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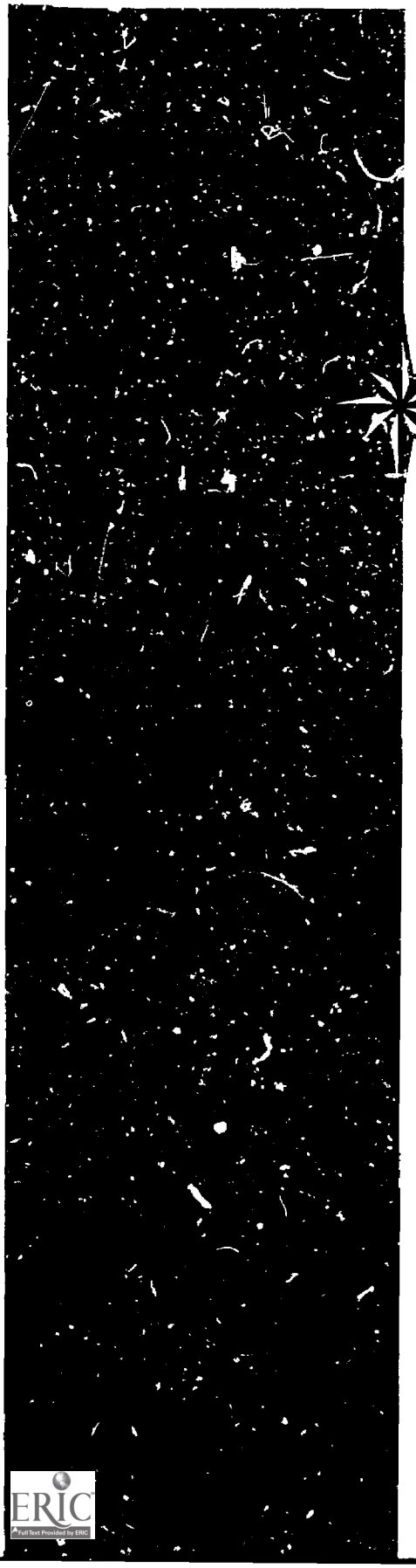
ABSTRACT

This study was guided by two fundamental concerns: the problems of developing assessment procedures which are better suited to the more humanistic but less tangible goals of education in general, and the need for a clearer conceptualization of the objectives of open education programs. Two major components of this report are: 1) conceptual analysis of an "open" approach to pre-school and primary education; and 2) discussions of implications of this approach for questions of research and evaluation. Particular attention is given to identifying basic assumptions about children's learning, educational change, and the teacher's role. (Author/PR)



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ANALYSIS OF AN APPROACH TO OPEN EDUCATION

Interim Report

Anne M. Bussis and
Edward A. Chittenden

August 1970

EDUCATIONAL TESTING SERVICE
PRINCETON, NEW JERSEY

Analysis of an Approach to Open Education

Interim Report of a study conducted by Education Testing Service in cooperation with participants in the Follow Through program of Education Development Center.

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August, 1970

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Acknowledgments

This report is about an educational position--one which embodies a philosophy of learning, a craft of teaching, a vision of life. It is not easily understood, and we do not claim to understand it fully now. Nonetheless, it was our intent to translate this position into terms which would have implication for psychological assessment and research. In order to study the position first hand, the project plan called for a cooperative working relationship with the advisory staff at Education Development Center, Newton, Massachusetts, who are sponsoring one of the models in the national Follow Through program.

The job of understanding and translating any position from another discipline is difficult at best. In our case, it would have been impossible to construct this particular report without the help of many other people. During the course of the year, colleagues at ETS not only listened to our ideas but provided thoughtful comments at critical stages in their formulation. Much of the work necessarily involved field visits to EDC Follow Through schools. The project effort would have been severely hampered without the cooperation and help given us by the teachers, Follow Through coordinators, and principals at these schools. We also drew upon the assistance of many educators, British and American, who were not officially part of the EDC staff or Follow Through program. In particular, David and Frances Hawkins, residing in Princeton for the year, made invaluable contributions to our understanding. Most of all, however, we are indebted to the EDC advisory staff. In teaching us--as well as the Follow Through teachers--they provided concrete examples of the very things which so often they were reluctant to discuss in the abstract.

Chapter One

Background and Purposes

This is a report of a study funded by the United States Office of Education and carried out by members of the Early Education Research Group at Educational Testing Service (ETS) in cooperation with members of the advisory staff at Education Development Center (EDC) who are sponsoring one of the educational programs in Project Follow Through. Intended quite literally to follow and build upon Head Start, Project Follow Through is a massive social action program which provides comprehensive resources to poverty communities. The educational or instructional component of this federal effort is conducted under a policy of "planned variation." Thus, there are several sponsors of educational programs in Follow Through (colleges, regional laboratories, etc.); and each community eligible to receive funds may choose the sponsor it wishes or take the alternative route of sponsoring its own program. Whatever is chosen as the education component, the general practice is to initiate Follow Through at the kindergarten level (for those communities having kindergarten) and extend upward one grade level each year, through grade three. It is estimated that most schools will reach third grade level during the 1971-72 school year, but at the time this study was conducted, the majority of schools had programs operating in kindergarten and first grade classrooms only.

The educational approach sponsored by EDC is patterned to some extent on current reforms in the British primary schools and represents a broadly conceived position with respect both to teaching methods and instructional goals. By its very nature, however, this "open" approach defies easy translation into behavioral objectives or prescribed techniques--characteristics which have generally been regarded by the psychometric profession as essential for scientific evaluation. Thus, last year's study was funded for the purpose

of investigating two major and related concerns. One was the problem of developing assessment procedures which are better suited to the more humanistic but less tangible goals of education in general. The need for new measures of this kind in evaluation is widely recognized. A second concern stemmed from the fact that approaches to early education which have come to be labeled "open" seem particularly vulnerable to misunderstanding and elusive to evaluation efforts. The need for a clearer conceptualization of the objectives of such programs is critical, both for better communication of their essential components and for more meaningful evaluation of their outcomes.

It was recognized at the outset that a first priority of the study would be the construction of a conceptual framework. What does this position represent? Given the convictions which characterize the EDC approach, a next question that logically follows is what are its implications for assessment? As a starting point, assessment was very broadly defined. It included, in fact stressed, the evaluative activities conducted by the teachers themselves and the advisors on the EDC staff--evaluation in the service of practice. The term also included the concerns expressed by parents and by funding agencies. It should be stressed that the distinction between identifying components of an educational approach and developing assessment procedures appropriate to that approach are not, in practice, easily separated activities. While the one must precede the other, both endeavors are too closely interrelated to be carried out in a clear sequence, and the distinction between them is one of emphasis rather than of kind.

Chapter Two

The Project Strategy and Plan

General Remarks

It was evident from the beginning that any project strategy would have to contend with the "gap" between priorities implicit in evaluation procedures and the actual concerns of educators. (Various aspects of this problem are discussed in a recent issue of the Review of Educational Research, 1970.) Among other criticisms, it has been claimed that evaluation efforts often deal only with narrowly conceived aspects of classroom or child life. In planning the project, such criticism was taken seriously. We began with the assumption that early education research is hampered as much by inadequate or inappropriate schemes for conceptualizing what goes on in the classroom as it is from a paucity of appropriate measuring devices.

The problem of the "gap" between research and practice can be handled in several ways. One way is to assist or to pressure the educator into formulating behavioral statements of instructional objectives. The possibility of adopting this method for purposes of articulating the EDC position was initially considered, but it soon became evident that the "non-model" quality of their approach made any such attempt unprofitable. Moreover, it became apparent once again that the psychologist and the teacher often speak on a different wave length. When pressed about objectives, the teacher seems to fluctuate between vague "romantic" terms and "trivial" concreteness, while the psychologist seeks some middle level abstraction which can be transformed into measureable operations. This impasse has occasionally been resolved by the psychologist persuading the teacher to his way of thinking, but such a resolution is not very satisfying for either party or the mutual goal they seek to serve.

As an alternative approach, Zimiles (1968) has argued that the evaluation worker should become "saturated" with the life of the program he is studying in order to understand the goals of the educator. While we perhaps did not plan to the point of saturation, we did place great emphasis on the need for close cooperative interaction in all phases of the project between ETS staff and EDC Follow Through. Among other implications, this meant trying to find out why the "vague" and the "trivial" were so meaningful to the practitioner. As David Hawkins (1966) has observed, research on education, on learning and teaching, is currently being conducted in a situation "...where the best practice excels the best theory in quite essential ways; this fact defines a strategy we ought to follow." He thus argues that educational research should look to the practitioner more seriously, rather than the other way around... as is the more usual advice.

Activities of the Staff

The following paragraphs outline major activities of the staff during the year. Although we received substantial assistance from others, for the most part "staff" refers to the four principal investigators of this study.

a. September Conference

The project, funded to begin July 1, 1969, was not officially launched until the week of September 23rd when a week-long conference was held in Boston for purposes of examining the philosophy and objectives of EDC Follow Through. Plans for this ETS/EDC conference on evaluation were included in the original proposal to the USOE. The conference was hosted by EDC and attended by the ETS staff, by the director and representatives of EDC Follow Through, by several British educators, and by others in the United States who are associated with this type of educational approach. The major questions on the agenda for the conference dealt with (1) goals and objectives of EDC Follow Through, and their implications for evaluation.

The first set of questions had a natural priority over the second, but it was the purpose of the conference to try to give ETS staff some guidelines and directions to facilitate work on evaluation. A wide range of topics was actually covered in the meetings, including a discussion of the central role of the advisory system and the very concept of an advisory. One important result of the conference was the development of an initial set of working papers, or "position papers," organized around four main topics: the child; the teacher; the physical environment; and institutional variables. In contributing to these papers the participants of the conference had several audiences in mind. One was the conference audience itself. What were common areas of agreement, of disagreement? Secondly, there was the audience of EDC teachers and advisors who might find these deliberations helpful. Finally, there was concern about communication to the wider audience comprised of interested public, other educators, and researchers. Inasmuch as the notes for these working papers were rather hastily assembled, ETS staff agreed to continue development of this work. Several weeks later, copies of all original and revised versions of the materials were mailed to the conference participants and to EDC advisors with a request from ETS for suggestions regarding further revisions and clarification. The working papers were also used as basic materials for structuring interviews with each advisor.

b. Participation in Workshops

One or more of the research staff participated in the five major workshops held at EDC for Follow Through participants. These workshops provided a chance to talk informally with teachers, aides, and principals in a setting which was quite different from that of their school. Equally important was the fact that the way in which workshops are organized and conducted reflects a central aspect of EDC's advisory approach to helping teachers. In several significant ways, the "open" workshop, in both form and content, parallels the "open" classroom.

c. Visits to Follow Through Communities

Seven of the eight Follow Through communities working with EDC during 1969-'70 were visited by one or more of the ETS staff.[1] Visits were generally scheduled to coincide with visits of the advisors. Such scheduling made it possible for advisors to introduce ETS staff to school personnel and also afforded the opportunity to observe the advisory in action. Several schools and classes were visited by the research staff two or more times, with visits ranging from one to three days in length. In the course of the nine-month school year, the staff spent approximately 50 days in such visits. Following each visit, impressions and observations were written up in the form of informal internal memoranda.

Part of the time during visits was allotted to accompanying advisors and joining with them in local workshops, interactions with children, teachers, etc. Thus the ETS staff was able to get a vivid practical idea of the day-by-day activities of advisors--activities which range from creating stories with children, to helping a teacher organize some part of her room, to meeting with principals, to getting donations of cloth and materials from a local mill. During these visits time was also spent informally talking with aides, teachers and principals...sometimes during lunch or immediately after school. A great deal of time was also spent in participating in the activities of the classroom and talking with children or working with them on some project. In many of these rooms, it is virtually impossible to adopt other than a participant observer role. Such close interaction provided the chance to get some first-hand

[1] New communities are often added to Follow Through sponsors each year as the program expands geographically; and new classrooms are always added each year as the program extends upward in grade level. The particular schools visited by ETS during the period of the study were located in the following communities: Burlington, Vermont; Johnston County, North Carolina; Laurel, Delaware, Lackawanna County (Scranton), Pennsylvania; Philadelphia, Pennsylvania; Rosebud, [illegible] and Washington, D.C.

acquaintance with children served by EDC Follow Through, as well as to consider how they reacted to various aspects of the EDC approach. Finally, toward the end of the year, some of our interaction with children took on the characteristics of testing and structured interviewing. The purpose here was to obtain preliminary data on the effectiveness and suitability of new assessment techniques.

d. Interviews with Advisors

The set of working papers derived from the September Conference was used as the focal topic of interviews with each advisor. A member of the ETS staff interviewed the advisors individually, with interviews averaging about 1½-2 hours. Although the interviews were purposely quite unstructured, the working papers did act as a kind of standard complex stimulus condition which served to bring out some of the major convictions of advisors, as these related to their work with teachers and children or with the institution of the school. The advisors' comments and reactions (many of which we were able to record on tape) were sought with two purposes in mind. First of all, there was the problem of the usefulness of the working papers as they stood at that time. How adequately did they reflect the priorities of the approach? Secondly, we were interested in trying to identify key constructs or basic themes in the advisors' discussions of teachers, children, and schools. Certain ideas did recur in one form or another in almost every interview, while others appeared to be of more interest to some advisors, less interest to others.

Our analysis of the EDC position and our ideas regarding implications for assessment, as they were formulated from all of the above activities, were presented to the total EDC Follow Through staff in April. At a more informal level, of course, we checked out specific ideas and impressions with EDC staff throughout the entire year. Nevertheless, it should be understood that ETS bears full responsibility for all statements made in this report.

Chapter Three

A Framework for Conceptualization

No conceptual model of EDC Follow Through in terms that have implication for evaluation and research can possibly be a comprehensive or fully fair representation of the approach. Furthermore, such a model might actually misrepresent the program if read in isolation and interpreted outside the context of major guiding principles and characteristics of the EDC philosophy. The purpose of this chapter is to spell out some of those principles and characteristics in order to provide a more adequate framework for conceptualization.

It should be noted at the outset that the following series of generalizations is not intended to comprise a summary of EDC educational philosophy. Rather, the statements are an attempt to emphasize selective aspects of this position which appear to us to be of critical importance for understanding it. Some of these generalizations are intended simply to underline views already expressed in EDC publications, while others derive more directly from our own interpretations of what we have seen, heard and read.

Although it will hopefully be evident, we should perhaps stress the point that many of the ideas discussed in the following pages are not uniquely held by EDC advisory staff. To the contrary, they reflect views and practices shared by a number of educators, both past and present, in this country and abroad.

1. The EDC Follow Through program is not an educational "model" in the usual sense. It is significant that EDC's Follow Through proposal is entitled "A Plan for Continuing Growth," (Armington, 1969) and that it outlines just that--a plan for working with teachers and children. It does not propose a set of instructional objectives and procedures for attaining them which are the characteristic earmarks of a "model" in educational research today.

Armington even points out EDC's dislike for the term:

> We are reluctant to use this word (model) because it suggests to many people a panacea--a program or "package" which, if understood and adopted, would somehow solve all problems. English primary schools emphatically do not represent a system, program, or "package." Schools we have visited vary widely in style and quality. (p. 4)

At the September conference, the discomfort with labels and behavioral statements designed to specify objectives or procedures was even more clearly evident. For example, to a statement such as "activities should be initiated by the child," the EDC response would be "yes, but it depends." It depends on the sort of activities under consideration, on whether the statement implies that teachers should not initiate, on why the child might be initiating something, and so on. There was profound uneasiness with statements out of context--even statements which we anticipated would be not very debatable.

In its extreme form, the shunning of labels and instructional objectives gives the approach espoused by EDC a reputation of inarticulateness which critics call "mystic" and friends describe as "intuitive." In the case of EDC, however, it seems apparent that regardless of difficulties in stating objectives, their position is characterized by strong convictions regarding the process of educating children. In other words, any apparent inarticulateness certainly does not stem from lack of beliefs or ideas about education. Eisner's analysis of the distinction between expressive and instructional objectives appears helpful in understanding EDC's position in this respect.

> Expressive objectives differ considerably from instructional objectives. An expressive objective does not specify the behavior the student is to acquire after having engaged in one or more learning activities. An expressive objective describes an educational encounter: it identifies a situation in which children are to work, a problem with which they are to cope, a task they are to engage in--but it does not specify what from that encounter, situation, problem, or task they are to learn. An expressive objective provides both the teacher and the student with an invitation to explore, defer or focus on issues that are of peculiar interest or import to the inquirer. An expressive objective is evocative rather than prescriptive. (1969, pp. 15-16)

Eisner goes on to argue that teachers really use, in a day-to-day sense, expressive objectives much more frequently than instructional ones. This, then, would seem to be one distinguishing feature of the EDC program that helps to cast it in the role of a "non-model." It is much more concerned with the expressive objective as a statement of educational encounter, than with the instructional objective as a statement of educational outcome. We would also agree with Eisner that the question of whether or not to state objectives in behavioral terms is more than just a question of taste or technique. "The differences between individuals regarding the nature and the use of educational objectives spring from differences in their conceptions of education; under the rug of technique lies an image of man." (p. 9)

The ramifications of such a "non-model" are several, but at least two should be mentioned here. For one thing, no single set of administrative rules can be considered to define the British Infant School approach. Contrary to some current published accounts, an "open" school may or may not integrate ages, and classrooms may or may not be self-contained. While such physical rearrangements might stimulate development of the sort of educational setting EDC seeks to encourage, they are by no means either sufficient or even necessary for the realization of such a setting. Another consequence of the EDC "non-model" is that there tends to be no single expert or authority on it. While several publications are highly regarded by EDC advisors, there is no single document to which one can turn to discover what open education "really is." In fact, once some publication starts to be treated as a final authority, it is apt to be viewed with some suspicion by educators who are actually involved in the practice of working with children in open ways. In summary, EDC seeks to promote a philosophy of education--not a particular set of educational prescriptions.

2. EDC does not view Follow Through basically as an "experiment," but as an opportunity to implement and support educational change in directions which they feel have already proven desirable. The EDC staff and other educators who advocate their philosophy share a basic belief that the Follow Through program affords an opportunity to implement good educational practice. While they are the first to point out that much needs to be learned about how children learn and how schools can operate more effectively, they are also clear in expressing the conviction that we need not, nor should not, start from scratch in the search for "better ways." They point to earlier experimentation during the 1920's and '30's in the United States and to more recent reforms in Britain as evidence that educational innovation can rest in part upon a history of experimentation. Perhaps more importantly, they seek to build upon contemporary efforts in curricular and school reform. Thus, they seek to bring about basic change which profits from past experience.

An interesting observation about the educators who share this viewpoint is that convergent evolution, rather than conversion to a model, seems to have brought them conceptually together. One advisor, for example, had never heard of the infant schools until a visitor to her class asked if she had been studying the British "system." Another advisor was part of a group of teachers who had long experimented with ways of creating more opportunities for individual learning, quite independently of what was happening elsewhere and before the term "open" became part of the popular vocabulary. Without belaboring the point, we simply note that these are educators whose experiences have differed widely, but who find themselves holding quite similar (though not identical) conceptions of good education. They are by no means a group of disciples. It seems important to make this observation because it serves to underscore another major reason for the advisors' unshakeable (some call it

stubborn) faith in their own position. The convictions they hold are not only rooted in the past but have been borne out and verified through personal experience.

3. The classroom teacher is an active experimenter. EDC places great stress on helping teachers become experimenters and inventors. Concerning the English school changes, Armington states "...schools and teachers tend to think of themselves as researchers and experimenters, responding to the endless challenge of doing a better job today than was done yesterday" (1968, p. 4). He goes on to argue that the permanence of any changes begun in classrooms very much depends upon the extent of the teacher's active involvement in that change. Unless teachers as well as other adults associated with the schools take on central roles in experimentation, then benefits of such experimental efforts are apt to be short lived. It is important to stress this aspect of EDC's position because it highlights the fact that open education means opening possibilities and responsibilities to teachers as well as to children.

A more extensive discussion of the teacher's role is presented in chapter five, but the point is mentioned here simply because it is so fundamental to EDC philosophy and represents an outlook not frequently found or explicitly adopted in other positions.

4. Understanding involves a solid experiential as well as intellectual component. Throughout EDC philosophy, there is a marked and pervasive emphasis on the importance of experience for human development and change. This proposition holds for the development of understanding in a mature adult, as well as for the development of basic skills and abilities in children. In other words, the verbalization of correct answers or theoretical postulates may indicate that a person "knows" something, but it is not sufficient evidence that he understands it.

EDC's stress on the importance of an experiential foundation for understanding seems most obvious in terms of the individual child. Here, one can quickly perceive compatibility with Piaget's conception of assimilation and accommodation--that the child organizes information and constructs ideas through action upon the physical environment and interaction with the social environment. Such an emphasis on action and experience is certainly not unique to EDC nor new in the history of educational thinking.

When we focus on the teacher, however, the role of experience in understanding presents a somewhat more complex picture. For one thing, this principle means that abstract knowledge of child development and of the learning properties of various materials--while essential--is not sufficient in itself to produce the understanding required of good teaching. Personal involvement and "messing about" with materials, as well as the exercise of imagination, are also critical. When understanding is bolstered by both kinds of components the teacher is best prepared for the task of guiding children's learning with sensitivity.

Numerous examples could be given to illustrate this premise, but one should suffice to make the point. Consider first the teacher who conceives of mathematics as a given amount of rather elementary subject matter "to be covered" over the year--from "subtraction with borrowing through basic operations of long division," or whatever. Now contrast that image with the teacher who conceives of mathematics as a way of thinking; who has herself experimented with cuisenaire rods or dominos and perhaps discovered some property of the number system; and who has given serious thought to what the formalized and arbitrary world of number must look like to a child. The latter teacher, to be sure, also has a list of skills that should presumably be mastered by her students over the course of the year. But the latter teacher will have richer resources to draw upon in helping students learn not only the skills, but an understanding and appreciation of mathematics that goes beyond the acquisition

of skills alone. To summarize, it is the experiential component of understanding that makes up a substantial part of what might be called the "craft" of teaching.

There is a second implication for the teacher once experience is promoted to a consequential role in understanding. From the EDC viewpoint, good teaching means giving credence to the legitimacy of children's emotional experience. Adults often hold an attitude toward childhood that serves to nullify much of the significance and human quality of a child's emotional life. If another adult should show signs of anger, fear, joy, resentment, or intense interest, the nature and motivational impact of his feelings is understood. When it comes to a child's emotions, however, adult empathy is often dulled. We tend to strip the child of acute feeling and may attribute quite inaccurate motivations to him. Thus, boredom becomes "inattentiveness"; anger becomes "acting out"; fear becomes "insecurity" or "lack of experience"; resentment becomes "resistence" to adult authority; joy is often entirely divested of emotion and seen simply as "cute" behavior; and intense interest may even be read as "obstinacy" or "dawdling." It is only natural in some respects for the adult to adopt a "this too shall pass" attitude toward children's feelings. Sometimes such an attitude is quite necessary and lends perspective to the situation. But when perspective begins to blind a teacher to the immediacy and reality of children's emotions--and to the important consequences of those emotions for learning--then the EDC position would argue that it no longer serves the aims of teaching.

Finally, the importance-of-experience premise suggests that the teacher recognize and accept the legitimacy of her own feelings. This is certainly not to imply that she become an emotional barometer, but many teachers tend to the opposite extreme and stamp out every vestige of personal feeling and expression as they pass through the classroom door. They don a "teaching face"

and become something of a robot in the midst of children. Soon they get across the message that the children, too, would do well to dampen their spontaneity and become more mechanical in response. It is argued that a more healthy environment for learning is one in which children experience their teacher as a unique feeling individual, with mature interests of her own, capable of expressing genuine emotion and of manifesting weaknesses as well as strengths.

5. Children's resourcefulness is the starting point of teaching. Perhaps one of the most distinguishing assumptions of the EDC approach is that children constitute the basic resources of the educational process. In contrast to those educational theories which assume the presence of a child during instruction, an EDC approach requires the presence of a child to define instruction. Teaching begins with the assumption that the children coming into a classroom come with capabilities and experiences--shared and unique--and it is the teacher's job to see that those resources give a direction and meaning to learning.

It is important to distinguish this EDC position from other child-centered viewpoints which have become prominent in practice or in the literature. In all their various forms, those approaches stress the importance of understanding children--but for slightly different reasons and purposes. Perhaps the most obvious distinction to be made is between EDC philosophy and the view which says that the teacher must understand what kinds of capabilities the child possesses, and to what degree, for the purpose of helping him contend with the curriculum. Such a viewpoint is often accompanied by an emphasis on the use of standardized tests. Educators holding the EDC philosophy, however, assume that all children have resources of human intelligence, creativity, and constructive action. They are puzzled, if not angered, at the psychometric paradigm of ordering children according to more or less intelligence, more or readiness, and so on. Their animosity to such differentiation stems not

so much from an animosity to tests per se as from the fact that test results tend to turn the educator's attention away from individual resources toward an attempt to categorize pupils, "water-down" instruction, or other similar efforts to fit the child to the curriculum. Individual differences are prized, not denied, by EDC and they see the opening of education as an excellent way of meeting each child's learning requirements. Suspicion of tests, therefore, springs from the fact that they are often used to rank children, thus portraying individual differences in terms of a deficiency model. To the extent that teachers focus on such a model and teaching is based on it, the very real resources of children will be neglected.

A second distinction between EDC and other child-centered positions concerns the issue of motivating children and stimulating their interests. One common approach is to try to understand the child's interests in order to attach these to subject matter that ordinarily might not interest him. Using batting averages of baseball players in the service of mathematics instruction might be one trivial example. An approach more characteristic of what EDC seeks to foster is taking the interests of the child for what they are and encouraging their extension in any of several directions. An interest in batting averages, for example, undoubtedly reflects a broader interest in baseball--and a more natural and significant extension of such interest might be in the direction of biographies of players, history of the sport, or geometry of the field. In the first example, the teacher uses the child's interest to capture attention regarding an uninteresting topic; while in the second example, interest is not only the starting point of an activity but is the sustaining and directing sustenance of that activity. Thus, EDC advisors are less impressed with the teacher who understands and can capture interest for periods of time than they are with the teacher who brings out in children the sort of interests that [illegible] sustained involvement in learning. In a good classroom the observer

would undoubtedly see both the "captured" and the sustaining interests, but the emphasis would be on the latter.

Finally, the EDC position should also be distinguished from a view exemplified in the writings of Hunt (1961) and others. This is the view which emphasizes understanding a child in order to find an ideal match between his present capabilities and the learning environment. While the EDC approach would sympathize with this view in its stress on the importance of looking at children and trying to provide for their developmental needs, it would also emphasize the fact that individual learners often move in unpredictable ways and directions. The advisors can cite numerous examples of this--of cases where children did things in ways which at first puzzled them and which only in retrospect made tremendously good sense. In fact, some advisors go so far as to claim that if the children engaged in an activity (e.g., exploration with magnets) do only what the teacher might predict and understand, the significance of that activity for the children might well be questioned. On this point, then, the advisors would be likely to agree with Jackson (1968a), who has questioned whether it is any more legitimate to think of an ideal learning match than an ideal marriage. The EDC teacher does not try to match a program to a child because he cannot possibly anticipate all the things that might interest or spark the child at any given moment.

Assuming that teaching begins with children's resourcefulness, the question nonetheless remains as to what an open classroom strives to accomplish. What does the teacher want to "do" with the inherent resources of children? Certainly there are many who argue along with EDC that the ultimate goal of education is to help extend intellectual and emotional resources so that the child becomes an integrated adult, capable of bringing rational consideration and personal value to bear in the life processes of making decisions, organizing

experience, and utilizing knowledge (Dinkmeyer & Dreikurs, 1963; Parker & Rubin, 1966; Rogers, 1969). The extension of learning in this manner is an extremely complex subject, however, and beyond the scope of this particular discussion. The more modest but critical point to be made here is that any extension of individual resources is not possible until the child is both willing and able to draw upon those resources. This, then, is one crucial goal of an open classroom.

A number of recent books have offered the products of children as evidence of what can be accomplished when individual resources have received encouragement and support (Kohl,1967 ; Richardson,1964). John Blackie, in reference to a rather remarkable poem written by a 9 year old, says, "You cannot teach children to write poetry like that, but you can create conditions in school in which a child who has that particular thing to say can say it. A child only writes a poem like that for someone whom he trusts." (1967, p. 76) Such writers, together with the EDC advisors, propose that the teacher must create a situation in which the child is willing to project himself into an activity if his resources are to be brought into play. The opening of a classroom, in itself, is no guarantee that this will happen. Putting oneself into an activity of the classroom, whether in writing a poem or constructing a graph, depends upon the relationship that has gradually been established between the teacher and children. It also depends upon past experiences in school. It is argued that the basic lesson learned by many children in the first years of traditional schools is that they should not look to themselves as originators--that they should not be in touch with their own interests as sources and origins of learning. Such children, even though they are perhaps willing to put themselves into some effort, may find it difficult to proceed in this way. The ability (the "ableness") to draw upon personal resources must be recultivated for these children.

In summary, the EDC position appears to argue that the best way to help a child utilize his capabilities is to create a climate in which there is both support and appeal for him to do so. Thus, to contribute to his capabilities as an author and to his skills in writing, the teacher should strive for an environment in which he will have something to say; to promote ability as a reader, create an environment in which he will find personal value in books; to contribute to his capabilities as a thinker, establish room and reason for thought.

Chapter Four

Dimensions in Viewing the Classroom

A popular dimension in early education research postulates that a classroom can be located somewhere on a scale of "child-centeredness to adult-centeredness." At one extreme is a classroom completely controlled by the teacher and organized around formal curricular requirements; and at the other end, a classroom in which the children are theoretically setting the entire course of learning--with a wide variety of positions in between. One important finding that emerges from examination of the EDC position is the fact that it does not fit comfortably anywhere on such a scale.

It is obvious on one hand that the EDC approach is child-centered, in many ways just discussed in the preceding chapter. In describing aims of this program, Armington places at the top of his list questions about children's responsibilities for their own activities--e.g., "Are they self directing? Do they take responsibility for their own learning?" It is argued that only the individual child can best determine what is meaningful to learn at a given time and what is the best pace and direction for learning. A breadth as well as a height component to learning are stressed. Children mess around with ideas, they elaborate, they do things over again, they do them in different ways. In the more traditional sense, learning is also seen as taking the form of vertical progression, of upward development. The basic image of the child is one of a constructor of reality...in a Piagetian sense, an inventor. The child puts together ideas and things in his own way and comes up with new combinations. From a pedagogical standpoint, it is believed that the growth of personal knowledge and the organization of experience can best take place when the child himself is located at the command center of the process.

The role of the teacher in EDC rooms is in many ways a good deal more difficult to delineate than the role of the child. In part, this is due to the fact that most publications, British as well as American, tend to give considerable attention to the children in open settings but are vaguer on how and where the teacher fits into the scheme. Of greater significance, however, is the fact that our usual dichotomous conception of the classroom can be misleading. We anticipate, for example, that the teacher's role in an EDC child-centered classroom will be the role of an understanding supportive adult--a role which has frequently been associated with teachers in child-centered preschool and early education programs. But any essentially passive conception of the EDC teacher is quite incorrect in several important ways. While it has been pointed out that teachers try to understand children, it is certainly not true that the EDC teacher should be some kind of unobtrusive valet who attempts to foresee and attend to every need.

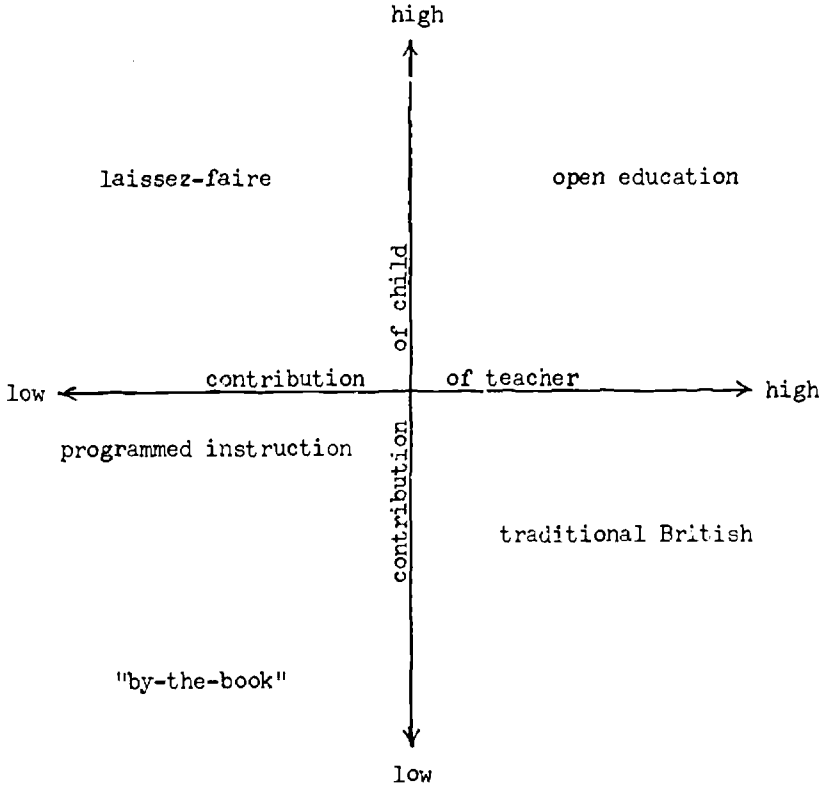
An inescapable conclusion is that EDC appears to represent not only a child-centered position, but also an adult-centered position. The very advocates of this philosophy are themselves educational activists who in their own teaching would never be content with a purely nurturant role. A major purpose of the advisory is to stimulate a greater degree of activism among teachers: in selecting materials and equipment; making suggestions; diagnosing; questioning; actively expressing their interests; being honest and adult in their appraisal. The classroom should reflect the teacher and other concerned adults just as it should reflect children. Far from expecting uncritical acceptance or passive conformity to anybody else's views, the advisory staff concentrates on fostering an experimental attitude on the part of teachers, encouraging them to "come alive" in ways that go beyond the passive roles of valet or of conveyor of a curriculum. In summary, good EDC classrooms bring active adults together with active children.

This analysis of the EDC position raises an interesting problem for conceptualization of an early education approach. It becomes apparent that child-centeredness and adult-centeredness might be viewed as independent dimensions in the classroom rather than as opposite ends of a single scale. Thus, we propose the two-dimensional space represented in Figure 1 (page 23) as a more adequate scheme for conceptualizing classroom environments. To locate a classroom in this space, two sets of questions need to be asked concerning persons who influence the nature and direction of learning. The first set of questions deals with the child as learner. To what extent does he affect what happens to him in that room? The second set of questions relates to the teacher's contributions.

In the upper right-hand quadrant would be located classrooms that have developed considerably along the lines advocated by EDC. In the upper left-hand quadrant are rooms in which the adult plays a very supportive but entirely nondirective role, the children having great freedom which occasionally erupts into chaos. The adult is rated as low in contribution for several reasons, one being her passive acceptance of the curriculum or of some set of "accepted" practices and procedures. While she may seek good relationships with children, such a teacher nevertheless works within set confines. The stereotype of many nursery schools might fall into this quadrant. The preschool teacher here is likely to be a rather bland individual who does not come through very strongly as a person. She may be up to date on child development theory and often tries very hard to understand children and to have a program suitable to their needs. But she is servant more than teacher, the emphasis is on nurturance rather than education. This quadrant would also contain rooms characterized by an extreme "hands-off" or laissez-faire attitude in which the adult generally attempts to avoid expressing personal preference or direct suggestion.

Figure 1

Double Classification Scheme Based on Extent to which (1) the Individual Teacher and (2) the Individual Child is an Active Contributor to Decisions Regarding the Content and Process of Learning.



In the lower right-hand quadrant would be classrooms in which the children have little say about what they will do. The teacher may be an active professional woman who examines new curriculum materials with a very critical eye as to their suitability for her classroom. She may be very active in diagnosis, making it her business to find out how the children are progressing. She tends not to take other people's word for it. She may or may not be warm in her relationships with children, but in either case she would come through strongly as an individual adult--the kind of teacher who is often remembered, sometimes with fondness, sometimes with anger. Some high school and college teachers might fit this category. They have a particular way of teaching Shakespeare, for example, that they have evolved themselves. They will throw out the textbook when it doesn't seem to make sense to them. They give a great deal of thought to what goes on in their room and perhaps as to how they are reaching each pupil. On the other hand, they give little credit or chance for decision making to students, preferring to think of themselves in the starring role and occupying "center stage" of the classroom.

The lower left-hand quadrant is the most distant from an open classroom in the two-dimensional space of Figure 1, containing rooms that the advisors would probably consider most dehumanized of all. Unlike the lower right, the teacher here is a passive conveyor of decisions made elsewhere; and unlike the upper left, the children have very little freedom or chance to express themselves. In such a room teachers often teach "by the book" and tend not to question its suitability for them or for their particular children. They accept the words of curriculum experts, of psychologists, of programmed texts, of most anybody, and rarely raise the significant questions themselves. The teachers of this quadrant are given, and depend upon, "packages," guides,

manuals, and other supportive devices to help them become more effective conveyors of decisions made elsewhere. Advisors argue that these are the rooms where education is seen as a grim business, a preparation for life, rather than life itself.

Somewhere in the middle of this two-dimensional space, at the intersection of the two lines, might be a room taught by an imaginative teacher using creative curriculum materials with emphasis on the discovery method. The children are given quite a bit of room to maneuver, although the external objectives of the lessons are clearly established. The teaching method here has been described as a kind of "sneaky telling" (Rogers, 1969). In this central position the emphasis is often on the need for children to understand rather than on the need for them to invent or construct. Similarly, the emphasis might be on the need for the teacher to understand what she is doing and toward what goals she is striving, but not much on her own inventions, constructions, or other forms of departure.

What are the implications of this two-dimensional scheme in which both teacher and children in a classroom are described as being somewhere on a scale from "high" to "low" in terms of their contribution to decisions regarding the content and process of learning? The vignettes presented above have hopefully served to point out at least one important implication--that the scheme has wide applicability. Although derived from a study of EDC, it is not restricted to the classification of EDC classrooms. It is a conceptualization that suggests questions which may be asked of any classroom. It should be stressed in this connection that the classrooms which actually comprise EDC Follow-Through vary greatly--they have indeed come from all four quadrants of the schematic space and they still bear predominant characteristics of all four quadrants. Granting the self-selection feature that is built into Project Follow-Through, it has

been our observation that there are extensive differences between localities in the degree to which teachers had an active voice in choosing the EDC program. If this observation holds true for the other Follow-Through programs as well (as we suspect it does), then in reality all Follow-Through sponsors must work in classrooms that reflect a wide variety of teaching styles.

To the extent that the present conceptualization does have generalized applicability, it follows that the objectives of any educational program, when adequately implemented, would result in an "ideal classroom" which could be located somewhere in the space. For example, an educational position which advocates "teacher proof" instructional packages would strive to create a classroom environment that would be located somewhere left of center in the space, with its position along the vertical axis depending upon the degree of choice and freedom extended to students. Thus, it is argued that all Follow-Through sponsors probably work with classrooms located in all parts of the schematic space, but they are attempting to "draw" these classrooms toward some particular point which represents their objectives.

A major implication of this conceptual scheme, then, is its potential usefulness for assessing change in classrooms--more particularly, from our point of view, change toward an open classroom environment. Preliminary attempts to apply this scheme in studying EDC classrooms suggests that there may be rather important differences between teachers who are basically engaged in experimenting with a new image of themselves and teachers who are primarily engaged in experimenting with a new image of children. This distinction between horizontal and vertical movement seems important, because it implies that the influence of the EDC advisory may be less evident in classrooms where the attitudes and ideas of the teacher about her own role are changing and more obvious in

classrooms where things are happening with the children. Occasionally, we felt that advisors had had significant influence on a particular teacher, in the sense that she was beginning to question her role in important ways, but these results were not yet clearly visible in what the children were doing. In such circumstances, the advisors tended to feel that they had not accomplished much. Conversely, in a few rooms where things had opened up considerably for the children, we tended to think that the teacher still held an essentially passive image of herself, was doing what she thought the program "expected" of her, and was too dependent on support from the advisors.

The year's study has also suggested the hypothesis that the easiest and most natural change toward an open classroom occurs in a vertical direction--in changing ideas about the capabilities of children and the freedom they can manage. The idea of centering on the child, however that philosophy has been formulated, is not new to a large segment of the American public (at least as set forth in education texts and child care manuals). Teachers recognize, or think they recognize in EDC's position, a view of the child which is not totally unfamiliar. By comparison, change in the horizontal direction seems to be considerably more difficult for many teachers. It requires abandoning the passive role of enacting a program in favor of taking part in creating an instructional approach. For many American elementary school teachers this can require a shift from subprofessional status and self-image to a more professional view of her role. (It is interesting to speculate that British teachers, with a stronger professional tradition, find less discomfort with the active image; possibly, for them, the infant school movement has meant discovering the child--or moving from the lower right to the upper right quadrant.) In any case, such observations and hypotheses are questions which could be submitted to further research. They are raised again in the chapter on "Implications."

Chapter Five

Toward Clarifying the Teacher's Role

In field notes on visits to some EDC classrooms that struck us as being particularly successful, the comment is made that "one has the impression of an open classroom but a tight ship." Although children as individuals had a great deal of influence and control over what went on in these rooms, there was a sense of overall direction and purpose which seemed to stem not only from the purposefulness of the children's activities, but from a sense of community and from the efforts of the teacher. While it is impossible to give any very satisfactory definition of the term "structure" as it is used in the context of open education, it would appear that this sense of classroom direction is what is referred to when educators claim that an "open" approach is not an "unstructured" approach. Because we found it difficult to define the teacher's part in an open setting--to explain how a classroom contains both an active, influential adult and active, influential children--considerable time was spent in trying to examine the teacher's role and come to grips with the more general notion of classroom structure.

As a starting point for analysis, it was helpful to employ Jackson's (1968b) distinction between activities engaged in by the teacher when children are in the room and those performed when children are not in the room. Generally speaking, research on teacher behavior utilizing classroom observation procedures has tended to focus on the first set of activities. This is the teacher in the role we are most accustomed to visualizing--in a classroom filled with students, performing many maneuvers and functions which are intended to bear on the

students' learning. Jackson describes this activity as characterized by "immediacy," both from his own observations and from teachers' self-reports of their classroom behavior. Since unpredicted and unpredictable events will occur during even the most carefully pre-planned lesson, there is an immediate "on-the-spot" quality to much of this behavior; and the great bulk of such "on-the-spot" activity has frequently been categorized under the general heading of "Classroom Management." Curiously enough, the notion of classroom management was rarely mentioned by any of the EDC advisors in interviews, and it certainly did not occur as a major theme. What they did stress about the teacher's interaction with children is perhaps best summarized under five general headings: (a) the diagnosis of learning events; (b) the guidance and extension of learning; (c) honesty of encounters; (d) respect for persons; and (e) warmth.

In reading various publications on open classrooms and in listening to the advisors' taped interviews, it also became evident that much of what is stressed about the teacher actually involves behavior occurring outside the context of interaction with children. There appear to be three major themes running through these comments which might be summarized as follows: (f) provisioning for learning; (g) reflective evaluation of diagnostic information; and (h) seeking activity to promote continuing personal growth. Considerable emphasis is also placed on characteristics not commonly regarded as "behavior" at all--that is, knowledge, beliefs and attitudes constituting a frame of reference which the teacher brings to the teaching task. For purposes of analysis it seems useful to divide these internal resources of the teacher into two sub-categories: (i) ideas related

to children and the process of learning; and (j) ideas related to the perception of self.

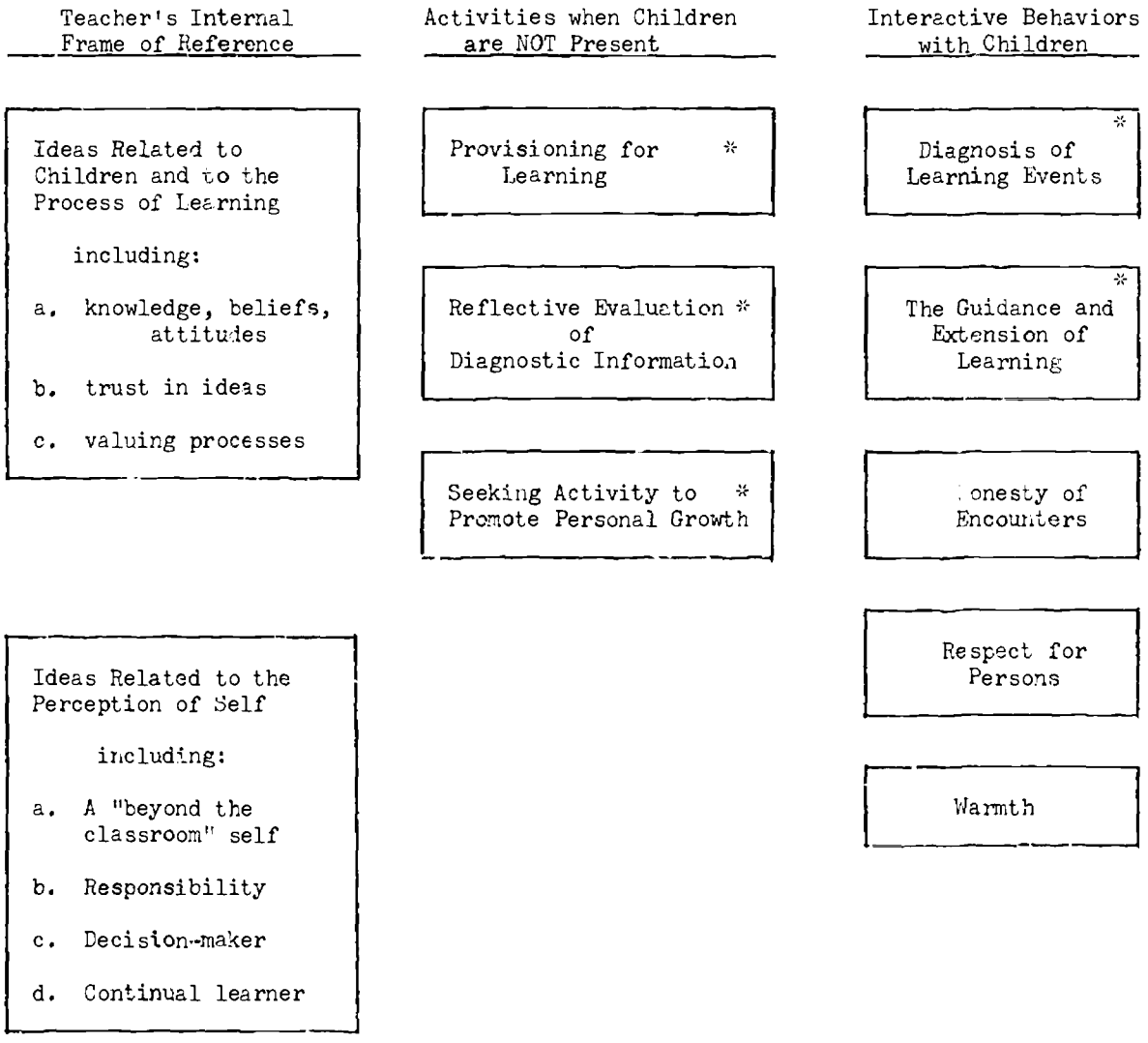
Thus, there are ten recurrent themes which we tentatively propose as a way of conceptualizing the role of the teacher who is operating somewhere in the upper righthand quadrant of the two-dimensional space presented in Chapter Four. These themes are schematically represented in Figure 2.

When this particular picture of the teacher is considered in relation to the two-dimensional space, it becomes evident that not all of the listed behaviors pertain directly to the horizontal "active-teacher" dimension of Figure 1. An overall conceptualization of the teacher's role in open education must be further organized into: (1) those components which are more directly related to the horizontal axis of the schema and would theoretically place a teacher somewhere near the far right of the hypothesized space; and (2) those components which determine the teacher's vertical placement and would serve to locate her position in the upper right, as opposed to the lower right, quadrant. In order to highlight this division, asterisks have been placed in Figure 2 beside those particular components of behavior which are hypothesized to characterize the horizontal axis only.

Considering this set of five (asterisked) behaviors first, it is apparent that they are interrelated in complex ways and that some may even occur simultaneously. While they appear neatly divided in Figure 2, these behaviors are not so readily separated or easily distinguished as such in the on-going life of the teacher. For present purposes, however, the separation into categories does facilitate examination of the active-teacher role in greater depth.

Figure 2

Analysis of Behaviors Tentatively Proposed as Defining Characteristics of the "Open Teacher"



* Components of behavior which are hypothesized to define the horizontal dimension of Figure 1. See text for further explanation.

Provisioning for learning. Near the passive end of the dimension in this activity is the teacher who doesn't give much thought to what is in the classroom on any given day. The basal readers and math workbooks are stored somewhere for the children, and their accompanying teacher manuals are filed in a convenient spot. The classroom furniture is standard equipment, arranged in more or less standard fashion. Before the school year began, this teacher may have been allowed to choose between two or three recommended materials in the curriculum catalog or required to decide upon a daily schedule of activities--the latter presumably to be followed the entire year. At the opposite end of the continuum is the teacher image described by Brown and Precious (1969):

> The teacher is in charge of the classroom and it is her responsibility to make the environment (well supplied with suitable apparatus and materials) attractive and thought provoking and one in which there is the widest opportunity for the development of the children's creativity and intellectual ability....Her resources for books, equipment and materials may not always be great, but her imagination and initiative help to make up for deficiencies. (pp. 28-29)

Perhaps the foremost requirement for responsible provisioning is an understanding of the potential value of materials. As several advisors put it during their interview, EDC Follow Through is not simply "having materials;" it is rather an attempt to foster sensitivity to the nature of materials. Even with highly structured materials there is the need for heightened sensitivity. All too often, for example, the teacher's only knowledge of something (be it puzzle, logic blocks, or a Language Master) comes from a manual which states how children are supposed to use the material in question and what they are supposed to "learn" from it. Children, on the other

hand, may use any structured material in quite unprecedented ways, gaining unanticipated value from it. Like the child, the active teacher always regards structured material as potentially "fair game" for new and imaginative uses which transform its learning value. Unlike the child, however, she is responsible for understanding in what ways the material lends itself to legitimate educational ends--whether used in an orthodox or unorthodox manner.

It is within the realm of natural and environmental materials, however, that American teachers probably experience greatest uncertainty. On an intuitive level, many think that the gathering of rocks and leaves, the care of live animals, or play with sand and water are all worthwhile learning activities. But it is in justifying precisely such activity, particularly for the upper elementary grades, that teachers are least articulate and most vulnerable to attack. It would appear that part of the trouble stems from the fact that many teachers do lack firm knowledge and genuine appreciation of the learning value of these experiences. Their communication is impoverished because their understanding is hazy. In other instances, a teacher's inarticulateness about the virtue of raw materials may not stem from faulty understanding or limited experience with such material herself; it may instead reflect the complexity of the topic.

After all generalities have been uttered, what specifically can be said about the value of natural and environmental materials? When pushed on this question, one EDC advisor responded with some detailed explanation of the possibilities offered by sand and water. Sand not only lends itself to all kinds of measurement operations (sifting, pouring, weighing) but provides a rich variety of tactile, aesthetic

and conceptual experience as well. Wet sand feels and acts differently than dry sand. Dry sand is good for making pictures and designs; wet sand affords the added possibility of three-dimensional construction. Tunnels, bridges, and towers can be made out of wet sand--but not soggy sand. A child can experiment endlessly with the precise consistency required for building different structures. Whole towns and road systems can be constructed, and these in turn may become the subject of mapping exercises as children learn to represent their three-dimensional sand town on a two-dimensional plane. Different symbols are then drawn on the map to identify such things as houses, gas stations, trees, stop signs, etc. In short, the potential for developing quantitative operations and concepts; artistic ability; notions of city planning; rudimentary principles of architecture, engineering, drafting and mapping; and symbolic representational skills--are all inherent in sand and water. Similar examples of the learning potential of raw materials--ranging from plastic bottles for liquid detergent; to food coloring and water; to nuts, bolts, and pegboard--may be found in the accounts of Brown and Precious (1969) and Hawkins (1969). In the long run, of course, it is the teacher's own experience with such material in her work with children which provides the essential understanding of its value.

To say that teachers must be sensitive to the learning potential of common environmental material is not to imply that they should plan exactly how children are to use it. To the contrary, any planning of this nature would be quite antithetical to the EDC position. The reasons for <u>not</u> planning in such a fashion are well illustrated

throughout Hawkins' book, and they are succinctly stated in a quotation which she cites (p. 107):

> Children, when they construct things in play, normally play after the eolithic fashion: a pointed board suggests the making of a boat, and if the toy, in process of construction, begins to look less and less like a boat, it can conveniently be turned into an airplane. Select the child who appears most ingenious in the making of this class of toys, present him with adequate tools and lumber, give him a simple plan which must, however, be adhered to until completion, and usually his ingenuity gives way to a disheartening dullness....(Storm, 1953).

Other responsibilities for provisioning are more in the nature of practical considerations and "craft." On a purely practical level, as pointed out by one advisor, the teacher should have materials ready for use, not just have them "there." Clay, for example, might as well not be in a room if it sits dry and hardened in some pot. On a similar common sense level, activity areas should be arranged so as to facilitate a smooth flow of traffic; and materials and equipment should be placed so as to encourage children to take responsibility. If coat hooks, construction paper, or facilities for displaying the children's work are out of reach, then a child must obviously rely on the teacher or aide for help in performing some act he normally could manage quite well by himself.

Activity areas should also be "attractive" and "appealing" for use by children. It is difficult to define such terms in any precise way, but they certainly do not imply simple artistic arrangement. What they do seem to mean refers more to what might be called "utility" and "balance." If all books in a classroom are centrally stored, for example, this arrangement does not serve a very utilitarian function. A comfortable reading corner well supplied with children's literature is certainly to be desired, but books about the care and feeding of

gerbils might better be placed next to the gerbil cage. The term "balance" implies a similar notion. If an activity area is to invite a wide range of interests, then the materials within that area should provide for a range of demands and difficulty levels. If it is assumed that there are diverse ways of "messing about" with a balance beam, then materials near the beam should reflect that diversity of exploratory possibilities. On the other hand, balance beams also lend themselves to more systematic manipulation with problems of increasing difficulty. Therefore, materials such as a set of graduated weights would also be present to reflect and suggest this type of manipulation.

Finally, it is clear that the term "balance" also refers to the totality of a classroom. There should be balance among the activity areas--raw materials, structured materials, reading materials, materials for dramatic play, etc. In addition, the room should reflect some combination of both teacher and child interests, but with the greater weight given to what is relevant for children. This reflection of interests is perhaps most clearly evident in the written and pictorial communications around a classroom. In surveying a room, one might ask the question whether or not these communications are really those of the people who usually live in that room -- e.g., do they communicate something meaningful to the children (children's stories or pictures) to the teacher (a favorite poem, a routine reminder about fire regulations); or are they addressed to no interest in particular (a sign: "Spring is Here")? While it may be impossible to determine the relevancy of any one specific communication, the advisors would claim that it is possible to make judgments about the ponderance of communicative material around a classroom.

The topic of provisioning has been treated extensively in this discussion, primarily because it is so central to an educational philosophy that stresses the importance of choice for children and because it is an aspect of the teacher's role which affords many concrete examples. In reality, it is also an area on which the advisors tend to concentrate when they are working with teachers. Other aspects of the teacher's role outlined in Figure 2 will be discussed more briefly.

The diagnosis of learning events. One major goal of provisioning is to provide opportunity for choice--to engage children in activity which they value and find of interest. Only to the extent that children are engaged in such a manner can the teacher gain very much in the way of meaningful information about them. David Hawkins (1967) expands on this point:

> What seems very clear to me ... is that if you operate a school, as we in America almost entirely do, in such a style that the children are rather passively sitting in neat rows and columns ... then you won't get very much information about them, you won't be a very good diagnostician of what they need. Not being a good diagnostician, you will be a poor teacher. The child's overt involvement in a rather self-directed way, using the big muscles and not just the small ones, is most important to the teacher in providing an input of information wide in range and variety....I think this is fairly obvious. It doesn't say that you will but that you can get more significant diagnostic information about children, can refine your behavior as a teacher far beyond the point of what's possible if every child is being made to perform a rather uniform pattern. (p.5)

Several of the advisors dwelt at some length during interviews on the importance of diagnostic information. One advisor, in particular, voiced concern over the fact that many teachers regard various activities only as providing the child with opportunities for growth.

They fail to see this activity as providing them with information as well. In her view, the opportunity for children to learn and teachers to assess what is being learned blend inextricably in classroom activity--but many teachers are attunded only to the instructional aspect of that blend.

If there is any key notion at the heart of how to obtain diagnostic information, it is the notion of involvement. This was stressed by virtually every advisor, and it is a theme that continually appears in many published works. If significant information is to be gained, you do not observe or relate to children in a vacuum. The active teacher observes children with an involved interest in what they are doing, and she relates to them in the context of involvement in an activity. The very title of Hawkins' paper quoted above--"I, Thou, It" -- suggests the nature of this kind of relationship with a child which centers on something of common interest. Such interest cannot be feigned, however, or at least it cannot be feigned for long. A child quickly catches on to the teacher who is really going about the classroom as an informal "tester" (asking questions here and there, making brief observations) and who is more concerned with whether he has learned something than with what he has learned. To become involved and interested in what children are learning does not mean to become a childish adult. Rather, it means setting aside some sophisticated but pre-emptive adult views of the world and learning to appreciate it in new ways. The hard part is the setting aside; but once this is accomplished it is argued that most adults will become better capable of noticing what the child's eyes see and better able to interpret his words and actions.

A final point relating to diagnostic information is that the good teacher knows when to refrain from obtaining it. Frequently, for example,

a trip to the zoo or to a museum is followed up immediately by the teacher's request for drawings, written reports, or oral reports expressing what the children "got out" of the venture. It is only natural for a teacher to want immediate feedback about an unusual experience she has provided for pupils, but to require such feedback can often kill the very learning one had hoped would occur. To put this principle in a more familiar context, many adults have experienced the futility of trying to tell someone "all about" a provocative book they have just finished reading. It is an impossible thing to do. The meaning that is derived from valuable experience (by adult or child) takes time in evolving; and a likely result of premature demands for evidence of learning is to interfere with this process and cause the event to be dismissed as "over." Teachers should certainly look for signs that learning has occured, but the impact of a given experience may not reveal itself in the child's behavior until days or even weeks later.

The guidance and extension of learning. What has been said about diagnostic activity relates closely to the teacher's behavior in guiding and instructing children. There are few categorical statements that can be made about when and how a teacher should actively intervene to divert or redirect the course of some activity or to extend it in a meaningful way. Although teachers feel a great need for guidelines in this area, it is undoubtedly the most "iffy" and "it depends" topic of all. In any given instance, it is not likely that even the most experienced teachers would find themselves in total agreement about what should be done. The general tenor of their thoughts on the matter might be the same, but almost certainly they would differ as to specifics. About the only thing that can be said with any assurance, therefore, is that the teacher is viewed primarily as

a resource person whose job it is to encourage and influence (in whatever way -- asking questions, supplying another material, giving information) the direction and growth of learning activity.

On the negative side of the ledger it does seem possible to offer at least a few general principles -- the "don'ts" rather than the "do's" of guiding children's learning. In general, for example, the teacher would be advised not to intervene in any way until she feels fairly certain what the child is getting from his present activity. In other words, she would be cautioned to become involved with a child diagnostically before suggesting any change, extension, or redirection of activity. Secondly, most of the advisors agree that it is not a good general practice to impose sharp distinctions between fact and fantasy, between what is real and what is not real. This would be particularly true in the area of reading, for example, where it can be deadly for the child to be told or reminded continually of such facts as "animals don't really talk." Even here, however, there are exceptions to the general rule; and the advisors might not agree that it was any kind of "rule" at all unless the words "impose" and "sharp" were underscored in the preceding sentence.

At a slightly higher level of certainty is the general principle of not discouraging choice by any number of subtle and not-so-subtle techniques. While the "you don't really want to do that - do you?" technique is fairly blatant, the "contract system" may not be so obvious at first. A "contract system" refers to the practice of giving children the option of free choice later -- if they will do something else you want them to do now. The most subtle forms of discouragement are often done quite unconsciously by a teacher, as in the display of highly differentiated interest and values placed on activities. One advisor described this process from personal

experience. In her beginning years of teaching, she began to notice that the children were demonstrating an excessive interest in reading -- excessive, at least, in light of the variety of other activities she had made available to them. She herself valued reading highly and suddenly realized that her involvement with children most frequently centered on activities related to reading. When her interests and behavior assumed greater balance, there was a corresponding broadening of interests in the classroom.

Reflective evaluation of diagnostic information. The importance of reflective evaluation is apparent in the example just given concerning reading. Had careful thought not been given to the observation that children were "excessive" readers, the teacher might easily have jumped to false assumptions and unproductive efforts. For example, when a teacher observes that children seldom go to a particular activity area, the conclusion often reached is that the activity in question simply is not an interesting one. In many instances, such a conclusion can be quite misleading, for it channels the teacher's energy into an endless search for more "intriguing" materials, as she introduces one new thing after another into the classroom.

In the advisors' opinion, the more usual reasons for children shunning an activity are not to be found in the nature of the activity itself -- unless, of course, it is patently inappropriate for those particular children. Rather, they are to be found in such things as the nature of the materials provided for an activity, in the way those materials are arranged or introduced, or (as was the case in the illustration above) in the nature of the teacher's attitudes toward the activity. Whatever the cause, it is insufficient to rest with the diagnostic observation that something "is

not working" and therefore hastily conclude that it should be removed. The teacher must also ask "why" it is not working and seek to determine the answer.

Seeking activity to promote personal growth. The importance of personal and professional growth is stressed again and again by advisors, by teachers, by various publications. Growth is defined in ways which go well beyond the type of definition (common to some school systems) that equates professional development with the number of credit hours a teacher may accumulate. One activity thought to be of great importance is on-going communication among teachers in sharing ideas and observations about children and learning. It is such interaction which tends to prevent teachers from working in professional isolation and frequently stimulates new ideas and insights. The same thing would be said regarding communication with other adults (parents, aides, administrators, community residents) who have vital interests in the school and the children. It should be noted, however, that the absence of interaction does not necessarily imply the lack of teacher initiative. The building facilities and/or official policies of some schools are such that they discourage any kind of informal adult interaction.

A second kind of activity stressed by advocates of an open approach is the pursuit of information -- particularly information regarding the physical and cultural characteristics of the surrounding community. What games are played by the children outside of school? What activities go on in the community? What services are available? What does the environment offer in the way of interesting places and physical features -- e.g., a factory, woods, junkyard, unusual architecture? The immediate environment contains

many natural starting points for learning, and it is the teacher's job to become aware of these. Also important is the need to be aware of new materials on the market and to consider the opportunities they might provide for learning. It is even more essential, however, that the teacher explore for herself some of the materials and equipment she has already provided for the children. What interesting possibilities does she find in them? While it is certainly not expected that the teacher becomes an "expert" in every field, it is expected that she pursue some topics of interest in greater depth. There are several informative but non-technical sources (some supplied by EDC) from which the teacher can learn more about the subjects included in the curriculum of early education.

Finally, and in some respects most important, is the teacher's involvement and growth in some area of purely personal interest -- be it in music, learning how to fly an airplane, or photography. It is assumed that the adult who continues to grow personally is an adult who exemplifies what she hopes to promote in children. Here, as in the classroom, the particular content of learning is less important than the process.

The behavior patterns and characteristics discussed so far seem to constitute essential directions of growth toward active and responsible teaching which EDC and other American and British educators are attempting to promote. As suggested previously, they represent what would be involved in movement along the horizontal dimension of Figure 1. These directions of growth, however, do not deal specifically with the quality of personal relationships in a classroom. Thus, they fail to encompass other aspects of the teacher's behavior which are considered vitally important in the creation of an optimal learning environment. The qualities regarded as necessary in the teacher-child relationship are most frequently described

by such words as "honesty," "trust," "respect," "confidence." While these terms are suggestive, their meaning is unclear and their connotations would apply to virtually all interpersonal settings. Since few publications attempt to deal with this problem, we tended to press the advisors rather hard for concrete illustrations. The following discussion, therefore, is based almost entirely on material obtained from the EDC advisors--although there is certainly reason to believe that the views they expressed are shared by many other educators as well.

Respect for Persons. The word "love" is rarely found in either publications or discussions centering on open education, but the phrase "respect for children" appears continually. While it is impossible to define respect in all the various contexts in which it is used, the process of respecting seems quite closely related to what Carl Rogers (1969) has described as the process of "valuing in a mature adult." Briefly, Rogers described mature valuing as re-establishing an internal locus for evaluation, subsequent to socialization and the necessary acceptance of various external standards and criteria for behavior. In other words, the adult begins once more to look to his own feelings (as all infants do) in determining what is good or bad, what is worthy of attention and what is not. One major result of re-establishing the "self" as a legitimate source for guiding behavior is that the adult starts to place great value on individuality and freedom of choice -- for himself and for others. It is this particular kind of valuing process which we suspect underlies a great deal of what is implied by the word respect.

How does one evidence respect? Obviously there are any number of ways, but at least three kinds of evidence seemed particularly important to advisors. First and foremost perhaps is the valuing of involved

activity, and of the products of such activity, in their own right -- not only (or even necessarily) as steps in an overall pattern of growth. As discussed above, this does not mean that the teacher will always have a personal interest in the activity or place personal value on the product; but she does value the activity or product as a legitimate expression of another person's interest. Secondly, the ways in which children operate -- their personal and cognitive styles -- are also to be respected. If a teacher values the right to work in her own individual way, then she respects that right for children as well. It is thought that one outcome of such respect is greater freedom and willingness to experiment with different ways of doing things (e.g., the usually careful and reflective painter can make an impulsive and bold sweep of the canvas). Finally, the advisors are quite sensitive to the need to respect children's ideas. The problem is how to do this. How do you tell a child (other than by words) that his ideas are worthy of attention? Displaying children's work is one approach, which may or may not get the message across depending upon how it is done. One advisor suggested other possibilities: e.g., do the stories children have written become legitimate reading material for other children; do the games they invent become incorporated into the classroom as a legitimate activity; where feasible, are their suggestions acted upon?

Honesty of encounters. A concern for honesty which appeared in one form or another during many interviews centered on the need to direct a child to another resource if the teacher cannot provide adequate help or understanding. The cause of her inability might be temporary and situational (involvement with another child, not feeling well); it might be lack of knowledge about the subject; or it might be more personal (fear

of examining a dead animal). Whatever the reason, if it would severely limit her capacity to help the child, then she should be willing to say so and direct him if possible to a more appropriate resource. Aside from providing for the child's need at the time (assuming availability of another resource), it is argued that such behavior also encourages children to feel that there is nothing wrong about admitting human limitations -- that it is "okay" to express lack of understanding, fear, uncertainty. In addition to these ramifications, the honest admission of limitation would seem to negate any "traffic cop" image of the teacher as the only person who can direct the flow of learning. This kind of honesty, then, suggests one specific way in which the teacher creates and reinforces a classroom atmosphere of shared responsibility for learning.

A second type of honesty which was stressed involved the teacher's evaluation of children's products. This is a tricky subject and certainly an "it depends" area of behavior, but at least a few things seem relatively clear. First, the repeated use of pat and stock phrases which reflect little individuation ("isn't that nice," "how lovely," "how interesting") generally leads nowhere. Even more damaging, in the opinion of many advisors, is the thoughtless use of global praise without any real examination of the product being considered. Not only does this fail to provide the child with examples of differential criteria which might be internalized, but it may serve to stifle his verbalization as well. If the teacher really doesn't understand the meaning of some product or find it very interesting, a better approach would be not to feign appreciation but simply to ask the child what it means to him. On occasion the teacher might openly express her own preferences in the matter, but in such a way as not to discourage the child's interest or devalue the product.

The more difficult case in evaluation arises when, in the teacher's opinion, the child's product is rather shabby. The advisors approached this topic rather gingerly and from many different directions, but one generalization does seem warranted from their remarks: poor quality, as such, is not to be praised. If a child put considerable effort into the product, then that is what the teacher should focus praise on, while perhaps at the same time seeking ways which might help him to improve his work. On the other hand, if a teacher knows the child is capable of much better productions, then her response should in some way suggest the recognition of a discrepancy -- perhaps in a very casual manner if she thinks he was merely "horsing around," or in a more probing way if there is reason to believe something might be bothering the child. In summary, honesty in evaluating children's products is thought to be extremely important, but it is definitely a contextual ethic and the teacher's behavior should be tempered by judgments about the particular child and the particular product in question.

A final kind of honesty mentioned by some advisors actually amounts to "being realistic." While the teacher strives to create opportunities for choice and self-expression in an open classroom, there are nonetheless obvious limits and rules. Free choice, for example, is necessarily limited -- by the nature of materials in a room, by the number of people who can work at an activity at any one time, by other considerations. Self-expression cannot be interpreted to include the destruction of material or of other children's work. While the necessity of limits and rules is the common sense knowledge of almost every teacher, these matters can inadvertently be played down or remain unexplicit in an enthusiasm to implement free choice and to "open up" the classroom. When this happens, the lack of clear cut guidelines can undermine, from the very start, even the most

committed attempt to create a productive atmosphere. It seems important to emphasize this aspect of honesty (or realism), because our field observations suggest that it might be a critical factor underlying the difference between those classrooms where intentions were uniformly good but the results varied considerably.

Warmth. The qualities of respect and honesty discussed above certainly apply to the child's emotional as well as cognitive life. Feelings are as much respected as ideas or products, and they are to be dealt with honestly. In fact, one of the primary objectives of advisors is to communicate in every way possible the integration of feeling and thinking in behavior. They are by no means separate or separable entities; and any attempt to divide the day in "feeling times" and "thinking times" is not only misguided but potentially harmful. Although it is quite possible to stifle emotion and get the child to regard himself as a more or less divided individual, many educators feel that genuine growth takes place only to the extent that emotional and intellectual resources are brought into play and merge in behavior.

This emphasis on the importance of emotion and the importance of accepting it as legitimate, poses some rather special problems for the teacher of an open classroom. Since significant growth is expected to be accompanied by a wide range of emotions, it is recognized that at times children will become not only joyful but quite unsettled, doubtful, perhaps anxious. A number of advisors stressed the importance of risk-taking, with its associated feelings, as a sign of growth. A critical characteristic of teaching, then, would appear to be the ability to recognize emotions differentially and to act as a stabilizing and reassuring influence when necessary. To do this successfully (to be able to stabilize and encourage emotional

expression) requires the warmth necessary in any human relationship where one person (the child) is willing to depend on another (the teacher) for assistance in handling some difficult aspects of his emotional life -- aspects that might not find expression in more traditional classrooms.

The chapter began by raising the question of how it is possible to bring an active, influential adult and active, influential children together in the same classroom. The analysis of the teacher's role presented here is intended as a partially answer to that question. The topics of provisioning, diagnosing, seeking professional growth etc. describe some ways in which the teacher is an active contributor; but it is the nature of the human relationships (the qualities of respect, honesty, warmth) which appear to be central in understanding how the adult and child can work together. When a child has learned that the teacher is true to her word, that there is no hidden curriculum, that she respects honest efforts on his part regardless of where they lead -- then the relationship between teacher and child is such that any suggestions she may make to him are not taken as commands or veiled threats. If good relationships are established, it means that the activitist teacher can offer suggestions, introduce materials, demonstrate ways of doing things, with the expectation that children will react to the content and merits of such instruction rather than trying to guess the intent of the instructor.

In concentrating on the role of the teacher we may have inadvertently portrayed it as an impossible one -- a role attainable only by super-teacher. Certainly energy and effort are called for, but it has been our observation that a great many "ordinary" teachers begin to move into such a role rather naturally when they find some support and encouragement for their efforts.

Chapter Six

The EDC Advisory and Follow Through Teachers: Impressions

The concept of an advisory is central to EDC Follow Through and might legitimately be considered its one defining "model" characteristic. The organization of the advisory, the people who staff it, and the way it functions are all intimately related to conceptions of the classroom which permeate the EDC approach. The advisory should be thought of as an extension of an educational philosophy as well as a system for implementing that philosophy.

Characteristics and functions of the advisory have been described elsewhere (Armington, 1968). The advisory staff (numbering twelve at the time of the study) operates out of the EDC office in Newton, Massachusetts, with each advisor assigned to certain communities and scheduled to make periodic visits there. An attempt is also made to develop local advisory capabilities within the communities. The advisory method of helping teachers is considered to be clearly distinct from more customary school supervisory services or services of the curriculum specialist. One key element in the advisory centers around the relationship which the advisor attempts to establish with the teacher--i.e., one in which he is responsive to the teacher's interests and needs and can at the same time offer help and suggestions which will not be taken as subtle directives. The advisors also work with children, aides, parents, school administrators, and other members of the community, but of necessity the primary emphasis is on working with the teacher.

As Armington has pointed out, the idea of the advisory is in an early, formative stage, "...the EDC advisory group represents a first attempt to develop a new mechanism for helping schools bring about change" (1968, p. 11). The following comments, based on our field impressions, are made with the hope that they will serve as another way of clarifying the EDC approach and

may also be useful to EDC or to similar groups who have interests in an advisory system.

One of the first impressions that an observer gets from joining advisors in their visits to Follow Through schools is the impression of tremendous diversity--a diversity in the people with whom they work and the type of activity in which they engage. For example, the advisors frequently spend time with small groups of children or an individual child; they talk to the principal, the custodian, the secretary; they may seek out the owner of a nearby company from which teachers might get free materials. Their work with teachers and aides may take the form of a private conversation, joining the teacher and a group of children in some project, assisting with the rearrangement of a classroom, or conducting informal workshops at the conclusion of a school day.

It is difficult to generalize in any meaningful way about the nature of these interactions, but a few comments do seem warranted. First, it appears that in very many of the interactions between advisors and teachers, wherever they occur, discussions are apt to center on <u>how</u> something could be taught or <u>how</u> children learn, rather than on the issues of what should be taught or learned. In other words, the advisors tend to accept the particular instructional goals of a teacher or school, reacting less to the wisdom of those goals than to procedures a teacher might use for achieving them. One teacher, for example, showed a mimeographed worksheet to an advisor which was patterned after standard drill materials in mathematics, with the remark that she wanted the children to learn the skills required for the completion of that sheet. Although the advisor herself most likely had reservations about those goals, she did not discuss them but instead made suggestions about other ways the sheets might be used (the children might devise problems)

and other materials that might serve similar purposes. Insofar as it is possible to separate "what is taught" from "how it is taught," it seems that the direction of many discussions between teacher and advisor moved toward the latter topic rather than the former. The advisors continually sought ways in which to build upon the teacher's present approach and to extend this approach where it seemed promising. To build or to extend necessarily means to accept much of what is there. What is often accepted are the local objectives of a particular classroom...what is challenged are the ways of reaching those objectives.

A second general comment about the operation of the advisory comes under the label of "craft component." While it is true that the advisors are concerned with promoting a broad view of teaching, it is nevertheless clear that the actual exchange between advisor and teacher is often an exchange over very specific things. Exchanges on the philosophy of education or the psychology of learning are much less evident than interactions centering on very practical matters (although theoretical discussions may well ensue from encounters over specifics). These range from showing a teacher how to operate an electric sabre saw for cutting tri-wall, to helping her arrange an activity corner, to bringing some new kind of material to her attention. Discussions take place over what might be done when a boy is unable to settle down, what are some ways to get children started with cuisenaire rods, how to house a turtle. To operate in this way, the advisors must be able to draw upon something much more substantial than good intentions and a philosophy of education. They must draw upon their own teaching experience, from what they have learned in visits to other classrooms, from what they have gained from research and development activities at the advisory center and from the resources of that center. (The 75 page guideline to materials and supplies, ished in May, 1970 by EDC, is one manifestation of a recognition of the

craft component in teaching.) The advisors themselves are quite aware of the need to develop their capabilities. It is important to stress this craft component, because the researcher who is seeking generalizations of a model frequently tends to relegate craft to a minor position--and to do so misses the reality of advising and teaching. Teachers relate to children over real and specific events and materials; advisors relate to teachers over real and specific issues and actions; and any conceptualization of the nature of these relationships must take into account the reality of such interactions. On a more general level, consideration of craft makes it clear why experience can be, and should be, a vital component of what goes into the making of a good teacher or advisor. In EDC's view, it is a sad commentary on American education that experience often seems to count for so little. New gimmicks, "innovative" techniques, and "revolutionary" methods are constantly introduced in ways which discourage the teacher from continually trying to incorporate knowledge gained from earlier experience.

The support and encouragement of teacher experimentation also means that there will inevitably be failures as well as successes. If this were not true, one would doubt that experimentation had taken place. Teachers remarked on occasion that they tried certain things with poor results. Sometimes they implied the blame was on the EDC program, sometimes they blamed themselves, and sometimes they viewed it more in the context of an experiment and tried to learn from it. Much in evidence was experimentation with ways of arranging a room. One teacher, for exampl , had gotten rid of the rows of tables and chairs at the beginning of the year, but put them back again as a way of checking to her own satisfaction on the children's reaction. This particular teacher taught in a school of fairly high mobility rate, and it was her

specific worry over what might happen to children who transferred into a more traditional school which originally motivated the experimentation. In addition, however, she also felt a personal need to experiment--to see how these children compared with others whom she had taught in more traditional ways in past years. Ultimately, her goal was to establish some degree of "openness" and "structuredness" which she judged as suitable at that particular time. In this instance, then, the teacher might appear to have moved backwards by reestablishing the conventional rows of tables and chairs; yet from the point of view of her active role as an experimenter, one felt that the movement was forward. Experimentation, if taken seriously and if seriously supported, poses an additional problem to the evaluator, for it means that good classrooms are continually changing and moving in different directions. Because advisors encourage and applaud the teacher's own inventive efforts, it means that any count of "EDC-type" objects or ideas that can be seen in a given classroom is not necessarily a good indication of the progress made in that classroom. In fact, if this count were very high, the advisors would probably feel that they had not accomplished the basic purpose of fostering teacher experimentation. "Good" EDC rooms, then, will differ in significant ways one from the other, the differences reflecting the locality, the children, and the teacher. Certainly, if rooms were all alike in terms of materials, activities, and arrangement, the EDC model, by definition, would have failed.

One interesting impression from talking to the Follow Through teachers and visiting their classrooms is of the great variety of strategies that exist for implementing an open approach. At the extremes, of course, there are a few rooms in which nothing much but the addition of an aide appears to have occurred, and a few in which, from all indications, the change is indeed a

radical departure from previous ways. The great majority of the teachers, however, fall somewhere between such extremes and their forms of experimenting were intriguing. Quite a number, for example, were experimenting with open ways as a function of the clock. They perhaps would teach rather traditionally at certain times, particularly in the morning, but open things up during other hours or in the afternoon. Another strategy was to experiment with openness as a function of physical space--open activities going on in the corridor, in an adjacent playground area, or perhaps in some clearly delineated section of the room. Experimentation with different aspects of the curriculum was another approach, with teachers maintaining conventional methods for reading and arithmetic instruction but obviously trying out new ways in science and other activities.

Related to these observations is the impression that some teachers seemed to be changing in their relationships to the children more than in the content of their instruction. That is, they appeared to "teach" more or less as they had previously done, but (from their accounts) were apparently developing a more natural, common sense approach to working with children. For example, one such teacher said that she had put an idea of one of the advisors into practice, and when some of her boys got too "itchy" she let them go out on the playground to work or to run. This was something she had never done before in well over a decade of teaching, and she claimed that "it works!" Another such teacher said she had discovered that kindergarten children could be much more responsible than she had previously supposed, in management of the room as well as in setting a sensible direction for their projects.

Motivation to experiment also varied tremendously among the teachers. Some teachers had been "assigned" as Follow Through teachers and although they had not been enthusiastic about such assignment, they viewed it as a professional

challenge and were willing to give it a try. Often, these were teachers who were rather successful in their implementation of open approaches and generally satisfied with the results they saw in the children. It is interesting to speculate that the initial professional attitude they held was perhaps an important key to success in these instances. Others saw EDC Follow Through as an opportunity to put into practice ideas they had long been thinking about or were already actively seeking to accomplish. Some teachers, on the other hand, seemed to find the whole concept of experimentation distasteful and were admittedly uneasy living with it. Still others seemed highly motivated to experiment and change, but mainly for social political reasons rather than educational reasons--if it is possible to separate the two. It seems a particularly noteworthy impression that many such teachers were black and appeared to find in the EDC educational approach a social philosophy that embraced many of their own values, goals, and ways of thinking. In summary, because motivations varied so greatly, variation in rate of change was strikingly evident.

One final observation is that neither age nor experience appears to be a good predictor of the ease or success with which teachers implement the EDC approach. The energy and idealism of many younger teachers is often offset by their lack of experience, and they seem to have particular difficulty knowing how to evaluate what they are doing. Several young teachers, on the other hand, implemented the approach exceptionally well. It was also our impression that some of the best rooms were run by experienced teachers who had previously been teaching in quite traditional ways for many years. Conversely, there were other older teachers who seemed completely tied to rigid ideas and former ways of doing things. A conclusion which might be drawn from these impressions concerning motivation, age, and experience--and one which has been tentatively hypothesized by Gazden (1970)--is that general compatibility between a teacher's

life style and the EDC philosophy is a critical factor in the successful adoption of an open approach.

Impressions of the advisory staff and teachers working in schools represent a major part of the total picture, but by no means all of it. A word must also be said about the workshops held at EDC headquarters in Newton. Since a stated objective of the advisory is to encourage active professionalism, workshops were conducted in such a way as to discourage any passive "note-taking" attitude on the part of teachers. Indeed, there were few occasions in which formal notes could have been taken at all--or if taken, would not have made much sense. The overriding tendency was to organize workshops in an open fashion, with participants having considerable choice in the kind of activity they might select and in the way they would carry it out.

The EDC goal of encouraging teachers to become centrally involved in learning was exemplified in the very manner in which workshops were conducted. Artificial curricular boundaries were dismissed at the outset. Thus, a "math" workshop session could include dance and movement through space; a "reading" session could lead to group improvisation of some recent event a teacher had experienced or to dramatization of a story or poem; a "science" session might result in the creation of photographic essays, with photos taken and developed and text written by the participants themselves. While many teachers coming to the workshops were prepared to learn <u>about</u> what is new in the teaching of math, reading, and science--fewer were apparently accustomed to being asked to become involved as learners in their own right in these and related areas. Nevertheless, it is EDC's assumption that adults who can themselves become engaged in learning are in a better position to relate to the vitality of learning in children. Even in more commonplace activities, the basic purposes ing EDC's workshop strategy were apparent. For example, a group

discussion was held on the topic of children's books. This discussion took place in an area where many books were on display, and the books discussed ranged from comics to ABC primers to classic fiction. At the conclusion of the discussion the group left the building, with each teacher allotted $25 for the purpose of purchasing books for her particular classroom. While group discussion is certainly not an unusual workshop event, this particular episode is significant in two respects as illustrative of the manner in which the advisory operates. First, it was evident in the discussion that how a book is judged (whether appropriate, valuable, useful, etc.) depends...depends on the children in question, depends on how it is used, depends on what other kinds of books are already in the room, and so on. Books, as well as other educational materials, are to be evaluated in context. Secondly, the actual purchasing of books is a straightforward example of how the advisory encourages the teacher toward reflective evaluation of her children's needs and active decision-making with respect to provisioning for those needs.

Specific assets and liabilities of the workshop approach were frequently the topic of discussion and debate--between advisors, between teachers, between advisors and teachers. Some teachers felt that the advisors refrained too much from giving concrete suggestions or offering directives. Others found it very profitable to be challenged to explore a problem or activity in their own way. In any case, it seems clear that not all teachers had importantly felt needs satisfied by the workshop experience. EDC is still searching for some optimal balance which will provide support and direction where it is needed in the workshops and yet retain the essential integrity of their educational philosophy.

In summary, the operation of an advisory is premised on the assumption that the significance of change is a direct function of how that change is

brought about. A question that was persistently raised throughout the year concerned the scope and permanence of changes that were being effected. It is EDC's position that the opening of education to "teacher-experimenters" is an essential prerequisite for "continuing growth." This hypothesis could be posed in a testable form and its implications are discussed in the next chapter. The essential point to be made in conclusion here is the need for various kinds of support to sustain change. However effective EDC may be in initiating change, its impact is necessarily limited to a finite set of personnel operating from a centralized location. The human resources of the advisory staff and their willingness to sacrifice personal time in the interest of professional goals are indeed impressive. But limited human resources can be stretched only so far. Furthermore, EDC is unquestionably limited in the official influence it can exercise to support change. While the advisory staff would never seek an "authoritarian" role by virtue of its philosophy, such limitation of influence can create serious frustration in those cases where an individual teacher is trying to change and must simultaneously cope with forces that oppose change. From what we have observed this year, it would seem that other resources (parent groups, school administration, professional associations) are needed as additional sources of support for sustaining the teacher's efforts. In other words, an environment conducive to "continuing growth" requires various forms of support, some of which cannot be forthcoming from a central advisory alone.

Chapter Seven

Implications for Evaluation and Research

The report thus far has concentrated on presenting an analysis of EDC's approach to open education. The present chapter is addressed more directly to the implication of this analysis for assessment. Current perspective suggests five major activities which seem important for future work. To summarize in advance, these activities are: (1) development of procedures for appraising the extent to which open education is implemented; (2) development of techniques for evaluating child outcomes in an open educational setting; (3) development of comprehensive assessment programs; (4) development of diagnostic materials for teacher use; and (5) further research on learning as it occurs in an open classroom and on the process of educational change. A discussion of each activity follows.

1. Development of procedures for appraising the extent to which open education is implemented. Evaluation procedures developed for this purpose would focus on individual classrooms and on the larger institution of the school; data analyses would therefore pertain more to educational processes than to the usual question of student outcomes. There are at least three reasons for expanding traditional perspective and giving high priority to classrooms and schools as prime targets for educational evaluation.

The first reason is paradoxically the most and least obvious of all: educational process constitutes a legitimate and critical focal point for evaluation in its own right. This assumption is obvious in the reflection of any adult who has ever stopped to ponder what is happening to his own child in school--what values is he exposed to; what interests, aversions, attitudes, and life styles is he developing? The assumption is far less

evident in the logic which has characterized most evaluation projects to date. Nevertheless, as Jackson (1968b) so vividly portrays, any educational program implicitly or explicitly prescribes a setting for human activity and thus suggests a way of life--at least a way in which young people are expected and required to live during many of their waking hours. While different educational programs may hold similar objectives with respect to learning, they often advocate radically different methods for reaching those goals and thereby reflect different philosophical assumptions about life values. Westbury (1970) comments on this point in a recent review of curriculum evaluation:

> The possibility that a curriculum might serve an education which has intrinsic value or is an object in its own right must also be addressed. Mann (1969, p. 40) drew on this possibility to suggest an intriguing...prescription for a curricular criticism that has as its starting-point the assumption that "the world we create for children through the curriculum is a real present world, a lived-in world, and a meaning world." He argued that any criticism of a curriculum presupposes ethical and aesthetic judgments about the meaningfulness of the world created for children in the here-and-now. (p. 246)

From EDC's standpoint, these "presupposed" judgments should be made explicit; and accurate description regarding the quality of school life should perhaps be the first and foremost concern of the evaluator.

A second reason for advocating attention to educational process rests on the assumption that such processes have significantly greater influence on the development of intelligent human functioning than any given body of curricular content. The requisites of personal understanding, of effective decision making, of integrated and broadly applicable cognitive constructions--all are to be found more in the way people learn rather than in what they are taught. Certainly this assumption underlies EDC learning philosophy, and Parker & Rubin (1966) make much the same argument when they observe that "knowledge keeps no better than fish" (p.2). More to the point, they make the following interesting distinctions:

> Where the stress is upon process, the assimilation of knowledge is not derogated, but greater importance is attached to the methods of its acquisition and to its subsequent utilization. Therefore, a discrimination must be made between knowing something and knowing what it is good for....
>
> A judgment as to the relative emphasis which should be assigned to process and content requires a preliminary commitment as to the fundamental purposes in educating the young. Public criticism has focused on insufficient mastery of content. We recognize the public concern is appropriate, but with two qualifications. First, there are proper and improper ways to master content. There is imminent danger that, in our haste to overcome the criticism, we shall unthinkingly succumb to improper ones. Second, the idea that content learning frequently necessitates a willingness to engage in future unlearning, should our notion of truth change, must be more widely understood.... (pp. 2,3)

The third reason for emphasizing educational settings and process is of a more practical nature: judgments about a program's impact or effectiveness necessarily depend on adequate information as to whether and how the program has been implemented. The point is simple enough, but it has often been ignored in the practice of evaluation. Even where the importance of such information is acknowledged, there are few guidelines as to what constitutes significant information on program implementation or how to go about obtaining it. Thus many evaluation designs end up treating all classrooms with the same label ("open education", "computer assisted instruction," or whatever) as though they have actually been doing similar things. Cohen (1970) discusses this problem at some length, particularly with respect to the evaluation of large-scale social action programs, and Rosenshine (1970) raises the issue in relation to instructional evaluation:

> In studies where teacher behavior in special curricula was compared with the behavior of teachers in "traditional instruction"...there often was significant variation in the behavior of teachers within each group. Although the number of classrooms observed in these studies is small, the results are consistent enough to cause serious doubts about whether all classrooms using the same curriculum constitute a single treatment variable. (p. 280)

During the course of the project, preliminary developmental work was undertaken on ways of looking at the classroom commensurate with our understanding and conceptualizations of the EDC approach. As a first step, two of the working papers which emerged from the September conference were developed in directions which seemed promising as potential instruments for assessing both the classroom and the school as an institution. The "Physical Environment" papers provide rough guidelines for assessing several aspects of the learning environment such as: organization of the classroom; nature of the materials in a room; evidence of actual use of those materials by children; evidence of the individuality of children and teachers; evidence that a classroom reflects aspects of the local community. The revised papers of "Institutional Variables" provide an outline for gathering information organized around four major characteristics of the school: vital statistics and background data (e.g., community size); rules and regulations influencing everyday operations (e.g., regulation of the children's movement within the building); formalized policies and practices (e.g., curriculum requirements); and dynamics of interrelationships among the staff. Institutional data of this sort would provide information on the extent to which the efforts of the teacher are representative of a broader institutional commitment, or whether change toward an open environment (if it is occuring) represents the striving of individual teachers working more or less in isolation.

A second kind of necessary instrumentation is the development of procedures for describing how the teacher views her own role and how she regards children's learning. An interesting start in this direction has been made by Barth (1969) who constructed a Likert-type attitude scale

for rating extent of agreement with 28 stated assumptions about learning and knowledge. These assumptions were derived from Barth's own examination of open education and they are assumptions which the EDC advisors, for the most part, find themselves in agreement with. Such an instrument might prove sensitive to the teacher's ideas concerning children, which constitutes part of her "internal frame of reference" outlined in the first column of Figure 2 (p. 31) in the chapter dealing with teacher characteristics. Since Barth's scale is oriented only toward the child, a parallel scale would need to be constructed which seeks information on the teacher's perception of her own role (lower half of the first column in Figure 2).

Another means of appraising the nature of the teacher's role would be through interviews which survey rather factual information. Here, the second column of Figure 2 suggests an organization around the topics of provisioning, reflective evaluation, and personal growth. The teacher might be asked such things as how she customarily goes about obtaining supplies and materials; how the children react to a particular activity or type of material; information about the surrounding community and its resources; professional activities and association; hobbies; etc. Data obtained from the attitude scales mentioned above and from teacher interviews could then be profitably compared for evidence of agreement or disparity.

The development of procedures for making classroom observations and ratings is a final necessary element in the assessment of educational environments. The five categories of the third column in Figure 2 (interactive behaviors with children) suggest some important components of behavior on which to concentrate. Observations related to these categories, as well as significant observations of the children's classroom behavior (e.g., responsibility assumed for learning, degree of

involvement), would require complex judgments on the part of trained observers. The use of such judgmental procedures means that the observer is regarded as an essential part of the instrument and great emphasis must therefore be placed on assuring observer understanding of the nature of the judgments called for--this in addition to the customary standardization of procedures, etc. Initial work on the development of observational techniques was started during the year, specifically in the category of "the guidance and extension of learning." Here, preliminary forms were devised for rating the questioning behavior of the teacher (intent of the behavior, its setting, focus, and evidence of individuation) and the nature of her behavior in response to a direct request for help by a child. While reliance on complex observer judgments appears to be growing in research, it is by no means a widely practiced, or in some cases accepted, evaluation procedure. Nevertheless, it seems to us that the important issues do not revolve around whether such judgments can be made reliably (that is a matter for empirical demonstration) but rather around what judgments should be made. The EDC approach is one where complex interpretative judgments would seem to comprise a more suitable method of studying classroom life than would observational records based on narrowly defined units of behavior.

2. Development of measures for evaluating child outcomes in an open educational setting. The first consideration which open education poses for child measurement involves a working conception of the organism being assessed. Can the "whole child" of the EDC position be analyzed in some way that makes psychological sense and would facilitate measurement yet does not undermine the emphasis upon his essential integrity? Field

observations, informal interactions with children throughout the year, and pilot testing of preliminary instruments were carried out with this question in mind, and they were directed to the more immediate goal of finding out what was actually happening to children in "good" open settings. Our search was for meaningful ways of organizing concrete evidence about children which might ultimately underlie the development of more meaningful instruments. This is not to imply that EDC summarily rejects the content of all existing tests as "meaningless;" but they do maintain that present tests and testing procedures usually fail to tap what is of greatest importance about children's growth from their point of view. Analysis of the EDC position and impressions gained from the field suggest a working conception of the child that is organized around five aspects of development which appear to be more compatible with what EDC might regard as being of primary importance. Although interrelated, these aspects of the child's behavior can be examined separately, as a starting point for instrumentation.

a. Resourcefulness. The central assumption about children's resourcefulness (discussed in Chapter Three) suggests one important construct which is not commonly encountered in the research literature on learning. Measurement procedures based on this idea would seek evidence of the child's original constructions with respect to both the physical and social world. "Originality," in this sense, would be defined more in terms of the source (the authorship) of the capabilities measured than by the sheer uniqueness of the product. One would seek evidence of individual involvement in construction of the concepts and ideas in question, as opposed to responses which appear more stereotyped or based on social expectation (e.g., the child seeks cues from the examiner as to what is "expected" of him).

b. Self-perception. Of principle interest here is the assessment of the child's feeling about himself in relationship to school and school-related experiences. It can be argued that children in open settings are likely to develop a perception of themselves as active organizers of their own learning and contributing participants in the classroom. This hypothesis suggests measures somewhat similar in intent but narrower in focus to those which have been based on the more general constructs of locus-of-control and participation versus alienation. Instruments developed in this area would be aimed at obtaining information about whether the child views school as a place to learn or a place to be taught; whether he has confidence in his own capabilities; etc.

c. Personal and cognitive styles. Focus on this aspect of behavior proceeds from the assumption that the more open classroom permits and encourages considerable exploration with different styles of functioning. Although research demonstrates that personal and cognitive styles are rather stable characteristics, it is suggested that children in open settings evidence greater flexibility in such traits than might normally be expected -- that rigidifying of a particular style, coping mechanism, or classroom mannerism is less apt to occur. Thus, there seems reason to expect less evidence of caricature (the "overly-neat," the "class clown," the "hopelessly impulsive" child) in an open classroom than in a more traditional one. Modifications of existing research instruments as well as new measures would need to be developed in this area.

d. Self-others frame of reference. Peer interaction is a marked characteristic of open settings, and children are expected to learn a great deal from each other. Observation of peer interaction and individual

functioning in the open classroom has led to interest in a general formulation regarding the balance between self and others as a frame of reference for behavior. Two sets of questions are suggested for measurement purposes. The first involves communication situations -- are children learning to take active and adaptive roles in instructing each other, whether this role is one of the communicator who adapts to the needs of a listener or the role of the listener who actively seeks out information when something is unclear? The second set of questions deals with reliance on self in matters of judgment and opinion. To what extent does the child express individual opinion in the context of peer values which may oppose that opinion? Does greater peer interaction foster greater peer conformity, or does the open setting provide a better opportunity for children to learn to balance their own interests with those of their classmates?

e. Language functioning. Although language obviously plays a part in all of the activities described above, its significance as a symbolic mode of thought deserves special attention. Peer interaction and exposure to the raw data of language in a variety of contexts have both been hypothesized as important factors facilitating language development. If indeed they are, then the open classroom theoretically should be an excellent environment for expediting such development. Field observations of the children in EDC classrooms have tended to confirm this notion in several areas of language functioning. For example, the diversity and complexity of sentence structure (in speech and writing) used by these children seemed rather striking in comparison with other classrooms of comparable student populations. Additional aspects of language fucntioning which suggest themselves as targets for measurement include: the nature of questions

asked and the utilization of information gained from questioning; interest in "playing" with language -- e.g., enjoyment of puns; and stylistic considerations, or the "flavor" evident in written productions. This last factor of "flavor" actually relates as much to the assessment of resourcefulness as it does to symbolic functioning.

Granting an initial working conception of the child which may be appropriate, several assumptions underlying EDC's philosophy of learning and the operation of an open classroom still pose challenging problems for the development of appropriate child measures. While these assumptions are discussed at greater length in Chapter Three (particularly in connection with the idea of resourcefulness), for present purposes they can be briefly summarized as follows. Classrooms which seek to build upon the child's inherent resources are ones in which it is assumed that learning will often take highly unpredictable directions. Children are encouraged to mess about and explore, to formulate unique associations, to think freely and intuitively as well as logically. These idiosyncratic directions in learning are as highly valued as are the goals of helping a child attain basic language skills and the shared understandings of mathematics and science. Great importance is attached to the notion that whatever is learned should be learned in a context of personal meaning.

It is apparent that most existing achievement and ability tests attempt to assess the extent to which the common or shared components of curriculum have been mastered. As such, they may answer the question of whether the child has learned a particular fact or idea, but they do not reveal what else he may have learned about that idea or what it really means to him. It is not surprising, therefore, that these tests do not

differentiate in any very consistent way between children who have been in more traditional or formal school programs and those who have been in classrooms where meaning and exploration were stressed. The research literature (Minuchin et al 1969; Stephens, 1967) suggests that such tests can add little to our understanding of how the more broadly conceived approaches to education are actually affecting the children in those programs. Group achievement and ability tests have not been developed for such purposes and, as of this writing, there is scant evidence to indicate any forthcoming change in the picture.

The problem for test construction becomes more complicated when one turns to an examination of instruments (generally developed for research purposes) which focus on capabilities that are not restricted to common elements of the school curriculum. Here too, with some exeptions (e.g., Hadden & Lytton, 1968), measures such as creativity tasks or problem solving tasks have failed to demonstrate differences between programs and approaches of a magnitude that the educator might expect (Minuchin et al, 1969). Similarly, tests for logical thinking operations, derived from Piaget's work, have proved to be of uncertain value in contrasting "richer" programs in areas such as science and math with more routine ones (Almy et al, 1970; Chittenden, 1969).

Inspection of these various research instruments and of many achievement and scholastic aptitude tests leads to the conclusion that they give greatest credit for responses which reflect the child's desire and ability to work within the constraints of logical analysis and social expectation. On many tasks, for example, analytic ways of organizing the stimulus materials generally receive greater credit than associative or intuitive ways. This is not only a function of scoring procedures, but of

type of stimulus materials chosen and the test developer's apparent expectations as to which is the "better" type of response. Regarding the scoring and interpretation of responses made on classification tasks, Olver and Hornsby (1966) warn against making the easy interpretation that "superordinate" groupings are educationally superior to the "complexive."

> Obviously, the two approaches to grouping are required in adult functioning, and though in our data we see one replacing the other, the replacement is probably more for public activities than for those done more subjectively. The loose-knit complex, as Wittgenstein and others have noted, is a vehicle for searching out possibilities of kinship. It is also the vehicle of poetry and fantasy. What it lacks in tidiness, it recovers in richness. So too the superordinate category: if its applicability is limited to well-formed problems, at least it is capable of precision and a workable exclusiveness. (p. 79)

The clear implication is that each approach should be looked at in its own right in educational evaluation.

Similar concern about scoring systems which place the more abstract, logical grouping consistently above groupings of a different sort is voiced by Wallach and Kogan (1965): "Our results clearly suggest that ... attempts ... to treat the relational or thematic category as developmentally primitive may be misguided" (p. 135). They go on to point out that the creative individual may well break away from constraints of the analytical and inferential to a more playful, freer organization. The general implication is that hierarchical schemes which are commonly used in categorizing children's responses may be quite inappropriate for evaluating children who come from an educational approach that encourages constraint-breaking. This same reservation would apply to an uncritical use of Piagetian scales for evaluating pupil outcomes. One could argue that measures of the level of conceptual attainment in terms of Piagetian stages and sub-stages would be less sensitive indicators of the child's

involvement in learning than would measures which got at the vigor or conviction of his responses, regardless of level. In other words, it is important to consider the origins of a response via such indices as conviction (Piaget, 1929). In a similar vein, communication tasks which value analytic over metaphoric responses would be inappropriate measures in themselves, as would problem solving measures which permit only analytic solutions. As Westcott (1963) has emphasized, the use of metaphoric and associative reasoning is often critical in real life problem solving.

Considerations of the kind discussed above and field work to date lead us to examine carefully the questions of stimulus material and scoring in any attempt to develop child measures. Where feasible, we would propose procedures which encourage and capitalize on various modes of response. Depending upon the domain of the test, these modes might range from use of methaphor and reliance on intuitive processes to the customary logical and analytical processes.

The notion of resourcefulness also poses a fundamental challenge to traditional assumptions underlying much of psychometrics. To state this challenge in question form: Is "competence" a structure giving rise to behavior, or is it to be viewed more as an observation about behavior in a particular situation? For the most part, measurement practice and theory have tended to assume the structural hypothesis. EDC on the other hand, would tend toward a situational interpretation of competence. For example, from their perspective all children are assumed to have creative capabilities; and if some children never manifest creativity, the inclination is to examine the conditions surrounding their behavior. The question more likely to be asked is "what's wrong with the setting?" rather than "what's wrong with the

child?" -- be it a classroom setting or a test setting. While this view could be pushed to the extreme of denying difference where real differences exist, it is nevertheless a healthy one and one which should be kept at the forefront of any developmental effort. The importance of the context of testing has been discussed by Minuchin et al (1969) and, more recently, has been dramatized by Elkind, Deblinger, & Adler (1970). In different ways their studies demonstrate that children taken from boring or restrictive classroom activities perform better on "creativity" tasks (which represent a "welcomed change" in their eyes) than do children who are taken from classroom activities which apparently are of great interest to them. Such findings, in conjunction with the more widely discussed evidence concerning the effects of race and sex of the examiner, make it apparent that the dynamics of the testing situation need to be given as much thought and attention as the content and scoring of the test.

During the last phase of the project several testing procedures were explored with kindergarten, first grade, and a few second grade children in some of the EDC classrooms. While there are no clear solutions to the issues raised here, certain directions for instrument development and certain specific measures do seem more promising than others. These directions and measures are outlined in some detail in a recent proposal submitted to the U.S. Office of Education.

3. Development of comprehensive assessment programs. A third set of implications pertains directly to the professional services offered by testing organizations (e.g., ETS) or by research and evaluation bureaus set up within a school administration. These implications relate to the

assessment of achievement, particularly in the early grades and in major areas of the curriculum such as language arts and mathematics. What is recommended here can be anticipated from what has already been discussed under points 1 and 2 -- namely, that if a school wishes to evaluate student achievement, it should look to its own practices and curriculum as well as to many aspects of student behavior.

The conceptual framework for a comprehensive testing program as well as the associated data collection techniques (tests, interviews, observations. surveys, etc.) would presumably be applicable to a wide variety of schools, but would reflect the concerns and views of open education. More specifically, the program would reflect a view that mathematics, reading and writing are ways of thinking and knowing, ways of communicating commonly shared understandings, and ways of expressing a unique self. They are not simply sets of skills "to be acquired" at some level of proficiency. In the case of reading, for example, teaching for the skills measured by most tests ("teaching to the test") usually pre-empts helping children discover the value and excitement of books. Testing practices in general, however, have tended to reinforce the view that one should teach reading as a skill rather than as discovery. The question to be asked in assessment is not only can children read, but do they read? Numerous examples can be given of school systems which boast of reading scores "above the norm," yet in these same schools there is a limited variety of books in the classroom and the school librarian's job seems to be basically one of protecting books from children. Such schools apparently value the skill of reading but not the process itself.

To take reading as an example again, at least four types of questions could be raised in evaluating student achievement from a more broadly

conceived approach to assessment. (1) Motivation: How do the pupils feel about reading? Do books and other printed material provoke feelings of inadequacy or do they stimulate interest? Preference measures along with other indices might be developed here. (2) Opportunities for reading: Are children provided with both appropriate material and the time for reading? Is a variety of books readily available or does the supply consist of 30 copies of the same reader at any given time? Is there an area conducive to reading? (3) Ability: Measures of skill, comprehension, and interpretation would be included under this heading. While there are many tests already available in the skills area, most of them assess these abilities in one format only. In our opinion, a variety of presentations is needed. As one example, primary tests of sight vocabulary or phonics skills would be more appropriate if they included test items embedded in contexts that more closely resemble the child's first encounters with words -- e.g., natural conversation, scrambled arrangements of commercials, words printed on cereal boxes, street signs, etc. Similarly a great many tests of reading comprehension are in fact addressed to only one question -- did the child read the material? While there are notable exceptions to this generalization, much more needs to be done in constructing assessment procedures for determining how children understand and interpret what they have read. (4) Literacy: Is the child literate in that he has a sense (or beginning sense) of authorship -- an understanding that books may be written because someone had something to say? Is he developing tastes and preferences in reading? Does he read for various purposes -- the gathering of information, learning about real events, exercising imagination and fantasy, the development of aesthetic appreciation? To our knowledge at

least, no available measures tap reading literacy in this way, but there is no reason to believe that such techniques could not be developed.

In summary, if assessment of student achievement within an educational system is to be undertaken, it is as important to appraise the environment provided by that system as it is to test the children. Comprehensive assessment along the lines sketched above would seem to be more compatible with a comprehensive view of education.

4. Development of diagnostic materials for teacher use. In British publications on the infant school movement, reference is frequently made to the need for teachers to maintain some form of systematic observation and record keeping. There have also been attempts in England to develop "check ups," which appear to be semi-structured testing procedures designed to help the teacher obtain a better appraisal of pupil growth. While these matters are just beginning to receive attention in the EDC effort, there are already indications that it will be a topic of growing concern because of the central role the teacher is expected to assume in an open classroom.

Along the line of "check ups," previous work has been done at ETS on the development of materials which give the teacher a central, more informed role in understanding and diagnosing signs of intellectual development (Let's Look at First Graders). A project is already underway to expand these materials, and future work could very well incorporate parts of the working papers which emerged from the September conference of the present study. In particular, the papers on The Child and The Physical Environment might be helpful in constructing some practical guidelines. Whatever form the materials might take, the purpose would be to provide the teacher with

specific suggestions and procedures to be used to broaden her capabilities for understanding and observing children's development. The most difficult problem involved in such an attempt (and one not really resolved in previous efforts) is to devise concrete ways of assisting teachers without inadvertently creating a new kind of "package".

5. Further research on learning and educational change. Intensive study of a limited sample of children in a few open classrooms appears to us an urgently needed research endeavor. What are these children learning, and do they go about it in ways which corroborate the assumptions about learning that characterize EDC's approach? Methodology in such studies would be primarily observational but could well include periodic testing, interviews, and analyses of children's products. The need for intensive study is probably greatest from the first grade level on, where the differences between open approaches and traditional practices are much more evident than in kindergarten or preschool. One focus for such research might be examination of the validity of a more or less "naturalistic" approach to reading instruction which is advocated by EDC and many other educators. This view of reading, similar in some respects to the natural acquisition of oral language, has not frequently been studied in educational research -- largely because of a dearth of appropriate settings in which to study it. With the exception of some published work on early readers who have learned in the home (e.g., Durkin, 1966), most reading research has investigated how children cope with various methods of instruction rather than how children acquire reading capabilities when the options of whether to read, when to read, and what to read are much greater. More broadly speaking, studies of learning in open classrooms should provide a clearer

picture of how instruction may be carried out in the service of construction and of what this means for the intellectual and personality development of children.

A second direction for research leads to questions concerning the legitimacy and usefulness of the distinction made in this report between contributions of the child to learning decisions and contributions of the teacher (see Figure 1, p. 23). Do teachers located in the four different quadrants, as defined by some independent procedure, respond with any consistent differences to the efforts of the advisory? Or, do advisors intuitively sense what "type" of teacher they are dealing with and systematically emphasize different kinds of help for teachers starting an open approach from different quadrants? Of special interest would be a study of the relative difficulties involved for a teacher in changing perceptions about her own role as opposed to changing perceptions about children. In a previous chapter we speculated that British teachers, with a stronger tradition of professionalism to back them, may well have found movement toward open education (the British Infant School movement) an easier and more natural transition than do many American teachers. Implicit in such speculation is the tentative hypothesis that changing the teacher's image of herself is more difficult than changing her image of children. Is this hypothesis tenable, or is it virtually impossible to distinguish the effects of change in one direction from effects of change in the other direction? Does the teacher's image of herself necessarily affect her image of children, and vice versa? If the schematic representation of Figure 1 is to have generalized usefulness, it should also be applied to classrooms using approaches other than EDC. Do other Follow Through sponsors show different patterns of success in implementing their programs,

depending upon the location of their "ideal" classroom in the schematic space and the location of the teachers with whom they work?

The basic assumption underlying the concept of an advisory suggests a third focus for research -- in our opinion, vitally needed research. This assumption states that both the permanence and pervasiveness of changes brought about in a classroom are determined by the extent to which the adults responsible for that classroom have been centrally involved in the change. Not only is such an hypothesis of theoretical interest, but it clearly has important practical implications as well. Parents, school boards, funding agencies, the public in general have a legitimate interest in whether some new approach or method will have only passing and relatively inconsequential effects (the ripple in the pond that soon vanishes) or whether it will lead to substantive change and continuing growth. A preliminary teacher interview was drafted in cooperation with the advisory staff during the year, as a first approximation of an instrument which might be used in examining questions of change. The general topics covered in this interview schedule include such things as: how did the teacher come to be included in the Follow Through program; what is her perception of the changes required or the opportunities for change that are afforded by Follow Through; what are her responsibilities in implementing this change. In addition to the teacher, research studies on change should also examine the involvement and expectations of the school as an institution and the community it is intended to serve. Data from teacher interviews and these other sources, gathered over a period of time, should shed considerable light on the relationship between permanence and scope of change and the extent of direct involvement in change.

This chapter began with the title "Implications for Evaluation and Research." In conclusion, it seems fitting to remark that any dichotomous view of "evaluation-on-the-one-hand" and "research-on-the-other" is a short-sighted view. Adequate evaluation of educational environments, and of the young people living in those environments, simply cannot be accomplished by existing standardize tests -- and it cannot wait indefinitely until all the decisive research evidence on new procedures has been accumulated. In so far as educational decisions are influenced by evaluation data, new techniques must be used together with established tests in assessment projects; and all of them (new and old alike) must be selected on the basis of the best judgment possible as to their validity for a given purpose.

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ERRATUM

The reference on page 25 (Rogers, 1969) does not appear in the list of references and should be added. The correct reference is:

Rogers, V. R. English and American Primary Schools. Phi Delta Kappan, October, 1969, 71-75.