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ABSTRACT

This document stimulates further study of open education. The publication is an edited version of selected presentations and panels of the American Association of Elementary-Kindergarten-Nursery Educators' National Research Conference on Open Education. Conference papers include the following: "Current Research in Open Informal Education;" "Search and Research;" "Research and Assessment Strategy;" "Open Education and Internal Locus of Control;" "Practical Applications of Research." Two additional papers presented by the Directors of the ERIC Clearinghouse on Early Childhood Education concern problems and issues on research on open education and preparing educational personnel for open schools. (Author)

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CURRENT RESEARCH AND PERSPECTIVES IN OPEN EDUCATION

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A RESEARCH REVIEW FROM

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Foreword

In publishing this document, it is our hope that readers will be stimulated to study open education, a major topic of interest to American educators. Although this is not a comprehensive or definitive publication, there are many useful ideas and much substantive information. Also, careful readers will find broad perspectives for further study and future experimentation with open education concepts which "make sense" for them.

An implicit danger of importing ideas from any place and anyone should be noted: blind importation and implementation of the British experience should be avoided. Like their British cousins, Americans need to spend months and years of study and slow but sure installation of practices which are suitable for particular educational settings. Before open education is practiced anywhere, it should be made compatible with local objectives, student needs, staff interests converted into competence and commitment, and with resources available to make open education viable and vital.

This publication is provided as a means of disseminating ideas and information. It does not necessarily have the endorsement, and the viewpoints do not necessarily reflect endorsement, of the American Association of Elementary-Kindergarten-Nursery Educators (AA E/K/N/E), the ERIC Clearinghouse on Teacher Education, the ERIC Clearinghouse on Early Childhood Education or of the sponsors of the clearinghouses. It is published solely as one of many stimuli to continuing efforts to find practices which can lead to better education for children and youth.

This publication is an edited version of selected presentations and panels of the AA E/K/N/E National Research Conference on open education held January 1972 in Washington, D.C. Technical recording difficulties prevented inclusion of the joint presentation by Raymond Bernabei and John Dopyera.

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Abstract/ERIC Descriptors

This document stimulates further study of open education. The publication is an edited version of selected presentations and panels of the American Association of Elementary-Kindergarten-Nursery Educators' National Research Conference on Open Education. Conference papers include the following: "Current Research in Open Informal Education;" "Search and Research;" "Research and Assessment Strategy;" "Open Education and Internal Locus of Control;" "Practical Applications of Research." Two additional papers presented by the Directors of the ERIC Clearinghouse on Teacher Education and the ERIC Clearinghouse on Early Childhood Education concern problems and issues on research on open education and preparing educational personnel for open schools.

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TOPIC: Research and Experimentation of Open Primary Schools

DESCRIPTORS TO USE IN CONTINUING SEARCH OF RIE AND CIJE:

Early Childhood Education
Open Education
Elementary Education
Educational Research
Conference Reports
Progressive Education
Professional Personnel

Research on Open Education: Problems and Issues

by Lilian G. Katz

This conference on Open Education is one of many events in recent years signifying increasing interest in opening up classroom procedures and activities. This movement in the direction of open education has been developing alongside a growing movement toward independent and free schools. The two movements--open education and free schools--have in common a few general themes, although there are some important differences between them. One of the common themes involves rejection of traditional-formal academically oriented education; another is the adoption of a rhetoric emphasizing commitment to "humanistic" values, including self-determination, freedom of choice and aesthetic appreciation.

Reasons for such widespread interest, by now reaching the proportions of a bandwagon, are no doubt many and varied (Featherstone, 1971; Hapgood, 1971). Certainly the general dissatisfaction with so-called traditional (i.e. formal) schooling and the resulting readiness to "try anything" may be at work behind the ground swell. Possibly a long-standing Anglophilism contributes to Americans' receptivity to British developments as well. Notably, a body of evidence that

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open-education is effective is not available, and is not among the many causes of the spreading enthusiasm. Nor is there as yet any counter evidence. In spite of the absence of accumulated and reliable evidence of effectiveness, several lines of reasoning support the position that Open Education represents a viable alternative approach to early childhood education. Before we examine some of the reasons, let us look at some problems of definition.

PROBLEMS OF DEFINITION

In spite of the current interest in Open Education, a definition of the term which would answer the question "How will I know it when I see it?" has not been found. The formulation of an operational definition is difficult, and has been understandably resisted by workers in the field. This resistance stems from fear of the development of orthodoxies, doctrines and rigidities. On the problem of definition, Spodek has commented: "We have talked around the concept of open education and provided some examples, but we have 'not' defined it. Perhaps that is because openness, like freedom, cannot be defined absolutely" (1970). This comment reflects a common assertion that specificity must necessarily, in and of itself, betray the spirit of openness and informality.

Another source of definition difficulty arises from the fact that open-informal education takes many forms. Some classes are "open" throughout the school day, some only partially. On almost any dimension of classroom life, there are wide varieties of style. No ideal version of the Open Classroom has been advocated, endorsed or adopted.

Further difficulty facing the would-be definer stems from the fact that the major data base from which to extrapolate a definition consists of "personal testimony" (see for example Silberman, 1970; Featherstone, 1971 passim). The available personal testimony is extremely difficult to conceptualize. Barth and Rathbone (1969) have suggested that Open Education "is a way of thinking about children's learning and knowledge." A "way of thinking" is difficult to operationalize. The available data imply, but without proof, that there are reliable relationships between ways of thinking, assumptions about learning, classroom events and educational outcomes. In fact, there is some reason to believe that practice is followed by rationalization rather than the reverse!

Another difficulty in formulating a working definition stems from the fact that some attributes of the open classroom cannot be discerned from direct observation at any given point in time. Rather, they require a knowledge of the history or genesis of the event observed. For example, suppose we see in a class-

room a small group of children recording their own direct observations of a small animal. The fact that they are working in a small group and are making direct firsthand observations appears to qualify the event as "open," however, the more "open" the classroom is, the more likely it is that the activity is a consequence of a child's (or children's) spontaneously expressed interest in the topic. If the same activity had been prespecified by the teacher, independent of the children's interests, the class would be less "open." The same activity prespecified by the school district syllabus, or by state requirements qualifies the activity as even less "open." The personal testimony data generally include some information about the genesis of an activity; time sampling observations of classroom activities typically do not.

Finally, a major obstacle to an operational definition is the centrality of the theme of the quality of relationships and consequent classroom climate to the openness of the classroom. In the preliminary research of Bussis, et al (1970) and Walberg and Thomas (1971), the qualities of the teacher and child and child-child relationships are given great emphasis. The qualities of relationships attributed to open classrooms include honesty, respect, warmth, trust and humaneness. To what extent these terms refer to broad or global configurations of teachers' and children's behavior is not clear. To what extent any two observers would agree that these qualities are present at a given point in time in a given classroom is also not known.

TENTATIVE DEFINITION OF OPEN EDUCATION

The British apply the term "informal" to the practices of their modern infant schools (for children aged 5-7 years) suggesting that the events, relationships, activities and materials in the classroom are neither standardized nor routinized. This absence of formal, standard and routine procedures and processes accounts for the wide range of activities, transactions, styles and materials within a classroom and between classes, within a school and between schools. In an attempt to formulate some answers, the following list of dimensions of informal-open classroom practices is tentatively proposed.

1. Space

In varying degrees, the use of space and the movement of persons, materials and equipment within it, it is less routinized, fixed or invariable in the open-informal than in formal-traditional classrooms. In open-informal classrooms, movement may be outside of the school campus.

2. Activities of children

In varying degrees, the range of encouraged and permitted activities is wider, less fixed or bounded, more open-ended in open-informal than in formal-traditional classrooms. Activities in open-informal classes may transcend the classroom itself.

3. Locus of activity selection--teacher/child

The more open or informal the classroom, the more likely that children's activities will be pursuits, extensions or elaborations of their own spontaneous interests, rather than activities selected by teachers or others.

4. Content or topics

The range of topics or content to which children's attention and energy are guided is both wider and more open-ended than in formal-traditional classrooms.

5. Time

Time for specified categories of classroom activities is more flexibly assigned in open classrooms than in formal-traditional classrooms.

6. Teacher-child relationships.

a) In the open-informal classroom, teacher-child interactions are likely to be initiated as often by the children as they are by the teacher.

b) In the open-informal classroom, the teacher is more likely to work with individual children than with large groups. The more open the classroom, the less often the teacher addresses the whole group as an instructional unit.

c) In the open-informal classroom, the teacher is more likely to be seen giving suggestions, guidance, encouragement, information, directions, feedback, clarification and/or posing questions, (primarily during individual teacher-child encounters).

d) In the open classroom the teacher's response to undesirable behavior is likely to be to offer the child an interpretation of his actions in terms of the classroom group's life and its moral as well as functional implications. She is not likely to ignore the behavior or to exact punishment.

e) In the open-informal classroom, teachers are likely to emphasize appropriately high standards of work as in the traditional-formal classroom.

In Figure 1, a tentative answer to the questions involved in defining open education is suggested in terms of continuous dimensions on which, except for one (emphasis on academic skills and standards), open and traditional practices lie at opposite ends.

Earlier in this discussion it was suggested that one must know the history of what one is seeing in order to identify the observed event as characterizing open-informal education. Another aspect of the operational definition which cannot easily be displayed as points on continuous dimensions concerns the nature of adult and child authority in the open-informal classroom. The teacher's authority in the open-informal classroom is best captured by Baumrind's term "authoritative" (1971).

It suggests a co-occurring pattern of adult nurturance, warmth, communication, control and demandingness in which the child's feelings and ideas are treated by the adult as valid, but in which the adult also exercises control and sets limits. The adult makes decisions where his greater experience and maturity can be counted on to lead to better ones than the child alone would make. It should be emphasized here that the quality of authoritativeness is applied to the children's work, as well as to their conduct. That is to say that the teacher exercises her (legitimate) authority in guiding the children's intellectual and academic work as well as in the interpersonal relations in the classroom.

In much of the literature concerning open-informal education there is strong emphasis on achieving an open "climate." The specific cues by which observers judge a classroom climate are not clear. They appear to be related to the wide variety of activities to be seen: the "project-oriented" organization of the room*, the active involvement of children with each other and the teacher's constant guidance, encouragement and stimulation of individual and small group work. It should be restated, however, that there are almost as many definitions of the open-informal classroom as there are classrooms.

*It should be noted also that some of the open-informal education literature strongly emphasizes the importance of learning centers as a particular way of "provisioning" for learning. The learning centers are relatively permanent sections of the classroom or corridor featuring displays of topical materials, an assortment of manipulanda, assignment cards of suggested activities for using the materials and equipment displayed and an assortment of reference books and pictures. Furthermore, in many versions of open-informal education, a central reference library is a pivotal program and provisioning feature.

Figure 1

The Position of Open-Informal and Traditional-Formal Classes on Selected Dimensions of Classroom Life

Space	Flexible Variable	O-I / T-F	Routinized Fixed
Activities of Children	Wide Range	O-I / T-F	Narrow Range
Origin of Activity	Children's Spontaneous Interests	O-I / T-F	Teacher or School Prescribed
Content or Topics	Wide Range	O-I / T-F	Limited Range
Use of Time	Flexible Variable	O-I / T-F	Routinized Fixed
Initiation of Teacher-Child Interaction	Child	O-I / T-F	Teacher
Teaching Target	Individual Child	O-I / T-F	Large or Whole Group
Child-Child Interaction	Unrestricted	O-I / T-F	Restricted
Emphasis on Academic Skills And Standards	High	O-I / T-F	Low

O-I = Open-Informal Classes; T-F = Traditional-Formal Classes

WHY OPEN-INFORMAL EDUCATION?

As already indicated, there is widespread interest in open-informal education in the U.S. today, and some of the societal reasons underlying this interest have been suggested. What are some of the educational or pedagogical reasons for encouraging open-informal methods?

The strongest reason to support open education is the assumption that classroom activities derived largely from [illegible]neous and natural interests of the pupils themselves are more likely to result in positive attitudes towards school and learning than are classroom activities which are prespecified, independent of the children to be served. This assumption, however, needs to be tested.

Another reason for supporting open-informal methods can be stated in the following way. There is now some convincing evidence that it is possible to teach children the basic academic skills (the three R's) in the early years of schooling by the application of traditional instruction aided by the use of behavior modification techniques, and by intensive drill methods. But these approaches only answer the question: How can we teach children the specific academic skills they need? It is the question which is inappropriate. A more appropriate question is: How can we teach children the skills they need while at the same time strengthening and enhancing their feelings of self-respect, self-responsibility and sense of dignity--their capacity for curiosity, exploration, investigation, for tenderness, compassion, understanding and insight? Open-informal methods promise the co-occurring achievements of academic, intellectual and personal growth in children.

Research reports on comparative effects of early childhood curriculum models indicate with impressive consistency a finding known as specificity of effects: namely, children learn those "lessons" which are emphasized by the curriculum model to which they are exposed (Bissell, 1971). This consistent finding implies that open-informal education can also be expected to foster the acquisition of the lessons emphasized by it: academic skills, intellectual competence and personal resource development. In open-informal education these are a group of mutually inclusive objectives, now seen as highly desirable by a growing proportion of the practitioners and clients of early childhood education programs.

Some other reasons for supporting open-informal education, though mainly conjectural, might be considered here. Rohwer (1971) has suggested that there is no evidence to show that the day to day instruction received by elementary school pupils helps them to solve problems they encounter outside of the classroom doors. While Rohwer may have overstated his position, his report certainly suggests that

we would be wise to open up the range of activities and topics available to children in classrooms so as to provide greater continuity and generalizability between classroom and extra-classroom experiences. Open-informal education takes into account the general and individual environments of pupils and tries to help children acquire basic academic tools with which to examine, analyze, record, observe, measure, explore, grasp, recreate and organize their own experiences, and eventually the experiences of others.

WHERE SHOULD WE START?

In the present period of shrinking funds, it seems wise to concentrate our research and development efforts in open-informal education on the preschool and primary years. This proposal stems first from the fact that the main data base, such as it is, and the principle literature currently available are focused on the early childhood years. We thus have some preliminary information upon which to build. Secondly, current developmental psychology provides a stronger rationale for the suitability of open-informal methods for the younger children than it does for older ones. Thirdly, the current spread of open-informal methods is already well underway in early childhood programs, and should be strengthened in those settings where they are now developing.

Another proposal concerning R&D efforts is that a priority thrust should be toward "opening" classes which are now traditional or formal, rather than opening up new experimental schools and classes. The reasons underlying this proposal are first, that laboratory schools and experimental classes are doubtful sources of generalization to the broader educational scene. Secondly, many aspects of open-informal procedures take time to learn; formal teachers always have their pre-experimental formal routines to fall back on in case of panic; brand new classes (even if teachers have had traditional-formal experience previously) require uniquely competent individuals who can socialize their pupils to the flexible procedures quickly or else be faced with chaos. Such unique individuals can be found, but do not exist in abundance.

RESEARCH AND DEVELOPMENT TOPICS

Most specialists in open-informal education agree that qualities and competencies of the teaching staff are key factors in implementation. Research is needed which will answer the question: What pattern of attributes and behaviors characterize successful open-informal teachers? The term attributes is used here to refer to characteristics of the teacher which "belong" to her whether she is in the classroom or not. Examples of attributes are: age, sex, experience, amount and

type of training, intelligence, belief system, etc. Behavior refers to what the teacher can be seen to do in the classroom. This includes, for example, ways of responding to undesirable behavior, fluency of ideas and suggestions given to children, question-asking skills, her explaining behavior, etc.

The available literature on open-informal education tends to emphasize the importance of the teachers' assumptions about the nature of growth and learning (Barth, 1970). However, the relationships between such attributes (e.g. assumptions about learning) and their expected or assumed behavioral manifestations is largely unknown, although the work of Harvey, et al. (1966) suggests that such relationships may exist.

We also need research to answer the question: What are the psychosocial processes underlying a teacher's attitudes toward and management of his/her power over children?

Although it is generally agreed that teacher-child power relationships are a problematic issue in schools in general, and open-informal classes in particular, satisfactory formulations of the problems have not been found. There is some impressionistic evidence to suggest that some teachers resist "openness" out of fear of losing authority and control. Many observers point out that while this aspect of teacher-child relations is problematic in the U.S. it appears to be less so in Britain. For some background information on the contrasts between teaching in the two countries see Baron and Tropp (1961). Similarly, some teachers are attracted to the open-informal approach because they confuse it with permissiveness to which they are drawn because of personal historical problems with power and authority. The distinction adults who are authoritative, authoritarian and permissive, suggested by the work of Baumrind (1971) represents a useful point of departure for such research. A sharper understanding of teachers' problems in this sensitive area is urgently needed.

Given that teachers have all the intrapersonal resources and skills required for successful implementation of open-informal methods, what other factors impinge upon successful implementation? The question to be answered here is: What are the immediate causes of teacher behavior? Analysis of potential causes of determinants should include the examination of interactive as well as direct influences. For example, it is not sufficient to ask whether or not the quality of the physical plant is a determinant of teachers' behavior. The question which must also be asked is: What types of teachers are influenced by the qualit, of the physical plant? Are some teachers able to be informal, independent of the physical

setting? Categories of causes of teacher behavior should include the members of the teacher's role-set, (i.e. pupils, colleagues, peers and assistants, parents, supervisors, principals, board members, janitors, etc.). Other categories of potential causes include the physical plant, availability and type of materials and so forth. Of particular interest in this line of investigation is the pupil as a cause or determinant of teacher behavior. It is more customary to examine teacher influence on pupils than the reverse. However, such inquiry should help to answer questions concerning the effects of different types of children (e.g. self-reliant, dependent, verbal/non-verbal, etc.) on teachers' attempts to guide, stimulate and control them.

Another research question is: What are useful methods and procedures for selecting teachers for open-informal education?

Both program implementors and teacher trainers are interested in answering the question: On what bases and with what procedures can teachers and trainees for open-informal education be selected? Another way to state this is: If I have 20 applicants for 10 (open-informal education) positions in either training or teaching, on what bases and by which methods and procedures should I distinguish the more from less suitable candidates? The development of informal interview schedules, teacher observation checklists, etc., based on some reasonable constructs concerning personal resources and preferences should be developed. For example, if ideational fluency is a prerequisite skill for teaching informally, one questionnaire or interview item might be to ask the candidate to generate ideas for activities she/he would suggest to a child following his expressed interest in a given object or event. The list of ideas thus generated can be examined in terms of its length (i.e. fluency) and qualities (e.g. age-appropriateness, appeal to children, etc.).

A segment of this research might be the close study of a known population of effective teachers who are nominated by various specialists in open-informal education, such as advisors now working in open-informal classrooms, and teacher trainers from various settings.

A frequent comment found in the current literature on modern developments in British primary education concerns the role of the Headmaster (or principal) in setting the "tone" for the school and in continuous in-service training of his staff. In general, the British pattern suggests a "professional leadership" emphasis for the head teacher (or principal) which is facilitated by a long tradition of virtually unlimited autonomy. Observers of the British scene also often note the small size of the school as a contributor to the relatively small adminis-

trative demands placed on British Heads.

The reports of British leadership styles, autonomy and control, and school size (not class size) patterns suggest the need for the development of a new role for elementary school administration, namely an Executive Secretary, who is responsible to the principal and his staff for day-to-day administrative functions. The Executive Secretary would relieve the principal of administrative detail, and free him/her for in-service leadership and training. A few pilot projects in schools of varying size which elect to participate in such a project should be supported for two or three years of development. A careful documentation of the natural history of such a development project would be helpful.

Many observers of developments in early childhood education have expressed concern over its apparent reliance on the charismatic qualities of its leaders, prophets and institutions. This is a serious issue for two major reasons. First, the achievements of charismatic leaders tend to fade, if not be reversed, when they leave the scene. Secondly, the field is currently more dependent on the most attractive or charismatic leader than it is on the soundest evidence. Clearly, charisma in leaders or institutions can be associated with either desirable or undesirable causes. For these reasons, the causes of reliance on charisma, some explanations of how they "work" and how they fail, etc. should be examined.

Most of the central precepts of open-informal education are not really new to the American educational scene. Some observers suggest that one of the sources of difficulty encountered by open-informal methods in the U.S. resides in the area of school-community relations. A particular aspect of such relations in need of examination is the match between parental expectations of their school and teachers, and the teachers' and school administrators' expectations of themselves. Some parents are abandoning the local public school with disgust and launching their own "independent" or "free" schools. On the other hand some efforts to use open-informal methods in public schools are rejected by parents whose expectations of the school's role closely parallels the "military academy" model (Barth, 1970). Current literature suggests some "polarization" of the community in terms of expectations, although the size of the "indifferent center" is not known.

The research of Sieber and Wilder (1967) suggests that attention should be given to identifying the segments of a given school's community so that a full appreciation of the heterogeneity of schools' clienteles can be obtained.

There is much comment on the problems of evaluating the outcomes of open-informal education. The literature gives the impression of a dangerous

quagmire developing in this area. One strategy to consider is to employ "in-house historians." Although the case-study or documentary approach to research is generally not seen as reputable, it is recommended here, although three precautions are in order. First, the useful case-study requires a trained and disciplined worker (see Becker, 1958) as much as does any reputable research approach. Second, a case study is likely to be enhanced when the student "knows what to look for." No doubt this "knowing" is strengthened during training; nevertheless, it is reasonable to assume that the students' theory (explicit or implicit) tells him what is worth knowing. Formal theories of open-informal education have not been found, although much informal theory is attributed to Piaget. Any of the available theories of learning and development may serve for such historical case studies. Fresh theories should be welcomed. It is interesting to note that the extensive developmental psychology literature on modeling and imitation has not yet served as a basis for systematic classroom interaction research in early childhood education. Third, case studies are useful only when they are used, i.e. analyzed and cross examined for fruitful leads on further research and development activities.

With these precautions in mind, it is hoped that documentary or case studies conducted "in-house" will help to answer questions concerning what factors account for successful and/or unsuccessful implementation of the projects' objectives. The information gained by such histories would strengthen our ability to interpret the findings produced by conventional assessments of pupil learning.

In open-informal education strong emphasis is given to a creative and interesting classroom climate or environment for learning. Implied in much of this literature is that the open-informal classroom provides children with day-to-day experiences of particular qualities. These qualities include personal involvement (in an activity), and feeling states such as satisfaction, eager interest, curiosity, self-respect, self-assurance, enjoyment (of working with others), etc. Classroom observational studies which systematically assess the quality of the invidual child's ordinary or typical day-to-day experiences (or feeling states) are needed.

There is a common assertion that the open-informal classroom increases children's liking for school and that learning is another high priority target for evaluative study. A research and development program which explores the dimensions and complexities of children's attitudes toward and associations with school, and various component aspects of it seems to be needed. Comparative examination of the attitudes of children in both open-informal and traditional-formal classes would be

of interest. It is assumed that (a) freedom of choice, (b) the pursuit of their own interests, as well as (c) respectful treatment by teachers all contribute strongly to liking of school and learning. The finding of a reliable two-way prediction on these variables would strengthen this assumption. Mixed findings may lead to clarification of the true predictor variables, or suggest the nature of some mediating variables.

SUMMARY

In the preceding pages, the reader has been subjected primarily to one observer's views of open-informal education, and its central issues. It should be added, if it has not already been detected, that this observer is not optimistic about the spread of open-informal methods in the U.S., and furthermore, would not be surprised if the recent 35 years of advance in Great Britain subsided.

Finally, it should be noted that there are no problems in education which are not also problems in the rest of our society. As Thelen has pointed out:

> The classroom is a small but complete piece (microcosm) of the larger society. It is swept by the same controversies, has the same values and behavioral norms as the community... After all, the teacher and pupils live most of the time in the larger community, and they become socialized into it...they internalize its controls and guidelines, and they...employ these in the classroom. (pp. 75-76, 1971)

It seems to me that whenever I look at an educational problem, no matter how small or how discrete, I get the impression that we need a new society. But the schools cannot develop one by themselves.

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Current Research in "Open" Informal Education

by Vincent Rogers

There are a number of ideas that seem to be broadly related to the field of research and open education. In this paper I'll deal with those ideas rather than try to review current research in detail.

Essentially I'll present some of my observations, some problems that I see. I will deal with the evidence question, but perhaps not in the way you might expect. Then I'd like to talk about what you might call breaking new ground--some of the things that seem to me to be needed in research and open education.

In my presentation you will get a layman's approach to things: a different perspective than someone who is deeply involved in research would give you. Most of us working in open education are, I think, uncomfortable with the word "research." I think the main reason is that we're too busy--some of us working with teachers and children in classrooms--to get involved in this. I think the more important reason has to do with the tremendous significance of philosophy in the open education movement or among its practitioners; much of what we want for children, much of what we discuss among ourselves, much of what we say to parents is based upon a set of beliefs about education and about life that are not necessarily researchable.

I often refer to the work of Roland Barth. Barth was a graduate student at Harvard who, for his doctorate and dissertation, did a careful study of some of

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the assumptions underlying open and traditional education. Let me give you some of these assumptions as we think about the idea of philosphy and researchable versus non-researchable ideas.

"Knowledge is a means of education, not its end. The final test of a man is what he is, not what he knows. Knowledge is one part of an individual's personal experience and cannot be divided into neatly separated categories of disciplines. The structure of knowledge is personal and idiosyncratic and formed by each individual's experience with the world."

John Coe, Chief Primary Advisor at Oxfordshire, raised the evidence question thus: "You have to look at the quality of life in the classrooms." That strikes a very responsive chord in me; I think I know what he means. But it's a very difficult thing to research. I have some ideas about this "quality of life" thing; but it's anything but precise, and it's difficult to pinpoint. We're all advocates of a position, of a life style, if you will, that affects the way we view not only education but life itself.

I think an interesting study for someone to undertake would be a study of the people involved in open education, their political, religious, social beliefs, values, personality characteristics. You might find that there are some remarkable similarities. I often get the feeling when I meet people who are really sincerely into this thing, that we're part of a religious movement of some kind.

My impression is that most of us would accept Carl Rogers' description of the "fully functioning personality" as a reasonable description of what education is all about, what it is we're striving toward. This comes from his book, Freedom to Learn[1], in which Rogers talks about the goals of education in terms of the kind of person, the kind of personality, the fully functioning person, as he terms him, we'd like to produce. I will quote just a bit of this: "He's able to live fully, in and with each and all of his feelings and reactions. He is able to permit his total organism to function in all its complexity in selecting from the multitude of possibilities that behavior which, in this moment of time, would be most generally and genuinely satisfying."[2]

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[1]Rogers, Carl. Freedom to Learn. Columbus, Ohio: C.E. Merrill Pub. Co., 1969.

[2]Rogers, Carl. Ibid.

We are convinced, I think, that a certain set of beliefs, values and attitudes, whether or not we articulate them, are right and good. The degree to which we advocate these ideas, the intensity of our beliefs (and I am convinced that most open educators do believe these things intensely) obviously affects our patience and impatience with those who are unsure, uncertain or who hold strongly to other views of life and education. I see no way of changing this. I don't think I'd want to change it.

But it has something to do with our attitude toward research, and in fact, with the state of research in open education. Santayana once said "Ultimate truths are more easily and adequately conveyed by poetry than by analysis." This is no reason for forbidding analysis, but it is reason for not banishing poetry.

My guess is that most of us arrived at our beliefs about children and education not so much through the influence of research, the analysis to which Santayana refers, but rather through our own or shared experiences with children in classrooms. Having developed an educational position or rationale on the basis partly of poetry and partly of experience (a challengeable assumption which I base mostly on what I have learned from personal conversations, and from reading the ever-growing body of literature on open education), what then might we expect when we advocate change in schools?

In some cases, we might expect violent controversy; in others, irrelevant discussion--endless debate over means, when ends, perhaps, have not been fully or even partially explored.

Many of us have assumed that our philosophy is an obviously good one which others should and will accept. What I'm suggesting, and this is the first basic point I want to make tonight, is that before we turn our attention to research--the questions concerned with evidence of the success or failure of open classrooms, or even more basic kinds of research--we ought to consider the need to engage parents, school board members, principals and anyone else interested in education in his community in meaningful dialogue on questions of philosophy, morality and ethics, and the relationship of these questions to the education of children.

In the state of Vermont,I had some very interesting conversations with Marian Stroud a year or so ago about a program we were developing there which, in

fact, involved grass roots discussions in communities all over the state. This is the sort of thing which should be done before one tries to impose new programs.

In my classes we try to do things like this. A simple sort of exercise we do is to ask, "What do you anticipate things will be like in the year 2000 if things continue the way they are now? What would you want the world to be like? What characteristics and skills would we want to develop in people? What kinds of schools would help to do this?"

These are tremendously important questions; I'm not sure of the extent to which research, in the way we generally think of it, is going to help. I have largely ignored the role of hard research in open education. Let me continue to do so, only in a different way. I referred to Barth's assumptions about open education. Let me go back to a few more of them.

"Children are innately curious, and display exploratory behavior quite independent of adult intervention. A rich environment, which offers a wide array of manipulative materials, encourages exploration and facilitates learning. Children learn and develop intellectually not only at their own rate, but in their own style.

Again, most of us would agree. I think you would also recognize that Barth's statements deal with means rather than ends, and support for them can be found in research and elsewhere.

Let us turn then to the elsewhere. Notice I'm studiously avoiding getting to the kind of research that I suspect a lot of you want to hear about.

So much of what we believe makes sense, methodologically speaking is supportable not only in the work of Piaget, Bruner, Isaacs, Bernstein and others, but also in an enormously profound body of insights gleaned and recorded through the centuries. Such insights or observations have been made by perceptive human beings of almost every era who have taken the time to observe and work with children, to to watch them grow, to watch them play, to watch them learn.

I chose an example tonight from Montaigne, written in 1580. It's terribly revealing to read things like this, written so long ago. Talking about teachers, Montaigne wrote: "Most teachers never stop bawling into our ears, as though they were pouring water into a funnel, and our task is only to repeat what has been told us. I should like the tutor to correct this practice and from the

start, according to the capacity of the mind he has in hand, to begin putting it through its paces, making it taste things, choose them and discern them by itself, sometimes clearing the way for him, sometimes letting him clear his own way. If as is our custom, the teachers undertake to regulate many minds of such different capacities and forms with the same lesson and a similar amount of guidance, it is no wonder in a whole race of children you may find barely two or three who reap any proper benefit from their instruction." This was in 1580.

It seems to me that in questions of method--questions of means, not ends--we have greatly neglected this body of wisdom. I used but one example. One could have gone on, with Pestalozzi and Froebel, Rousseau and Whitehead, Montessori and Dewey and many more.

We have largely ignored this wisdom in our quest for evidence, yet I see it as perhaps one of the most powerful collections of arguments for a more child-centered kind of education than exists. What I am suggesting is that some time be spent on the sort of historical research that might make this body of evidence more accessible to teachers and others. Some of us act as though we've discovered the wheel again, and in fact we haven't. I don't know why it is that the thinking of the ages about questions like this can't be brought into it. At least it's something not to be ignored.

Let me shift gears now, and consider the research or evidence question. The British call this the American hang-up, or syndrome, half kidding us. Of course, one of their hang-ups is that they're even more terrified of research than we are, which presents some problems for them, too.

But in any case, let's approach this question of evidence, of research. In education, one of the great barriers to change is the demand that new ideas and approaches must somehow prove themselves, while we assume that the status quo is working very well. There is, in fact, a great deal of evidence to the contrary.

Let's remind ourselves again of the sorts of things that Jonathan Kozol wrote when he looked at the Boston Public Schools. Let's look again at the writings of Herbert Kohl, John Holt, James Herndon.

Remember Charles Silberman's Crisis in the Classroom, the first part of which is a study of the status of existing education in the United States, a study made by a very intelligent and perceptive gentleman. He didn't report this study

in percentile ranks, and he didn't use chi squares; but this does not mean it isn't a valid kind of evidence. If you are familiar with the Boston Public Schools at all, you will realize that Kozol spoke much more truth than fiction.

Attitude studies have long existed; and they still come pouring out, listing our failures to deal with questions of children's attitudes towards minority groups, and the whole business of human relationships.

Ample evidence exists that schools have been largely failures in this area. I have always been interested in the social studies, and I could list literally dozens of studies done in the past 20 years about knowledge and the things that the traditionalists say you are supposed to be doing (and that you are not doing if you are an open education person). Yet most of these studies tend to indicate that really nobody is learning very much. It's amazing!

Studies of children's attitudes toward school itself have almost always been rather abysmal. Go into the corridors of a high school or junior high school as students change classes and you'll see animated talk, joy, pleasure at being released, absence of talk about what they have just experienced in class. Seymour Sarason talks about this in his book[3] which I will mention later.

In virtually all of our urban areas we do math scores (as measured by standardized achievement tests) which have been going steadily downward and not upward.

So, really it's hard to get terribly enthused about the current status of education. Yet I find many adults, as we talk about open education, who fail to take this into consideration, and end up in a defensive posture.

Having voiced mostly negative thoughts up to this point, let me turn to a more positive approach. Let's look at children and how they learn. Let's look at what we know about learning in a broad, nontechnical sense, as implications for open or informal education and for traditional education. I find we use this kind of knowledge about learning less than we should in our armory of defense.

I remember a whole host of studies on levels of aspiration, and additional studies that have been made since, which showed to nobody's surprise that when failure is induced experimentally, levels of aspiration either go drastically down or go unrealistically up.

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[3] Sarason, Seymour, The Culture of the School and the Problem of Change. Boston, Mass.: Allyn and Bacon, 1971.

Regarding studies of self-concept, it's no great insight for me to tell you that when people don't believe in themselves they don't produce very much; and very bad things can happen when a person develops a seriously negative image of himself.

Studies of anxiety are highly supportive of what the open classroom stands for.

There is indisputable evidence concerning individual differences among kids, intellectually, emotionally, physically, socially.

We don't need masses of evidence on the ineffectiveness of grouping or tracking kids. There is indisputable evidence indicating the importance of concrete learning experience for young children--one need only mention the name Piaget.

Dozens of studies support the idea that things are learned best when they are directly related to the learner's interests.

Psychologists have spent years studying children's play, concluding that this is the principle means of learning in early childhood. Play develops among other things, the power to discriminate, to make judgments, analyze, synthesize, imagine, formulate, see causal relationships and develop language.

A great deal of research indicates the importance of language development and reading. Schools that tell kids to be quiet are not the kind of schools where teachers have a realization of the importance of talk, relative to the thing they are usually most interested in, which is the teaching of reading.

We know that intelligence is a very complex and difficult thing to measure. It's a pioneering field. We have identified only a few factors of what makes up human intelligence. We know about cultural barriers; we know about the lack of stability of intelligence tests. Yet in many, many schools, these tests are used way out of proportion to their value. Achievement tests I won't even comment on.

We know something about the wholeness of the human learning situation. You do not learn in isolation. Drill, tests, competition, threats, ridicule, fear of humiliation, failure: all of these have residual effects that may go far beyond the arithmetic or the spelling that is being taught at the moment.

In summary, there is a great deal of evidence to support the methodological approaches generally associated with open or informal education and very little to inspire us about the ways in which traditional or formal schools have failed through the years. We ought, perhaps, to take a more positive, more aggres-

sive stand. We don't have all of the answers, but much of the researth that exists tends to be more supportive of the efforts of the open classroom than detrimental.

Certainly one cannot assume, as so many do, that we are out on a far-off cloud building this thing on romance and poetry. In fact, I think we can defend what we are doing on much more solid ground.

Let's turn our attention now to needed research, which might further qualify the developing strengths and weaknesses of open or informal education. The research themes I will explore do not represent a systematic cataloging of what we must know; but they are personal to me, and they intrigue me.

First I'll mention that obviously somebody should do a study which involves about 5 or 10,000 kids in so-called open classrooms and so-called traditional classrooms that indicates at the end of three years the reading scores would have risen more in one than in the other. Preferably in the open; this would be a great help to many people who have to argue about open education! It's so obvious a point that I don't wish it to be one of my themes. On the other hand, obviously it would be very handy data to have.

I alluded a little while ago to Seymour Sarason and his book, The Culture of the School and the Problem of Change. Sarason is interested in what really happens in schools in a holistic way, in a nonexperimantal way, using the techniques of the anthropologists. That is a value-free participant observer approach, and it can be tremendously revealing.

Sarason had observed that kindergartners were rarely seen very far from their own room in the school building. This observation was followed by a study, of which Sarason reports: "20 percent of all the children repeated either grade one or grade two and a great bulk of these repeaters' intellectual levels clearly was not an etiological factor. The most frequently stated reason for grade repetition was immaturity. I do not maintain that grade repetition is caused by the nature of kindergarten experience, but I do wish to suggest that immaturity is not a characteristic of a child independent of the environment in which the immaturity manifests itself. Within the school culture problem, behavior is wrongfully viewed as a characteristic of an individual, rather than as an interaction of individuals in a particular setting. Is it foolish to suggest that the highly protected and insulated kindergarten environment helps maintain immature behavior? Is the children's inability to adapt to first grade in part a function of the sharpness in discontinuities between kindergarten and first grade or are the

anxieties of these children maintained in part because they remained private?"[4]

This example illustrates my first research theme. Sarason studied what he called the regularities of behavior in school. He did this not to prove something, but rather to see what is actually happening, and to use these observations as a way of raising significant questions about existing practices in schools.

Barbara Biber suggests much the same thing when she urges researchers to become more adventurous--to study, in fact, what happens and why it isn't always within a prefixed design.

Suppose we applied this concept to open or informal education. What are some of the questions that might arise if we studied or observed, for example, what principals do? Imagine someone from another culture, from another planet as Sarason likes to think, observing in a very objective way what principals do in schools.

What could we learn, not be setting up an experiment but rather by simply observing what they do?

What happens in open-space classrooms in which ends have never been discussed, in which basic philosophy, basic assumptions, have never been changed--even if the walls have, in fact, been torn down? What happens when teachers work in teams? What happens in small schools as opposed to big schools? This is one sort of approach.

A second research theme is illustrated by a study being done by one of my graduate students. He is studying three curriculum projects developed in England, focusing on their internal consistency. Essentially what he is doing is examining stated beliefs and principles which are already supported by stated objectives, which in turn are supported by learning activities that are consistent. This is an intriguing idea, as applied to other projects which have used some of the open education ideas to sell themselves. When one carefully analyzes what they are actually doing, one finds quite a degree of inconsistency. One could apply the same techniques to so-called open schools, too.

A third research theme or problem has to do with the notion of definition itself. What do we mean by informal education? There will shortly be, I am sure, a number of research studies dealing with comparisons of skills and characteristics of children in informal and formal situations.

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[4] Sarason, Ibid.

What is it we are comparing? I think it's going to be dangerous if we aren't fairly certain before making these comparisons that we are comparing two things which are, in fact, different.

I think there is a need for going on to a fourth research theme, teachers' experience to be generalized and organized.

The experience of teachers is probably one of the most neglected reservoirs of help, or verification, if you will, of what works. Yet we tend to look down our noses at this.

Fifth, I think there is need for more information about what has been called the incubation effects of learning. One of my students who was teaching in the fourth grade invited a blind high school student in to talk to her fourth graders, and it was one of the most profound experiences those children ever had. He showed them how he uses braille. They asked him questions about how he gets along, and what it's like to think, not ever having seen.

It would be very hard to measure in any way what was happening then. My hunch is that something was happening that will affect those kids in a variety of ways as time goes on. Maybe it will never be possible to measure its effects, but most of us who believe in open education are willing to look at the growth of the child over a considerably longer period of time. We have got to look at these effects and try to work out some ways of measuring.

The sixth research theme concerns the teacher and what conditions lead to her optimum development. One of the most moving experiences I have ever had as a teacher-educator was participating briefly in a teacher workshop conducted by Vernon Hale, a British headmaster who had come to the University of Connecticut one summer. Vernon succeeded in getting these teachers, by the end of six weeks, to believe in themselves as people who could do things, who could make things, who could write poetry, who could even dare. My experience has been that most American teachers really don't think of themselves as doers. Rather, they have a negative kind of self-image.

It is important to develop teachers to believe in themselves, to become what I call real professionals, because so much of what we are talking about in open education depends upon a teacher's operating in this way. How do you free teachers? How do you develop them optimally? I have hunches about this; I certainly have no research about it, but I would like to see some research done.

The evidence is not all in, and of course it never will be, not in the hard and fast, right or wrong way some people would like. Meanwhile, children are

only five or six or seven once in their lives, and decisions must be made now concerning the quality of their lives in school. And so we end where we began, recognizing the continuing need for analysis, but restating the importance of experience, intuition, philosphy and poetry in helping us develop good places for children to learn and grow.

QUESTION AND ANSWER PERIOD

Q. You said you had hunches about ways to help teachers develop optimally. Would you go into some of them?

A. Well, one of the things I observed in England--and again I hate to go back to England all the time as if this was the only place where good ideas occurred--but in any case, in England they have teacher centers in places like Leicestershire. Here they have a beautiful old manor house, and teachers--not administrators or college professors or superintendents, but teachers--go for a two-day workshop in a beautiful physical setting, with food served to them, which is very important in their ability to achieve. This is just one idea, the concept of the teacher center; and England in many ways, I think, does something along these lines.

I think it is important to get teachers much more involved in studies at an adult level and to encourage them, as was done in the workshop I mentioned, not just to get some sort of knowledge about clay but to actually get in there and make something with their hands--not to become artists, but to become familiar with the medium. Then suddenly the insight comes to teachers that they can do something.

Those are two possible answers to this; and, of course, administrators should encourage teachers to make decisions. There are an awful lot of schools where this just doesn't happen, where principals get the message across very quickly that they don't have much faith in their teachers.

Q. I teach kindergarten in an open school and we have found that it is ceasing to be called kindergarten. Do you have any ideas for a name?

A. I don't know about new names except what happens in good old England, and there you have groups of five-, six-, and seven-year-olds together in something called an infant school.

We could devise our own terminology, I suppose; but I think that in many places, as you have described, people are simply thinking, why in fact have kindergarten, as opposed to education for five-year-olds in a continuous way with six-year-olds, seven-year-olds, and so on.

Q. Do you have any ideas about how to get parents to understand these ideas about poetry, philosophy, et cetera, rather than reading scores?

A. I feel there are no miraculous ways of doing it. What's needed is time and respect for the dignity of parents and, by the way, you could say that about teachers, too.

Respect for parents, respect for their ability to deal with questions like this; I think probably one needs to organize for what one is going to do. This is the beauty of that material from Vermont. I am not sure, as I say, whether it's used on any large scale yet, but if you are interested in getting specific help on this write to Marian Stroud, in the State Department of Education, Montpelier, Vermont. Ask her for information about the ways in which they are going about this grass-roots discussion of means and ends in education. They have a packet with devices that you can use to engage people in dialogue. Essentially there is no simple answer to this. What it involves is time and talk, and you don't do it by inviting someone to come in and give a speech once; that isn't enough. I think generally engaging in genuine listening is part of it, as well.

Q. I have had considerable experience in trying to get parents involved, and in talking to them I find that trying to explain Montessori or even talking about the grade schools and attempting to educate the parents is a very difficult thing to do. I have been generally unsuccessful, largely because parents feel put down. Those who come are from the middle and upper classes. They want to know what we are teaching. They want to see what we are doing. They want to participate but don't know how.

The best way to help is provide them with tools. Structured materials tend to frighten people, and teachers themselves are insecure about giving parents instructions. We provided cybernetic systems. The tape teaches and gives instructions that the parent is there to help the child. You have to first create the feeling of wanting to work together.

A. The question you have raised has to do with a good strategy. That is, getting parents--who are often arguing on the basis of very little knowledge of what goes on in classrooms--involved in classrooms as much as this is humanly possible and raising some of the gut-level sorts of questions about what kind of education they want for children.

Q. I have 31 children who are four years old. How do I encourage an open classroom? Can I do this with four-year-old children?

A. There are all kinds of answers to the question, but we want to start off by saying it isn't easy. It isn't easy in the best of terms. It isn't easy with 20 children. It is hard, demanding, compelling work.

I think in practical terms; isn't there a teacher college where you could get help?

In other words, maybe you could be a little bit more aggressive about going to universities and telling them what you're doing and what you're trying to do; that you need help, perhaps some student teachers or even kids who are below that could come in two or three days a week. Our university does this all the time, and usually we're delighted to find teachers who will try it.

There's another possible source of help, high school kids; and even, if you're teaching kindergarten, fourth, fifth and sixth grade kids can be helpful, too, very helpful.

Q. Accountability implies to many of us more formal, checkpoint progress, growth-type techniques. You're talking about informal open classroom, implying to us less structure. Do you envision a no-man's land between the two and an eventual battleground, where the need for more formal progress and recording is going to actually confront the informal classroom situation?

A. Let me backtrack a bit. I really didn't talk much about the open classroom and how it functions, and if I implied that there is less structure, then let's quickly dispense with that idea, because there isn't. If anything there's far more structure. Maybe that depends on what one means by structure. When I visualize a good open classroom, it is in fact a very structured place, in terms of the things that are in that classroom and the ways in which the teacher works with kids.

But to get to your real question, which is, I think, are we going to find more and more of a demand for us to show parents what in fact is happening? I suspect that this is happening now, and it's going to continue to happen. This is why I said a moment ago that if somebody would come up with a massive study of reading achievement in so-called open and closed classrooms, that would be marvelous evidence to have.

I think in the final analysis some of the best evidence of what children do is, in fact, the work that they do. While I don't visualize sending fifty thousand copies of the poetry of kids, I certainly do visualize teachers sitting down with parents, going over the work that their children have done, and trying to help parents see that we have a very good picture of what their children have done through this kind of work.

This does not eliminate the possibility of working with other kinds of devices. Some people are working on developing tests of mathematical understand-

ings which go far deeper than what's generally found in the standardized achievement tests, which probably would be very useful to us.

In America we're going to have to be very concerned about this. I think those going into open education are more likely than not to drop a lot of the familiar and put nothing in its place. They have a very interesting program going on in Glastonbury, Connecticut, an experimental open-end situation. The teachers there developed a very thorough kind of report card, about eight pages long, to replace what was thrown out, which they felt was completely wrong and unfaithful to what they believed.

In Hartford, in Project Follow Through they've done the same thing--developed a very thorough means of reporting to parents, in very specific ways, about the growth of children. If you write to me, I'll send you samples of them. I think these are going to work because they're not simply saying to parents, "Look, trust me, I know what's best for your kids. I know I'm not sending any report card home, but the kids are growing, believe me." They're not leaving a void. They're filling the void with something very concrete, and it is safer for the things they believe in.

I think this is the way we have to behave. We're probably kidding ourselves if we think that everybody is going to automatically think the way we think about kids, have something like the same philosophy, just walk into a classroom and get some sense of the human relationships that exist there, and then say, "This is good for kids."

Now, this is really what has happened to me. I had gone into such classrooms and spent a few hours there, and had come away entirely convinced that I don't care what the tests told me, this is a good environment for children. I know it is. I can see it.

But there are people who will go into a classroom and say, "It's great, the kids are involved, they're working, they have done beautiful art work, and I can see the books they've written, and so on; but how do we know they're learning anything?" Well, they just told me.

But they want something else, and I suppose we ought to be prepared to give them something else. In the East Farm School in Farmington, Massachusetts, (a good open school), they've kept careful records for the last three or four years and can demonstrate to parents that the kids' reading and mathematics achievement as judged on standardized tests has been very good, better than it used to be.

Obviously, from a research point of view, that isn't the greatest re-

search in the world, but it's enough to keep those parents pretty happy. They're beginning to do the same thing now in the city of Hartford, Connecticut, where all the five-, six-, and seven-year-olds are in an open education program. They've been doing this long enough now to begin to get some data, and the data that's coming in is pretty good.

You remind me of something else, too. Implied in your question, and I don't mean any offense by this, is this notion that isn't it probable that the kids aren't going to achieve as much in certain skills areas. There's no evidence that exists now to indicate that this is so. In fact, in England they used to give the eleven-plus examination. You've probably heard about it. They used to give it even in the marvelous county of Oxfordshire, which has really good open schools. Through the years they kept track of how many kids were passing the eleven-plus, and even after the schools had gone, to a large extent, open and informal, just as many or more kids were passing the eleven-plus. Then in secondary schools in Oxford there are examinations called O and A level examinations, which are very rigid, academic exams to determine whether you go on to the university or not. More kids than ever before, proportionately, are passing the O and A levels in Oxfordshire, and that accounts for increases in population, and so on.

I don't claim that that's precise research. All I can say is that whatever evidence seems to exist tends to support the notion that yes, we're on the right track. We're doing a lot of things for kids; they're also learning some of the things that parents are concerned about.

Q. With regard to testing, I think that what is going to happen is that we'll move away from standardized testing to criterion testing, so that any educator or any parent can see where the child is right now. That way, you can set your objectives for that child. Where do we go from here?

A. One of the big questions that has to be raised with parents is: Will you be satisfied with some sort of an evaluation of your child in relation to himself, or must you know that he's doing better than or worse than other children? I think John Holt raised this question. It's very basic, and I think it needs to be kicked around. This is one of our American cultural hang-ups--that many of our parents are not so interested in what their child is doing as in what he is doing compared to other kids. That's a notion I talked about earlier, when I discussed getting into dialogues about what schools are for and what they're trying to do. I think that's one of the big questions that needs to be dealt with.

Many people assume that unless you can compare people with other people

you really don't know very much about them. That's not true at all, but it's a truism, or cliche.

Q. Would you take an imaginary walk into a classroom of 75 or so children, a good open situation, and describe what you would see?

A. Well, first of all, that's too many kids. I would say not more than 50 kids, with two or three or four adults. I don't think you can get to know more than 50 kids, even though the ratios may look right.

What would you see? You would see a lot of movement. You'd see a lot of work going on. You'd see groups of kids and individual kids working. It should be quiet, reasonably quiet. In my biased judgment I don't believe an open classroom has to be chaotic, whatever that may mean to you. There ought to be materials of all sorts around. There might be animals, but that's not essential. You can have a good open classroom, believe it or not, without gerbils.

Q. In my area, people are worried about another aspect of open education and that's the size of the classroom. I don't think it's called a classroom now, but we have open building construction, with say 125 children in an area without walls, huge open rooms. Do you have any thoughts about this?

A. I find this very scary myself; I don't like what I've seen. I haven't done any research on this, and I don't know if the kids are really learning much more, or if there are other good things that are happening. But if you want to have an open space kind of thing where at least one wall is torn down between what used to be two classrooms, I would opt for something like 50 kids with two teachers and maybe an aide. But this is strictly drawn out of my own personal experiences in classes. When I've gone into the 100-kid kind of situation even with, as I said before, a number of teachers and aides and other people, I find it confusing; I find that people don't know each other, that the warmth that I personally have been looking for tends to be lacking. Those are biases and prejudices of mine, but that's my reaction.

Q. Earlier you spoke about life-style and philosophy, and then you spoke about a situation like Hartford, where all of the five-, six- and seven-year-olds are in an open, informal school. I'm a little bothered by the idea that we inflict this life style, this philosophy of education, on everyone. How do you feel about this?

A. I think it's a valid point, and the reason it's happened in Hartford is because a very intelligent, capable and persuasive young man is in charge of the Hartford program and has managed to convince the administrators, most of the teach-

ers and a lot of other people that what they're doing is in fact right for the kids.

I think you're right, though, the notion of alternatives is probably soundest. Everywhere I've spoken about this, particularly to parent groups, I find some people in whom this strikes a responsive chord. It varies depending on the nature of the group. There are always groups to whom I speak, where I could hang from the chandeliers and quote Dewey, Pestalozzi and everybody else; and they'll ask me, as one did, "How is this going to help my kid to make a buck?" Where do you go from there?

There is a danger in assuming that we have something for all kids. If, after all the dialogue and all the discussions, people say, "No, I want something that will do these sort of things. I want my kid to conform. I want him to obey," then who are you to say, "No, we want to develop a flexible system, or whatever else?" I think you're right in that the notion of alternatives is probably the soundest one for us to work on.

Search and Research

by R. Van Allen

If open education means anything to me, it means that as a teacher I take at least a second look before making decisions about a child. Over the years, I have observed, worked with children, worked with teacher education. I've searched for new ways of answering questions about how a human being becomes a great human being through educational procedure.

In an open education program I believe that the ability to ask questions is as significant as the ability to give answers. In the field in which I work, the teaching of reading, I'm aware that some people are calling teaching reading the process of engaging children in an endless round of giving someone else's answers to questions they didn't ask. I'm through with that, and I'm taking another look for something else.

I think the time has come when all of us must challenge procedures which put children down and say, "Your questions are not significant. We can order enough questions from Boston to last six years, and so we don't need any of your questions." To be successful, open education must open up opportunities for children to ask questions. If it doesn't do that, one is merely using words to cover up poor education.

I began my teaching career on the windswept plains of the Texas Panhandle, and even then these questions began to haunt me: What is it that is required? What must human beings be able to do? What must they be personally

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in order to be educated for our society?

My first teaching assignment was in a rural school near Lubbock, Texas. I wasn't appointed to this position because of what I knew or because of my experience in teaching. I had a secondary school credential with majors in English and Spanish, and I was assigned to teach elementary school. The reason, as I look back on it now, had nothing to do with my qualifications as a teacher. The school board had a responsibility to this community to be sure that they had teachers in the school who could play the piano for church, and I could play the piano. I played for the Baptist church, Miss Hawthorne played for the Methodist church, and we had automatic dismissal to play for funerals. Well, that's the way I got started.

From there, I pursued this nagging question of what it is that has to happen to us as human beings. Some of you know that at a time when I was in Austin, Texas, at the University of Texas, I physically entered every elementary classroom in the city of Austin and had a personal interview with every teacher and every principal to find out how they viewed their roles in teaching reading.

Then I went to Dallas, to the citrus groves of the Rio Grande Valley, along the coast of California and into the desert, and finally to Arizona. It seemed that something about the move to Arizona released me to call together some of the ideas that I had been pursuing over these years. And I'm going to share in a rather personal way some of the results of this searching.

Six questions relate to what every child and adult must come to grips with if he is to function in an open-concept classroom.

A child does not have to ask many questions of himself to function in the highly structured traditional classrooms. Someone else has made the decision about where he will sit, when he will read, which books he can have, which page he will open, when he will go to the potty, when he will go to lunch, how much of this he has to have, how many pages he has to complete. Now, when you open up education, these rules should vanish, and the teacher and child must have some kind of a rationale in which they can work to understand each other, or you have chaos.

I'm very much concerned about the number of people who are saying they are moving into open education, yet do not have one sentence of rationale for open education. Whether the rationale that I'm going to share with you this morning is the one for you or not, it's one that's been very helpful to me and to others. I'm not presenting this as a panacea, but merely saying here are six questions for you and the children.

I feel that no child can function in elementary school unless he gets acquainted with this first question, which is central to education: "Who am I?" No publisher of textbooks can answer this question for the millions of children in our schools.

Answers to this question must be pursued in the human environment where children live together and love each other. The teacher's role in this may be more one of listening than of telling. If you live in an environment of love, there is time for listening. Lovers listen to each other, and when one lover arrives at the place that he asks all the questions and knows all the answers, love diminishes.

"Who am I?" cannot be pursued in an environment without love. Who am I? What is my name? How do I feel about myself when I am with others? How do I feel about myself when I'm alone? What do I want to be? How can I be of service to others? How have other people viewed themselves? In what way can I share my feelings with another person? Can I help someone by sharing my feelings and ideas about the books I write and read, the pictures I paint, the music I compose, the discoveries I make, my feelings about myself, others, society, humanity? These key words--"myself," "others," "society," "humanity"--spark personal questions to extend the human environment of the classroom.

The second question is, "What can I do?" This is a tremendously significant idea, and the open classroom provides a laboratory for exploration. Many of us don't know what we could really do if we had had a chance to try. Children at times are reluctant to enter into new experiences at school because of the pressures for high marks and excellence. Once they have achieved a reputation of "excellent," it is very difficult for them to explore new areas which could open up a world of pleasure and satisfaction and information. This is also typical of university students. They are fearful of leaving elementary education to take a course in anthropology, because they don't know the vocabulary of anthropology. They are fearful to take a course in ceramics. They're fearful to take a course in music that is not music for teachers because they don't know what they can do.

Every child should be helped to view himself as already possessing skills and abilities which will grow in the richness of such a laboratory. For each child the conceptualization process of what he can do involves thinking about what has happened and what he has imagined, and talking about what he has thought, or painting the ideas for others. The words he says when he talks can be written down.

This language is from inside out, and the curse upon American education today is the curse of making children feel that language comes from somewhere else besides personal production, that you can buy a program from Chicago and install it, and that all the good language is somewhere else--not in the child. If you are serious about an open classroom concept, you must deal with language from inside out. Don't ask me to visit your school and say, "You have a marvelous classroom," if I do not see vivid evidence that the teacher is convinced that language is from inside out and is not afraid to deal with true language of children.

The words I say can be kept and written, and they can be shared with other people for their enjoyment. I can come in contact with the ideas and language of other people. I can understand what they think and talk about without even being able to read. Every open classroom--kindergarten, fifth grade, eighth grade, wherever you have it--should have many possibilities for children who do not read well to come in contact with languages other people use. You have to have listening centers, viewing centers, art centers. You have to have places and procedures for children to come in contact with the marvelous ideas and language of other people, whether they're good readers or not. It's a tragedy that children who are poor readers are kept away from the beautiful language which is available.

I just can't understand how a teacher or a principal can say, "We'll put all the poor readers together and just keep them in basic materials." There's nothing more basic for poor readers than language which does not require that they read it. In the open classroom you'll find procedures, materials and processes that permit children to come in contact with the language of many people without being good readers. We're through with demeaning and downgrading every child who is a poor reader. It's immoral to make poor readers feel bad about themselves when there are so many ways to help them join the main stream of thinking and ideas--through writing, painting, constructing, playing, and singing. Games provide one of the best ways to introduce language patterns which are not typical of home-rooted speech.

Students who work with me have a repertoire of songs and games which introduce basic sentence patterns. And they don't buy workbooks. They take the kids on the playground and sing, kick, play and fling. All the way from the tip of their toes to the top of their heads the kids get to know these sentence patterns which have not been typical of their home-rooted language, and they can't say, "I can't say that," because they just did. For example, we wouldn't think of trying to initiate Mexican-American children into reading without being sure

that they had had many exercises in basic sentence patterns which they will find in reading. So we do singing games.

Chanting, chorusing, composing, and learning how sounds work are important. Some people buy a phonics workbook. Other teachers buy tone bells. Autoharp, piano--there are all kinds of ways to bring children in contact with how sound works. High and low, loud and soft--that's what phonics should be about. Some people think it's learning your short vowels. I defy anyone to prove to me that a person is reading in a significant way because he knows his short vowels. It has nothing to do with efficiency in reading.

I don't know if you've tried it or not, but you can take anything you're reading and strike out all the vowels. You can still read it, and yet I see children in classrooms being put down, retained and remediated. Only one week ago today, a teacher in Tucson came to me in distress because her children in fifth grade didn't know their vowels. Well, I asked her if she'd used any autoharps, tone bells or anything; "Oh, no, we use Distar," she replied. She had tried to buy vowels from Chicago, and I said, "You've got more vowels in that class than you can possibly use." The trouble is the children have not related their vowels to language.

Cooking is another kind of experience which permits children to exercise all the major features of language. The names of things, how things move, color, size, shape, texture, sound, taste, smell, emotions, contrast, comparisons--all are in cooking. You have one hundred percent participation. In some of the schools I've been working with there's a cooking station furnished as a part of the basic reading material in every classroom from kindergarten to grade six. These are used as language development centers because basic language is inherent in cooking, and cooking is a lifelong experience for men and women.

A third question is, "What can I observe and hear in my world?" When children are asking this question in school as well as out of school, teachers begin to view the act of teaching as an art of raising levels of sensitivity. This is what teaching is all about: helping every child to view his world in new ways and to have new words to describe his feelings about the world. The sky, earth, size, shape, texture, motion, feelings--this is as available to culturally disadvantaged children as it is to affluent children.

The educated person has a personal contact with the sky and earth, or he is not educated for our universe. Such contacts include experiences with animal life, the texture of the world, how motion is related to human interaction, thought,

and enjoyment--the gathering of language which precedes self expression. A teacher and children may go on a field trip to a farm. Before they write, she helps them gather words that will express the sensory impressions of this trip. Teachers who use a language experience approach extend language. That's the first line of curriculum rationale, extend language. You have to know how language grows in order to extend it. You have to know that it has nouns, verbs, adjectives and adverbs in it. If you don't know that much, you shouldn't be teaching.

Any person who extends his language has more names for things than he did. He has more words for telling how things move, and he has more words for telling their color, size, shape, texture, sound, taste, smell. He knows how to contrast and compare; if he doesn't do that, his language has not been extended, and he has not even passed the first line of a language experience approach.

The fourth question is, "How is what I observe and hear related to the print I see?" I think most of you are aware that the biggest challenge of an open classroom concept is the challenge of being able to have every child come into a realistic relationship with print so that he can do what our society calls reading, and so that he can be tested with standard instruments of reading achievement. We have to face this as a realistic issue, and I do not mind being accountable personally for this because I think there are many ways in which teachers can bring children to a realistic relationship with their world as related to print. You read to them and read with them; you take dictation so they can see their own language encoded. They read with the teacher; they read away from the teacher; they hear the language as other people have slung it together; they explore writing and see how the alphabet works for them; they relate painting to writing with personal authorship; they express their feeling, their ideas, their imagination with printed symbols as well as other media for self expression.

The fifth question is, "How can I find out what other people have said about things which interest me. How can I find out?" This is the heart of a laboratory for learning, as contrasted to stations for keeping children in place. Exploration, flexibility, and discovery are all in this question. We can never know enough.

A book center enables children to come in contact with the hundreds and thousands of ways in which people have shared their ideas through books.

The comfortable, the quiet, the personal way in which books come into classrooms make a difference in the children's feelings toward them. If they

always have to sit up straight and keep their marker, they don't develop a love affair with books. It's just the same way as the human contact which generates love. If you always had to sit up straight with eyes forward and hands folded, I doubt that there would be much love generated. With books it is exactly the same. Children have to caress them, play and talk to them, listen and maybe tear one occasionally. It's a love affair that we're seeking: listening and viewing--learning from the media which provide all of us with input of information.

The sixth question is, "What is in my imaginary world?" Imagination is a universal resource. You don't even have to wait until you get your federal project financed. It's free; it's easy to obtain; it has no strings attached. It is very easily the greatest resource that human beings possess. It is only through the stirrings of imagination in children that progress is possible. Facts merely hold a place until someone extends them, first through his imagination and then through such processes as exploring, rejecting and accepting.

Every classroom should stimulate imagination. Interesting little cubby-holes, quiet places, puppetry, dramatization, pantomime and acting out, stimulate imagination so that children think things they've never thought before and express themselves in new ways. They should not be held by convention, nor made to feel that the teacher already knows all the right things to do.

Six questions then, which may guide you in viewing research and implementation of an open classroom concept are: Who am I? What can I do? What can I observe and hear in my world? How is what I observe and hear related to the print I see? How can I find out what other people have thought and said? What is in my imaginary world, the world I can never experience really?

Valerie, a fourth-grader, summarized this for me in a little poem she wrote called "Open Your Eyes." Valerie was a "non-reader" according to the scores. She was in a school where reading was really emphasized in the primary grades, more so than in any other place I've ever known. But here she is in fourth grade with a teacher who has released her through these questions, and this is what she said:

"Open your eyes and see the world. See everything about you. The fish in the pond, the sun and the dew, the morning and the sunset, the palm trees so bright, the clouds high above that pass o'er the moonlight, the willows that blossom in the early spring. Open your eyes and see what I've seen."

And that's really all I'm asking of you. Open your eyes and see what I've seen.

Research and Assessment Strategy

by Edward Chittenden

During the past few years, staff personnel at Educational Testing Service (ETS), have worked cooperatively with some educators who are trying to do something about kindergartens and elementary schools in this country. The phrase "trying to do something" means that they are simply trying to get schools to become more responsive to the interests and abilities of children and adults in those schools. They are trying to create schools that are less controlled by institutional routines, curricular rigidities and curricular stupidities.

These educators are trying to "open up" the schools to children in the sense of introducing new possibilities and new responsibilities in learning, and they are trying to "open up" the schools to staff by introducing new possibilities and new responsibilities in teaching. Both of those have to be equally emphasized. Finally, they are trying to "open up" the schools to make better contributions to parents and other adults in the community.

So these are <u>not</u> child centered schools. They're adult and child centered schools. The schools are trying to build on the resources of both. This is important to emphasize because of certain changing aspects of American elementary education that come under the heading of open, such as: opening up the physical space; opening up the grade structure; changes in teaching. It's important to sort

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out some of these issues when we're using such a word as open.

There are all kinds of meanings of open, and there should be. But research on a conceptual level should try to pin this down in a somewhat more systematic way.

When we were working with Education Development Corporation Follow Through, and some other groups that have come under the label of open, we were studying systematically, trying to discover educators' priorities.

There are two classes of projects being conducted by ETS personnel. In one project teachers are interviewed who have been experimenting with open approaches for at least two or three years. Some of these teachers have had quite a bit of assistance in the form of advisories. Other teachers are more involved in the bootstrap operation: they've read a book, or they've been to England. For some reason, they're trying to reform their schools, but pretty much on their own.

One major purpose of the interview is to get each teacher to state his own perception of what he sees and does: objectives, priorities, definitions, difficulties, rewards, and how the general school setting contributes to these. These teachers are from kindergarten, first, second, third, and some fourth and fifth grades.

We assume, in this project, that there is much to be learned by professional interviews about the realities of change in teaching. The interviews are two to four hours in length, depending on the wordiness of the teacher, which is a characteristic, I think, of the profession. Some of them have said, "You know, it's been a long time since someone has come to me and sat down for two hours and listened to things that I think are important."

These interviews are very open ended, but are structured in the sense that a lot of planning went into them.

The intensive interview as an instrument in research has been most widely used in the past in studies of child rearing practices of parents. The obvious weakness of an interview is, obviously, its validity. What people say about themselves isn't, in fact, always what they're doing.

The strength of the intervies lies in its ability to bring out personal opinions, knowledge, perceptions and attitudes. The framework of this particular research project depends on the assumption that a teacher's behavior is affected by his perception of the environment and his beliefs about children and learning which, in turn, influences the sort of learning environment he creates.

Knowledge and belief systems are important intervening processes between

what philosophy the teacher may voice and what he actually does. It's important to study a teacher's actual behavior through observational techniques or other media in research, but for me the major problem with such methods has been that observing behavior does not replace understanding behavior. You might get a lot of data about what the teacher aide did, or about an interaction that occurred, but you still might not understand it. I know there are some places where there are massive amounts of data about teacher behavior just sitting there because nobody, for the moment anyhow, knows what it all means.

The other focus in our research has been on children. Most recently, we've been working with children in kindergarten through third grade. Our schools are often rather ordinary schools, both good and bad.

But, also, schools are trying to experiment in more open directions as well. One central question in this research has been, "How do different types of school environment affect the children?" It's an old question, and it's one that teachers, researchers, parents and evaluators keep coming back to. Another question is, "How can the effect of different kinds of school environments be assessed?"

In working on this problem, I find it useful to work with a model of the child's growth and learning that has both a horizontal and vertical component. I think of growth in terms of both upward vertical progression and breadth of experience. To simplify, if we use a test derived from Piaget's work, we might think of the stages of development as indices along the vertical path of development.

My own bias here is that the research today suggests that the openness of a program does not appreciably affect vertical growth for better or for worse; that kids are going to conserve quantity about as early or as late in this kind of program as they are in another kind of program, and children are going to attain certain logical operations at the age of eight, nine or ten, whatever the program.

There's some evidence and theoretical support for my bias, that a measure lifted directly from developmental literature such as Piaget will not be sensitive to differences in growth. I believe this is because children, in the better open programs, are moving along more in the horizontal sense. This involves the meaning of what children are learning, rather than whether or not they've acquired some concept; what they can do with a concept; what it connects to; the network of associations into which they can fit the ideas derived from classroom experience.

Further research and evaluation is needed in this area. The better school programs are having a measureable effect on children, because they're doing

so much more to associate, to make learning meaningful.

During the past year or two, we tried out various kinds of assessment procedures that we hope will tell us more about horizontal growth. Many of the procedures have not been very successful; others, however, are promising.

An area of communications we recently explored involved children communicating with each other, explaining things to each other. A second area explored was the child's perception of himself as a learner in school; a third, the use of intuition. A fourth area of exploration was the ways of evaluating children's writing. In some of the schools we were visiting, the writing seemed vastly superior to that seen in conventional third grades, where writing doesn't exist except to fill in a few blanks in a workbook.

We also explored certain scales, like sense of authorship, and linguistic complexity. These seemed to us measurable, observable phenomena of what's happening to children in such schools, and there's nothing esoteric about them. These could be assessed.

Finally, we explored testing procedures in the area of mathematics--the development of understandings of quantity.

It seemed to us that when we used real objects to ask children problems in measurement, the children floundered in a way that they didn't when we asked them with paper and pencil.

So I think the dimensionality of the testing--at the younger ages, anyhow--is a very important factor to consider, particularly in math and sciences.

Perhaps more important than the dimensionality is the examination of the child's ability to judge the requirements of the test, to be conscious of his own capabilities, and then to act accordingly. Our clinical impressions are that a great many children in the conventional program operated with sets of poorly formulated rules that they had only partially assimilated. Although they went about the task willingly enough, whether the task dealt with measurement, or probability, or counting, their behavior was often not very sensible. Thus, they could tell you that their own height was four feet, but they would guess the height of the table to be five feet. They would say in their workbooks that three times four was twelve, but they would itemize the legs of three actual chairs, rather than multiply.

We have no clear data yet, but I hypothesize that in the more informal programs which involve children as desision-makers in learning, children will approach such problems with a better sense of their own capabilities. Now, they may not come up with the right answer. I don't mean that. But their approach may

manifest more awareness of their own capabilities.

I remember, for example, one boy in an open school who happened to come up with the right answer in the toughest little counting task of all, and that was the cube of 27 small cubes. I watched him go about it, and I said, "Well, how did you do that?" He said, "Well, I could see there are nine in each layer. I knew nine and nine are eighteen. I didn't know three nines, so I went," and then he pointed to each of the cubes on the top layer and he said, "then I went nineteen, twenty, twenty-one, twenty-two, twenty-three, twenty-four, twenty-five, twenty-six, twenty-seven. I came up with twenty-seven." But what impressed me here was he looked at the task, he thought about what he knew, he put the two together, he made a judgment and he came up with a solution. For another child, another procedure might have been appropriate on that task; but what interested me very much was this exercise of judgment, the awareness of one's own capabilities, and bringing it into the problem. I was asking another boy in the same school some estimation problems about how high the ceiling was, how long the school bus was, and so forth. He went at it willingly enough, using his own body as a point of reference. Later, after several more of my questions, he said to me, "Are these questions really so important?"

This was an example of bringing self into what you're doing, and I said to him, "Well, we want to find out how children think about these problems, the difficulties and so forth." "Okay," he said, and then continued; but I rarely encountered that in the conventional schools.

Of course, depending on testing procedures, that attitude can also deflate your scores. It doesn't make the child come out with poorer results. But he looked at me and wasn't being fresh. He was just saying, "What's the point of these questions?" I had to struggle there for a moment, because I had lost sight of why I was doing it to begin with. So it was good for me.

I'd like to add one final word on assessment of how the child goes about bringing himself into the task. Let's continue with counting as an illustration. You might characterize the ages of four to seven as ages of acquisition of the skill of counting. Different children go about learning it in different ways, at varying rates.

By eight, nine or ten, most children, when asked to count something, understand pretty much what you're asking them to do. You might think of the ages of eight, nine and ten as being a stage of consolidation of this particular set of skills.

The strategy I'm suggesting seems to me to apply to many skills and other areas. When assessing the meaning of an activity for children (going back to horizontal growth), research data and evaluation can give very different pictures, Depending on whether the skills or abilities you examine are in a stage of acquisition for the age you're dealing with, or in a stage of consolidation. Thus, if you give a counting test to kindergartners, results might correlate with I.Q. tests, with educational background of parents and so forth. Among other things, with kindergarten children, you measure the differences of understanding the problem.

But if counting is used in thrid grade, which represents developmentally a consolidation phase, I think you've a better chance of looking at what counting means. You can look at the versatility of the skill, and the application of it in many ways, in many directions. And so, we develop testing or research procedures to try to obtain data that reflect not whether a child can pass a test, but how he goes about it, how he uses it. I think it makes quite a bit of difference whether you're dealing with capabilities of consolidation or acquisition.

A very strong case has been made for testing later on, when into a consolidation period, if, indeed, you have to test.

What's Open about Open Programs?

by John Dopyera

Since I have spent a good part of the past few years attempting to measure program structure, as well as attempting to relate variations in program program structure to what children get from the program, I should, perhaps, begin by describing what some of my concerns have been. After describing these concerns, I'll discuss the measures I have been working on, and some research regarding them; then I'll briefly indicate some implications.

There are two rather different points of view within the group of proponents of open education. The first is that open education, as defined by any given proponent, is a good thing, so let's get on with it and do a good job. The second point of view is that open education is an alternative to more conventional programs; it will be useful to determine how it is different, and ultimately, whether the consequences deemed desirable do, in fact, actually occur.

I am clearly associated with this latter group. I hold that programs for children have definable, identifiable characteristics, and that openness is one such characteristic.

Therefore, the issue, for me, is in what are some ways of assessing openness, and answers to this question will allow the further investigation of the

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consequence for children who participate in the programs which are more open versus those which are more closed.

Don't misunderstand me. I'm a clear proponent of open education. However, this is a factor in my research only inasmuch as it has motivated me to pursue certain kinds of program documentation constrasted with other kinds.

My concerns have been that, if we as a society are spending billions for programs to benefit children, we certainly need some evidence that the programs make a difference. At the present time, this remains mainly an assumption. We have little evidence that specific programs make more than a temporary difference in children's development and learning. The most striking evidence of program effects that we have accrued today comes from the highly manipulative programs of behavioral modification and enforcement, which focus on relatively molecular objectives.

There is all too little evidence of effects for children from the kinds of programs that I personally prefer. Those are programs which have more options and thus--theoretically at least--ought to affect greater cognitive as well as social development in children.

I have been very concerned that the majority of the programmatic research that has been done has focused on experimentally simple programs. More complex programs which produce greater growth are virtually impossible to do experiments on and, therefore, don't get researched.

We, therefore, have a paradox that when there are decisions to be made on kinds of programs to fund or adopt, the prepackaged, simple-minded programs get the money.

I have already implied something about programs, program structure and other factors. Before I continue, let me pause to define some of these terms as I use them.

When I use the term "program," I refer to an event which is purposely established, has continuity, and which has aspects which are encountered, or may be encountered, by the participant. "Program structure" refers to the facets of a program which impose constraints on participants, for example, the time constraints during which certain kinds of behaviors may occur. "Dimensions of program structure" refer to the product of a program analysis which would specify the components of a given program, or similarities and differences of programs. Openness is a dimension of program structure of concern in the discussion to follow.

If one is to determine the extent to which one program is alike or different from the other, or to determine consequences of programs for children, specificity becomes essential. Referential specificity is often something a researcher must impose upon a phenomenon to be examined. This is especially true when studying programs, because program planners and implementers often use labels in a very non-precise way. Many programs which are, in fact, different are called by the same name, or described in the same way. Also, many programs which are referentially the same are often described in different terms.

One is usually in a position of inferring what a program is from the label, rather than knowing what a program is by some objective description. In this regard, let's look at some of the potential synonyms for open education: British Infant School, individualized instruction, informal education, Bank Street Model, child development model, EDC model, responsive day care, responsive environment, continuous progress, family plan, integrated day, schools without walls, free school, Summerhill school, architecturally open schools, British primary school, open plan school, Leicestershire plan, integrated curriculum, non-graded schools, ungraded system, progressive education, affective education, Parkway program, life-adjustment education, open learning environments, vertical grouping, humanistic education, North Dakota plan, infant school, Nuffield math, activity centers, informal teaching, learning centers, flexible model, street academies, responsive instruction, unobtrusive teaching, flexible curriculum, interrelated studies, Piaget-based curriculum, experiential approach and unscheduled or unstructured day.

Each person could double this list off the top of his head. Each of these terms is assumed to have some relationship to some version of the concept of openness. But, in any given program, which version of openness is it, and what is it the children are encountering?

Regarding any particular program, or program type, how do you know without visiting, or even after visiting, how open it was; how it compared with any other open school; or for that matter, how it compared with any other quasi-open or convential school?

As many of you know, some open education terms are used interchangeably, some are not used at all regarding a program which may actually be the same in most respects as another program which has a similar label. And, often, these terms are used to designate programs which in virtually no way resemble programs otherwise described as open.

For example, several relatively conventional public school programs in Syracuse are referred to as an experiment in open education, following Commissioner Nyquist's endorsement of such a plan. They are referred to as open, even though children are all the same age, contrasted with multi-age to family grouping; the classroom day is time/subject segmented instead of integrated; there is a total division of labor between administration and teachers; there is little variety of materials presented for children's use; there is little accessibility to those materials which are present; success of the program is determined by normative group-administered tests, contrasted with an individual child's growth, pitted against himself at a prior time. Phasing-in or staggered entree is absent, as is differentiated space in the program. I think the program in Syracuse is no different than many examples of which you are aware.

Although labels are easily attached to programs, especially popular programs--and open education is a prime example--more precise means are necessary to get at the question of the ways in which any one of an assorted set of programs classified by that label is actually similar to, or different from, other kinds of programs.

We have a lot of programs around these days. Some programs are thought, for some reason or another, to be alike in some ways; some are thought to be different. We attach labels and then proceed to draw conclusions about the effects of these programs on children. I think there are at least two fallacies here. The first is that we continue to think we know what programs to provide for children, when in many cases we don't. And, second, based on the first fallacy, we draw conclusions about the effectiveness and desirability of programs.

To summarize, my concern has been to take a close look at what goes on in programs, beyond the labels, with the goal of eventually better understanding the different kinds of impacts which are made on different children through participation.

As a final introductory point, let me tell you one of my biases. It seems to me that open education, if it is anything at all that can be distinquished from other approaches to education, is a potential. A potential for something to occur as contrasted with the impossibility of something's occurring. In addition, it makes sense to me that there be a relationship between what occurs and what a child needs to have occur.

I would now like to discuss some of my efforts in dealing with these concerns both in instrument development and related research, and the relevance

this work may have for you.

First, I'll briefly describe a procedure which I call a "program structure index," and then I'll describe a specific version of the procedure: the open program structure index, or what I call the "OPSI."

The concern of the general procedure is to characterize the extent to which it was or is possible for a specified behavior activity or event to occur. The question addressed is: What is the probability that if a child had a need or an interest, it could be met by the program? The procedure requires first a specification of criteria in which one is interested. These are usually stated as behaviors, activities, or events, which might be seen as desirable or beneficial.

The second requirement is a description of the program as it is typically organized in time, or as it occurred on a given specific day. This description requires a format with specified time boundaries within the program, and "boundary" here refers to the expectations of the teacher for what may or will occur and when. The program description may be provided by a teacher, administrator, program planner or developer, or anyone knowledgeable about a particular program.

The third requirement is the thoughtful characterization by the respondent of the extent to which the behaviors, activities and events which are used as criteria may occur, without negative sanction within the program day. The respondent in summary must decide what behaviors, activities and events he is interested in indexing, how the program is actually organized, and then, by thinking through his own expectations, the extent to which it is possible that the behaviors, activities or events may occur in the program as it is.

The "Program Structure Index Procedure" (found on page 1 of the Appendix) shows an abbreviated version of the general procedure. You will notice under A that some illustrative criteria are specified: in this case, running and moving, talking informally, working with math materials. These are examples of behaviors that a program planner, researcher or teacher might find desirable to index. Section B depicts the daily time schedule of a hypothetical kindergarten.

The assumptions made by the teacher-respondent of the hypothetical program are indicated by the ratings in Section C regarding when the behaviors and activities are okay to occur, that is, when she would not negatively sanction their occurrence.

You will also notice in this example that the teacher-respondent used

"plus" to indicate that it's generally okay for the behavior to occur, and "zero" when it's generally not appropriate from her point of view for the behavior to occur.

The program structure index is then scored by converting all ratings to the time they represent. The time during which the behavior, activity or event is possible is then added and becomes the numerator for determination of a percentage. The denominator is the total time of the program day.

In this particular example, you will note that of the three criteria indexed, running is potentially okay about seventeen percent of the time, talking informally with peers fifty-six percent of the time, and working with math-related materials twenty-five percent of the time. The percentage indicates the extent to which a specified behavior activity or event can occur during a typical or a given program day.

Another way of viewing the percentages, of course, is as a probability statement. Let's go back to the original question for a moment. What is the probability of the child's need or interest being accommodated or met by the program? In this example, interest or need to run is accommodated by the program, or more specifically by the hypothetical teacher-respondent, less than twenty percent of the time. Talking informally with peers is accommodated approximately fifty-six percent of the time, and working with math materials twenty-five percent of the time.

The probability that a child would be negatively sanctioned were he to initiate running behavior is very high--eighty percent of the time. While these characterizations are only illustrative, I think they show you generally how the procedure works, and some possible interpretations.

Again, what is indexed by this procedure is the extent to which the respondent would accept without negative sanction the occurrence of a behavior, activity or event, were it to occur. It says nothing about whether the behavior or activity did, or will, occur.

It is at this point that the procedure differs from other procedures which attempt to document program structure, and variation between programs in structure. This procedure documents possibility, not actuality. The question addressed is: What is the probability that if the child has a need, interest or concern, or wishes to behave in a particular way, the behavior could be accommodated or met by the program, without negative sanction?

Let me now describe a specific version of the general procedure--one

which is concerned with openness. I call this the Open Program Structure Index, or OPSI. Relative to the first requirement, a number of behaviors, activities and events are specified. While different items were tried out, a few specific items have been used for most of my research. (These fifteen items are listed on page 2 of the Appendix.)

Let's go through them briefly together: Go to the bathroom; get a drink of water; rest; be left alone; have privacy; move freely around the room; practice large muscle coordination; practice fine muscle or eye-hand-coordination; run; play with peers; chase other children; talk informally with other children; receive responsive, undivided, individual attention from the teacher regarding something important enough to the child to initiate contact with the teacher; informal involvement in dramatic play, music, art, math/science, writing, and reading.

The definitions provided to the respondent regarding informal involvement should be noted. These items didn't come out of thin air. They reflect one point of view regarding optimal conditions for human development and learning. This point of view makes the following assumptions: a child cannot engage in optimal learning if basic physical needs are not met, that is, if he has excessive discomfort from hunger, thirst and so forth. A child cannot engage in optimal learning if there are few possibilities for encountering diverse materials and situations. A child cannot engage in optimal learning if he has little access to equipment, materials or persons which are present in the program setting. A child cannot engage in optimal learning in situations in which adults do not provide symbolic feed-back: that is, abstractions, such as words or classifications which serve as tools for differentiating experience, indirectly or through modeling.

I might comment that these four assumptions follow from the assumption made by J. McVicker Hunt when he talked about optimal degree of discrepancy.

A child cannot engage in optimal learning in situations in which the available and accessible materials, as well as feed-back, provide no opportunity for a match.

Those familiar with the literature will note that these conditions are similar to, but not identical with, the assumptions listed by Roland Barth in his Harvard dissertation.

The second requirement is a specification of the program as it occurs on a typical day, or as it occurred on a given day. (The format usually used is shown on page 3 of the Appendix.)

Were you the respondent, you would be asked to indicate three things about the program you were describing: what occurs, when does it occur, for how long does it occur? Stated another way, you would briefly label each portion of your program day, indicate the time during which it occurs and then, under TT, which stands for the total time, the amount of time in the time period.

The third requirement is for ratings to be made for each criterion used, and for each time period described in the program.

The rating sheet (page 4, Appendix) contains space for rating each of the fifteen criterion items relative to each of the time segments specified in the program description. Were you the respondent, you would mark a "plus" if the behavior or activity were permissible during a given time segment, and a "zero" if the behavior were not permissible (that is, if you would negatively sanction the behavior if it occurred).

To score the OPSI one has only to transfer the time that each "plus" represents under the scoring sheet (page 5, Appendix). The times for each behavior criterion rated are then added and recorded in the space below. Each is then divided by the denominator, which reflects the total time on the program day. The resultant score reflects the percentage of time during the program day in which the respondent allows the behavior to occur without negative sanction.

These are the essential steps in using the OPSI. To date, the OPSI has been used to index openness in several kinds of schools and early childhood programs. Pre-service and in-service teachers, as well as administrators, have described and rated both actual and hypothetical programs. Let's look at some of the results.

First of all, individual items and combinations of items appear to be metrically adequate. The same program is described and rated in similar ways on subsequent occasions by a given respondent. And different respondents rating the same program have relatively high agreement. In addition, ratings made of programs with known structural differences produce different scale scores.

For example, two day-care programs were characterized with the OPSI criteria (page 6, Appendix). The responsive care program was developed and implemented by Margaret Lay. The other program is a rather typical suburban day care program. The programs both run for ten hours a day. You will notice that, although there are some similarities, there are also some obvious differences.

Even a cursory examination of this graph, using the given criteria of openness, shows that the probability of the program accommodating a child's

interest or need, were the interest or need to occur, is much higher in the responsive program than in the traditional program.

Another finding is that when we use the OPSI with teachers from different grade levels, we find the children encounter less openness as they get older. That is, the probability that an interest or need would be accommodated by a program is much less if the child is a sixth-grader than if the child is a kindergartner. This finding is not surprising. It does, however, provide additional confirmation of the validity of the OPSI.

It also points out a seeming paradox in education in America today. As children grow older, and are presumably able to take advantage of more options, they encounter fewer options.

Another finding that may be of interest concerns how much openness is planned for by pre-service teachers. In a study I conducted last year, using the OPSI as a dependent measure, two kinds of influences on planning for openness were determined. In this study, school organizational climate was simulated. Student teachers who were assigned as new teachers to traditional schools planned for considerably less openness than student teachers who were assigned as new teachers in schools simulating the infant school setting.

Of equal interest to me, inasmuch as I'm concerned with teacher education, was the unplanned-for finding that student teachers who are assigned to more innovative school settings, contrasted with conventional student teaching placements, plan for more openness across-the-board.

In general, then, the OPSI appears usable for indexing a full range of programs, reliably and validity. However, it appears to work better with respondents with some experience in planning and implementing programs, than with persons of little or no experience.

For example, undergraduates with no experience ask more questions on how to do the task and more questions about the items being rated than do undergraduates after a practice teaching experience, and/or experienced classroom teachers, for whom the task is an obvious one.

Use of the OPSI has also demonstrated that the procedure meets a number of criteria which indicators of programs should meet, if they are to be both theoretically and practically useful.

The procedure is inexpensive, both in cost and effort. Most respondents describing existing programs complete the task in less than an hour. And the materials cost less than a penny. Of course, respondents describing hypothetical

programs take longer. The procedure can be expanded to include any behavior, activity or event that a particular researcher, program developer or monitor, or teacher wishes to index. For example, I use the proc[illegible]e to index child access to activity areas and materials in the classroom.

The OPSI format is also adaptable to the purpose of rating components within a program. OPSI can be used as a totally self-report device, or in conjunction with an interview proceeding, or subsequent to classroom observation.

The OPSI produces a descriptive, contrasted with an evaluative, index. How much openness is present in a program is described. Whether a given amount of openness is good, bad or indifferent is not, at this point, the issue.

These last two points, the descriptive, contrasted with the evaluative emphasis, as well as the ability to collect data via many methods, make the OPSI especially valuable to enhance communication via specificity. In this regard, I see the OPSI as equally useful for teacher education, program development and planning, and administrative quality control of a program, as well as for research.

There are some disadvantages to self-report procedure, using self-ratings and self-descriptions. These are always subject to faking, and to social desirability biases in reporting. The ratings, themselves, are sometimes subject to distortion: that is, when is a plus a plus and when is a zero a zero; what does "generally okay" and "generally not okay" mean in a specific instance? There are also instances in which respondents have asked for clarification of the meaning of the items, especially informal involvement.

A further limitation is that, in its present form, using the fifteen criteria as they are, the OPSI doesn't adequately discriminate some of the qualitative differences in facets of programs. This limitation, of course, can be overcome with greater specification of the criteria.

What, then, is open education? From my point of view, what makes a program open is the possibility of the behaviors, activities and events occurring. While the specific content of open education programs may vary, the degrees of freedom for behaving, and the relative presence of opportunity for diverse involvement does not. The procedures in research I have described today represent an attempt to measure this facet of openness.

Appendix

Open Program Structure Index (OPSI)

by

John Dopyera

ERIC Full Text Provided by ERIC

ILLUSTRATION OF PROGRAM STRUCTURE INDEX PROCEDURE

Key to Ratings:

+ generally OK for behavior, activity or event to occur

0 generally not OK

B. PROGRAM DESCRIPTION		A. CRITERION ITEMS (EXAMPLES) C. RATING			D. SCORING			
		RUN OR MOVE RAPIDLY	TALK INFORMALLY W. PEERS	WORK WITH MATH MATERIAL				
8:30- 8:40	Arrival	0	+	0	10	0	10	0
8:40- 9:00	News/Sharing	0	0	0	20	0	0	0
9:00- 9:45	Activity Period	0	+	+	45	0	45	45
9:45-10:00	Discuss/Share	0	0	0	15	0	0	0
10:00-10:15	Snack	0	+	0	15	0	15	0
10:15-10:45	Outdoor Play	+	+	0	30	30	30	0
10:45-11:05	Story	0	0	0	20	0	0	0
11:05-11:25	Music, Rythms	0	0	0	20	0	0	0
11:25-11:30	Dismissal	+	0	0	5	5	0	0

Time for behavior, activity or event	35	100	45
Total program time	180	180	180
Percentage	19.4	55.6	25.0

BEHAVIOR AND ACTIVITY CRITERIA INDEXED WITH THE
OPEN PROGRAM STRUCTURE INDEX
(OPSI)

A go to the bathroom

B get a drink of water

C rest, be left alone, have privacy

D move freely around the room

E practice large muscle coordination (except running)

F practice fine muscle (eye-hand) coordination (other than with pencil or crayon)

G run, play with, tease, chase other children

H talk informally with other children

I receive responsive, undivided, individual attention from you (as the teacher) regarding something important enough to him to initiate contact with you

J informal involvement in dramatic play

K informal involvement with music (singing, dancing, rhythms)

L informal involvement with art (painting, clay, woodworking)

M informal involvement in math, science, nature

N informal writing

O informal reading

NOTE: informal means that there are options present and that children may choose from these options

involvement implies that space and materials which facilitate participation are provided

PROGRAM DESCRIPTION SHEET

TIMES	PROGRAM DESCRIPTION	TT

TOTAL TIME (MINUTES) ___

RATING SHEET

BATHROOM	DRINK	REST	MOVE FREELY	LARGE MUSCLE	FINE MUSCLE	RUN-TEASE	TALK INFORMALLY	ATTENTION	DRAMATIC PLAY	MUSIC	ART	MATH-SCIENCE	WRITING	READING

OPSI SCORING SHEET

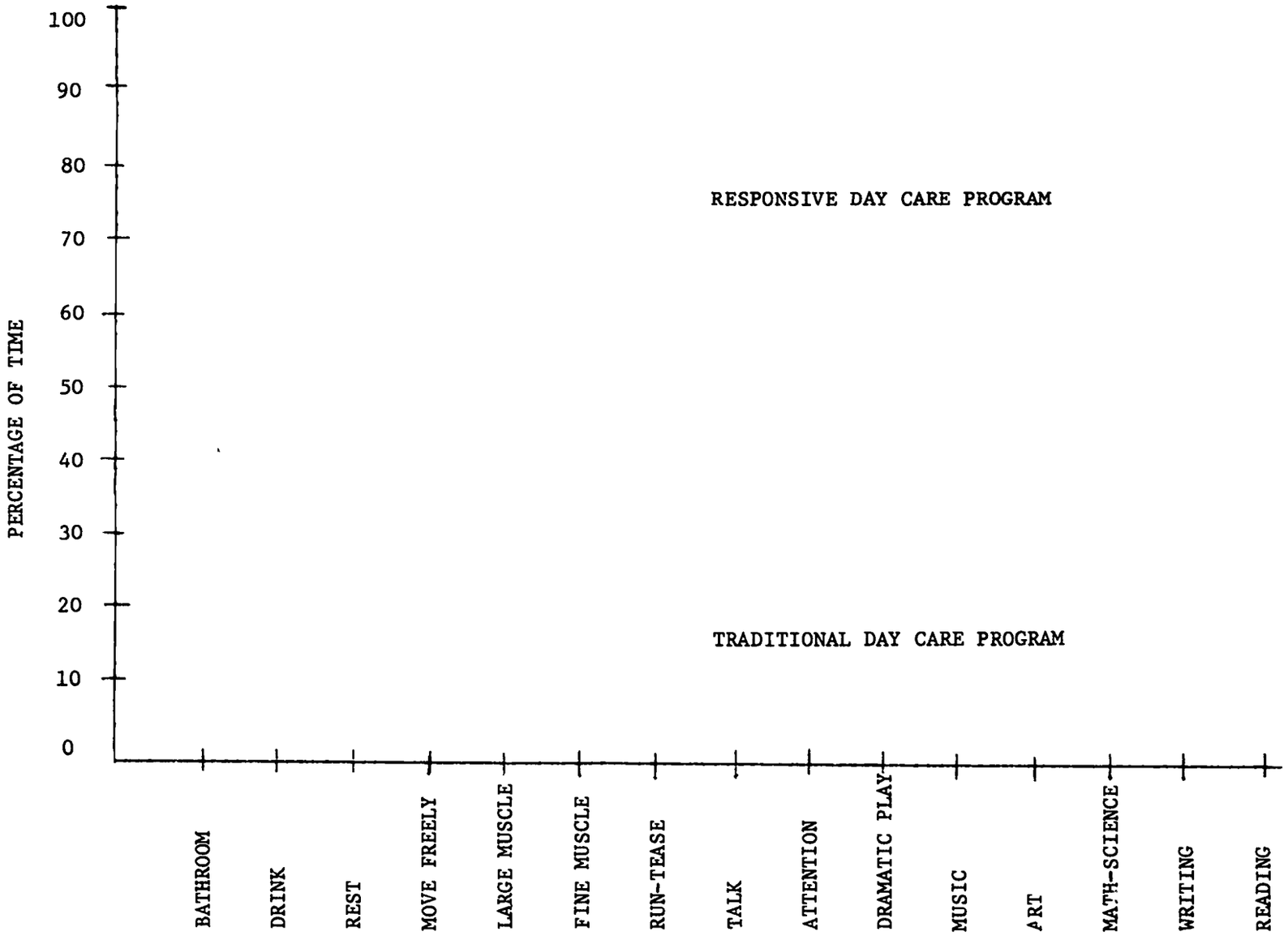
BATHROOM	DRINK	REST	MOVE FREELY	LARGE MUSCLE	FINE MUSCLE	RUN-TEASE	TALK INFORMALLY	ATTENTION	DRAMATIC PLAY	MUSIC	ART	MATH-SCIENCE	WRITING	READING

TIME POSSIBLE TO OCCUR

TOTAL PROGRAM TIME _____

PERCENTAGE

A COMPARISON OF TWO DAY-CARE PROGRAMS ON OPENNESS
WITH 15 CRITERIA FROM THE OPSI



British Primary—Locus of Leadership

by T. Darrell Drummond

I'm approaching the topic of locus of leadership from two dimensions. One dimension, which I'll go into rather briefly, concerns the national and world-wide influence of the British primary school experience. The other dimension, which I will discuss at greater length, involves residual leadership, or school leadership at the local level in England.

I think we must recognize that what has happened in the last twenty years in the British primary schools has had a tremendous impact on the English-speaking world. When I was studying as a full-time student at the University of London last year, I found that there were many people who had come, as I had, primarily to find out more about the fantastic things we had heard.

We need to recognize the impact and repercussions of the document known as the Plowden Report, Children and Their Primary Schools.[3] The first of the two volumes is descriptive, the second contains surveys and research statistics. The first volume was produced after Sir Edward Boyle, in 1963, formed the Central Advisory Council of Education for England, with twenty-five members. This was a parliamentary commission. The volume cost a hundred and twenty thousand pounds, approximately half a million dollars, to produce, including all expenses and printing.

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The document itself includes the results of the twenty thousand British primary schools that were surveyed. "Infants" refers to children from five to approximately eight. "Juniors" refers to children from eight to eleven plus, as the English term it. Infants and juniors are all together under the title of "primary school." We would call it elementary school, but this term is anathema in England. They dropped it completely from all the literature in 1944 as a result of the Education Act, because elementary education in England means "training one to perform useful work in the local factory," and they have taken, of course, a much broader view in terms of the level of education in England in more recent years.

Lady Bridget Plowden submitted the report as Chairman of the Committee in October of 1966; the two volumes were published in January of 1967. The one I have in my hand is the Sixth Printing, so far. This tells us something about the demand for this particular book.

It rates somewhat below the status of a British White Paper, yet its implications and its impact have far exceeded any White Paper, including the Suez Paper, that has come out of England in the last twelve years. In fact, it is the foremost of the two documents. The other one, I think, that was internationally read with a great deal of interest, was on homosexuality.

In scope I think we could compare the Plowden Report to our Coleman Report, but I suspect that it is far more widely-read than the Coleman Report.

However, there is an interesting parallel. One of the most controversial elements of the Coleman Report is that it flatly makes the point that the home environment is the most important factor influencing a child's success, a far more important influence than the school program. That's quite interesting when we find that the Plowden Report emphasizes that the single most significant factor in the child's success in school is dependent on the attitudes of his parents.

This finding has been studied at scholarly levels. We find the reports in most of the universities here in our country, and at the working levels. We're beginning to find the Plowden Report in many of the offices of principals and occasionally in the staff lounges, or in the professional libraries in elementary school libraries in this country.

I don't think I went into any principal's office or headmaster's office in England in which I did not see the two volumes, certainly the first one, dog-eared. It is found throughout the school; it is obviously used at great length. It is considered an authoritative reference on both sides of the ocean. And the

English, particularly the teachers, see it as a working document.

The Plowden Report isn't like the usual official document. It seems to me that from the Brigadier General to the university professors, to all of the other twenty-five that made up that Commission, they really got at the heart of the matter. They got their feeling for children into the writing of their report.

Now, I come to the dimension of locus of leadership, which I call the residual leadership. The locus of influence really resides at the local level. I'm talking about the headmaster, or the headmistress. A more commonly used term now is head teacher; this is a good generic description, in terms of the more modern and moving English school, in that the head does teach. But, however we describe it, it is still the head. I notice, in going through some of the forty books I brought back from England, that in about half of them, the head is always capitalized when it's used within a sentence. So I think the importance of the head is well-established in the minds of the British writers.

While the ultimate authority for education in England rests with the Department of Education and Science (that's what they used to call the Ministry of Education) it is delegated through the L.E.A.s (that's Local Education Authorities); then it is normally transferred to what are called "school managers" or "board of governors." This is really the small group of local people who are charged with the selection of the head.

Basically, and in actuality, this selection of the head is probably the only significant function the school managers perform. And since the head can be appointed for life, it may be a one-time affair. It is interesting, though, how a head is selected. The position is advertised nationally. It is placed in the N.U.T. (National Union of Teachers) Gazette. This union is a very powerful organization in England, I might add, which is not concerned with pay but with conditions of children.

What happens as responsibilities are delegated downward? We end up with the head having the real autonomy for the structure of educational programs in the schools. I submit, and essentially this is my theme, that it is the head that makes all the difference in terms of whether we're going to have a good school or a poor school.

Several years ago I published an article[5] in which the same theme is explored. The head may be all-powerful in the leadership or influence he wields, and in the effect he has on the lives of children. Now I want to take a look at how the head is received by the English themselves. You have probably heard of

John Blackie. He's quite famous and is the author of Inside the Primary School.

John Blackie was an "HMI," which means "Her Majesty's Inspector." These are very significant people in the hierarchy of British education. The best of them, the ones we're hearing from, ones who are helping move the schools forward, no longer perform in the inspectorial capacity, but as advisors and only upon request. Blackie says, 'The dominating influence in every school is that of the head teacher. Legally the curriculum of the school is the responsibility of the local education authority, but in practice LEAs delegate this responsibility to head teachers. An imaginative and gifted Head can transform a school despite a fairly mediocre staff, whereas an enterprising assistant teacher has very limited scope if the Head Teach- is unsympathetic."[1] I have another reference I want to cite from him: "Once he is appointed, a head teacher is given almost complete freedom in deciding how his school is to be run."[1] And again, "In no other country in the world is so much responsibility put on the head teacher, or, of course, so much liberty of decision given to him."[1]

Charles Silberman, in Crisis in the Classroom[8] discusses the structure of the English educational system in terms of its forward thrust: "A main consequence has been to insulate the English classroom from direct social pressures, which gives English teachers and heads far more freedom to experiment and innovate than their American counterparts enjoy. Once appointed, a head has almost complete autonomy over his school's organization, timetable, and curriculum."

One more quotation from Silverman: "The head is pivotal not only because of his autonomy but also because of his primary role as that of teacher--the head teacher--rather than of administrator."[8]

Tyrell Burgess, in A Guide to English Schools puts it this way: The Head is a perhaps benevolent despot, whose sway is tempered, if at all, only by interference from outside or intransigence from the staff. Normally, what he says, goes."[2]

I'm sure you're beginning to think of all the disadvantages of this if we appoint the wrong person. That's true. Burgess also says, "Head teachers in particular are probably freer here than anywhere else in the world from outside pressures of any kind, be they from the authorities or from the parents."[2] And how much some of us principals would love to feel that we had that kind of autonomy!

This brings us to the obvious point of comparing English and American schools. I would like to quote from an article by Vincent Rogers: "I refer to the relative freedom that English teachers and headmasters have to develop the kinds of

educational programs that they, as professionals, deem right--with minimum concern for outside pressure groups. Conversely, American teachers and principals are subject to tremendous pressure from the community, and no state-supported school can casually ignore them. This means that some changes will be easier to bring about than others. That what the lay public conceives of as 'good' education may be adopted in the schools more readily than other changes. At this point, the American public seems to see 'good' education as a hard-driving highly competitive, academic race, and educational innovations fitting that image stand a better chance of acceptance than do other innovations.

"In England, which has traditionally had an exceedingly competitive education system, the movement toward drastic change in the education of young children originated and was carried out largely by professionals, and often against the wishes of parents. This is not to say that English teachers and headmasters can do as they please. It does mean, however, that they are more independent of and more protected from outside pressures of all kinds than American educators. Vulnerability to public pressures probably causes American school people to be reluctant to adopt a child-centered approach to teaching."[7]

I think we might paraphrase what Rogers is saying here by saying, "They've got some guts and we're chicken." Because he makes the point, and it's made throughout the literature, there has been opposition to the British Infant School. There has been been a great deal. In fact, a whole society has been organized quite recently to answer Plowden from a negative point of view, to counter the impact of Plowden. Their papers are called the "Black Papers." I've collected them all at home. They're aptly named. One of the authors of them, and prime movers, happens to be another one of my professors at the Instutute of Education. So, I assure you I had a well-rounded experience at the University of England.

If you want to look more at this comparison, I recommend to you chapters 6 and 7 of Charles Silberman's Crisis in the Classroom.[8] I reviewed it again in this context, and it makes the point very well. Curriculum decisions, then, belong to the professional teachers. This is true in England in the schools that are moving ahead. Now, remember, in the more traditional schools, they are hidebound by the same restrictions that we perceive encompassing ourselves. Those that do move do so out of courage and commitment--commitment to what can be better for the children. I think we can do this in our own schools.

The why of curricular planning needs inexorably to focus on the individual learner; it leads us to look at what we know about the learner. The use of the

sure knowledge of what is known of child growth and development brings about change. The right and responsibility to make these decisions leads to action--to the revamping of curriculum, to the widening of the possibilities that response to one's own creative powers offers on behalf of our children.

Let me refer to Vincent Rogers again: "The English teacher accepts the significance of process over product in the education of each child. There seems little doubt that English teachers are greatly concerned with how the child learns, the kinds of questions he asks and the ways in which he goes about resolving them. Over the long haul, English teachers believe these strategies will prove to be infinitely more valuable than the subject matter."[7]

In spite of the poor pay which ranges from $2400 in our money to $4600 top, there is an insistence on the professional prerogative, which although limited to a minimum of resources, attains a maximum impact. By that I mean you won't find a galaxy of instructional equipment and audio-visual hardware in the typical English school. This is not the stuff of people. But the impact one recognizes when one visits these schools is significant; and I remind you again, we're only talking about good schools. We're only talking about the schools that have made significant strides forward, which various estimates have placed at from twenty-five percent to forty percent.

The English headmaster and staff in these best of English schools have succeeded in lifting the heavy hand of tradition in the most traditional and competitive English schools.

Involvement in the decision-making process and the planning and execution of truly child-centered curriculum connotes a personalizing of commitment for the success of the venture. The wisest of the English heads are those who are being most receptive to the involvement of their faculties in all curricular decisions.

Going back to Blackie for a moment, he has this to say: "It has been made clear at many points in this book that the English primary teacher carries a heavy weight of responsibility. In other countries teachers are, to a greater or lesser extent, told what to teach and how to teach it, what textbook to use and how much time to spend on each subject. In England, as we have seen, all of this is in practice under the control of each individual head teacher, and a good deal of it is decided by the individual class teacher."[1]

I would also like to quote Arthur Razzell from the section he describes as planning for informality: "To do the job properly is not so easy for the modern head, for the range and scope of studies that can profitably be undertaken by

juniors is recognized as being much greater now than it was in the past. This means that the head of a school must select priorities, or must delegate a large measure of choice to his staff. I am sure that the best policy is for the school to have a clear statement of what the head sees as the aim and scope of the work, and for him or some of his colleagues to present a fully detailed outline of a suggested course of study with ideas for development that indicate its flexible nature."[6]

I'd like to tell you a bit about a school I visited in London which seems to capsulize the Infant School experience.[4] The school is called Prior Weston Junior Mixed and Infants; it is in the east end of London, the part that had been bombed out during World War II. This is a redevelopment section. All around the school the jackhammers are going--the noises go on; the school is a little flat oasis of sunlight, surrounded by high-rises, which are called "counsel houses" in England. Generally this is what we would call an urban redevelopment. These are poor children. The school is sandwiched in between buildings which now look quite nice--certainly a far cry from the ruined tenements from which the people were forced to flee.

The entry to the school has no formality; there is no sign, actually no office; and no one is concerned about the visitors coming in. I had to wander around a bit asking children for directions. The lobby or foyer is really a part of the library. It's a staff room, it's everything. It's a crossing from which are hung a series of classrooms.

A little girl named Sandra decided to take me around, had me hang my coat up and said, "Let's get along to see the little ones, shall we?" Whatever that meant, I followed.

We went to the infant's wing, where there are five-, six- and seven-year-old children in vertically grouped classes. Some schools take children in on birthdays, some take them in every six weeks, some every three months. It's up to the head. Whatever he decides, that's when they come in. It can be once a month, when all children who are turning five will come in. That would be for a large school, where you could expect a pretty good reception class. Otherwise, you make it three months, so you get enough to make a class.

You might see the five- and six-year-olds playing chess. The ones who are playing draughts may decide to kibbitz with those who are playing chess. I thought nothing of it at the time, because you see so many things like that; but I suppose we could make much of this fact, that five- and six-year-olds can spend an

hour or two over a chess board, uninterrupted and undistracted by a multitude of activities going on about them.

Basically, the open educational plan, whatever it may be, must allow for things to happen.

There are quite a number of young men serving as reception (kindergarten) teachers. The period they serve as reception teachers may vary. Actually, the children pretty much select the class they're going to go to. The children begin to intermix over the six-weeks trial period when they first enter school, whenever this may be in the school year. The teachers notice the kinds of relationships that the little ones establish with teachers and with other children, sometimes older children, and it becomes pretty obvious where the children would like to be. So that's where they go.

You know, we have this obsession with supervision. Yet, infant children will go outside and come back in; they go out for a half an hour or an hour, as they please. These children, whom I noticed over a period of about thirty minutes, were constructing something that worked for them, so they could slide up and down. No adult had to bother. They were indoors. They could be seen, if necessary. Older children such as the juniors look after the little ones, too.

I'd like to tell you the story of a boy who was working with a calculator. Every time he would punch out a problem he would yell "twenty-seven" and then write something down. A little girl was working right beside him, children all around. Nobody paid any attention. I was the only one who seemed to take note. He kept shouting the numbers. Finally the headmaster, Henry Pluckrose, came over and gently whispered to this little boy. After he went away I asked the boy, "What did he say to you?" "He said if I don't be more quiet, he would put me out." And I said, "Would he do that?" The boy considered. "He might, you know. He's big enough," the boy answered.

There's no thing such as a total class, really, when you're talking about a level of learning. There are as many levels as there are children.

I'd like to tell you about a fantastic experiment in which a child had been talking with Henry Pluckrose (Henery, as the children call him). She had had some kind of a problem and had solved it, using a math concept. He then directed her to a little 3" x 5" card, handmade by teachers, on which she found a new problem to work. She had to discover the weight of the liquid that had originally been in a liter wine bottle. She worked most of the problem out herself. The card gave some hints and the materials to be used; but she set up the balance, put the bottle on

one side and filled it with sand on the other until they balanced. Then she filled it with water to the line Henry had drawn, then dropped ounce weights on the other side of the scale until they balanced. The sum of those weights was the weight of the water. Could our 7- and 8-year-olds do that? Would we conceive that they might do that? Do they have the opportunity to do that?

In this school, the care and feeding of children is a literal thing. Dinner is served in the middle of the day. Tablecloths are laid out by the mums, who work as auxiliaries; fresh flowers may be on the tables. The children are served. A meal is placed before them, each plate, water, milk and what-have-you. At each table, there would be a junior dining with the infants. I asked them why was this, because I thought maybe it was a supervisory function, and probably in a way it is. The answer I got from one little girl was, "Well, if they're not here, who's to help you cut the meat and show you the manners?" And that's about the say it sounded on the east end of London.

But, you see, in the vertical grouping situation, there is an opportunity for one to look out for another. Everybody needs to be needed, and the way it takes place in the helping and tutoring of a younger one can be fantastic.

Luncheon for the staff signals a staff meeting; it's held every day. It's simply a clearance of the space around the school so they don't rub each other raw as they have all these activities moving around. It's to clear a schedule, and that's about all it amounts to. Some of the staff bring their lunches; some may have eaten with the children. It's a matter of choice.

All during the conference, which took about 45 minutes, children came in and out, pets wandered in; some child climbed up on my lap when I wasn't taking pictures. These kinds of things occur all the time.

The long-range experiences that these children have, the amount of learn- that goes on and the desire to share it with any stranger walking through are just fantastic.

The children in this school live authorship day by day, and they are read to every day. This fulfills one of Roach Van Allen's twelve essentials of a language experience program--that children must hear their language used in expressive ways by someone who has mastery, day by day.

I'd like to conclude with this passage from Vincent Rogers: "Finally, one might say that the teachers and the kinds of schools I visited seemed to care deeply, perhaps passionately, about children. Children are to be taken seriously. Not laughed at or ridiculed in the staff room. Children are to be watched.

Children are to be listened to. Children are to learn from. Children are the essential ingredient in the teaching and learning process. Children make one's job exciting, challenging and truly professional. This point cannot possibly be exaggerated. It is, in fact, the day-to-day practical implementation of the intellectual rationale for a very real revolution in education."[7]

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Three Weeks in British Infant Schools

by Richard M. Brandt

Spending three weeks in the British Infant Schools certainly does not qualify me as an expert; but I think what I did have a chance to do may be worth sharing because it was a different kind of study: a very close descriptive study of two classrooms in one school, and of about twenty-four children of the approximately eighty children in those two classrooms.

Despite extensive interest in the open classroom style of teaching--especially as exemplified in many British Infant Schools, only limited empirical data can be found to indicate the precise manner in which instructional processes and learning activities are really implemented in these schools.

Last year, Lauren Resnick[1] made a start at gathering objective information systematically on infant school life, restricting her focus to the nature of teacher behavior in one school. My study extended this effort by focusing on a second school and using a more comprehensive observation and recording system which provided not only teacher behavior data but pupil data and contextural information as well.

Data were obtained principally by my own observations and by the making of PROSE (Personal Record of School Experience) records, developed by Educational

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[1]Dr. Lauren B. Resnick. "Teacher Behavior in an Informal British Infant School." Paper read at annual meeting of the American Educational Research Association. New York, N.Y., February 6, 1971.

Testing Service. The PROSE system requires an observer to focus on one child at a time for approximately two minutes each, and by using a timing device (in this case a stop watch), to code whatever categories of behavior he sees occurring at each twenty-five second point in time for five consecutive intervals. In my study, this system was used on a stratified random sample of twenty-four five-, six-and seven-year-old children in two classrooms. Nine 100-second cycles of five behavioral episodes each (a total of forty-five behaviors) were recorded for each child.

Data recorded on this sheet would be information such as whether the child was alone or in a group, who an interacting adult was and what she was doing, whether the child's contact with the teacher was verbal or nonverbal, sex of the teacher and child, activity and locomotion of the child, attention to tasks, etc.

At the end of the five observations twenty-five seconds apart, the observer then stops his stop watch, turns over to the other side of the paper and recalls the nature of the grouping, the instructional emphasis, the noisiness of the class and a whole series of specific behaviors that might have occurred on the part of the target child during this period.

In this report I will concentrate on those patterns of teacher and pupil behavior that are not touched on so frequently in other publications about the British Infant School. (Of course, many of the activities and the general organization of teachers described by Rogers, Silberman, Howson, Weber and numerous others were present in the school in which I was allowed to be a participant observer for three weeks: family grouping, child selection of tasks, expressive movement, highly individualized and small group activities, extensive use of hallways, out-of-doors, lobby and general purpose room, and many other characteristics of the integrated school day.)

Much of the teacher behavior recorded consisted of brief encounters with one child or with a small group of children as she inspected their work, monitored their play and listened to them read. The questions, directions, suggestions and reinforcements were related directly to the specific task with which children were occupied. Because of the rather informal style of teaching, I kept track of the specific nature of directions given and behaviors reinforced in order to discern whatever teacher expectancies seemed to be expressed frequently. Several became apparent.

1. Children were generally expected to have something to do. The

teacher would usually ask the child what he was doing if she noticed him wandering aimlessly around the room or holding extended conversation with another child who was busy at his own task. At the beginning of an independent activity period, she almost always asked if anyone did not know what he planned to do, then discussed the options with him until an activity was selected.

2. Children were generally expected to finish something already started before starting something else. Finishing something started often meant making a more elaborate response in beginning efforts produced and extending the child's initial thinking about what he was doing. If a child showed the teacher a picture he was painting of some flowers, for instance, she might ask him what color he wanted for the sky, or what other kinds of things grew in his garden. Other questions were raised in this fashion. The teacher did not insist on particular details being added, but the child often added to his picture in line with the kinds of responses he made to her questions.

3. Children were expected to have something tangible to show or tell to account for the time spent. Notebooks were inspected frequently. Creative products were displayed before the group with the teacher usually remarking about the progress made.

4. Children were expected to take care of materials and return items to their proper places and conditions after using them. As it was late in the school year, I saw children habituated to proper cleaning up patterns and occasionally heard the teacher ask who had left something out, as a reminder of this expectancy.

5. Children were expected to participate in group discussions and to permit others to talk. Many times when one child was telling about an experience, others would share it; but the teacher would stop others from talking until the child was finished.

Others have commented on the highly active role of the British infant teacher. Resnick's data generally confirmed this high teacher activity rate in the school she studied: the teachers having approximately one extended interaction (usually teacher initiated) and from four to eight brief interactions (usually child initiated) with various children every three minutes.

I tallied teacher interaction patterns for two 10-minute periods in each of four classrooms and found a slightly higher rate of teacher activity than

Resnick. That is, I found approximately three per minute during regular independent activities periods. During group discussions, when teachers were eliciting news, reactions and experience sharing from children, this rate was usuallly even greater.

Teacher behavior was most precisely recorded on the PROSE instrument. Table 1 presents the findings for teacher role categorizations following observation cycles. For the two teachers combined, more than three out of five observations found the teacher in a relatively nondirective role, supervising children's activities, acting as a resource person when children initiated contact and being concerned with behavior management if necessary. Another eleven percent of the time the teacher was not even in contact with the children, but out of the room or busy with other matters. Only about a quarter of the time was she involved either in discussion leadership or in a showing, demonstrating, telling role, leading most of the class in some large group activity.

The precise teacher behavior exhibited in Classrooms A and B is more explicitly indicated in Table 2, which is based on the categorization of the teachers' behavior during those instances when a target child would be in contact with the teacher. Listening or questioning the child was the most frequent type of behavior.

The most discriminating data with respect to teaching climate came not from PROSE but from a separate teacher interaction checklist I used in four classrooms, including those of teachers A and B. Table 3 presents the numbers and types of reinforcements exhibited. Over all, more than twice as much approval as disapproval was observed. Teacher A provided more than three times as much approval as disapproval, and Teacher B exhibited no evidence at all of disapproval. Only Teacher C provided more disapproval than approval during the relatively brief period of observation.

The high rate of Teacher A's activities should be noted. The total amount of reinforcement she provided during the twenty minute observation period was almost as great as that of the other teachers combined. She also tended to use a wider variety of ways for expressing approval or disapproval than the other teachers.

The PROSE instrument provided space for coding a child's contacts, not only with his regular teacher, but with other adults as well. On many days a teacher trainee or a teacher's aide was present in the classrooms. Occasionally, classes or parts of classes were combined for particular purposes and were under

the direction of another teacher in the same building. For example, the head teacher often conducted assembly programs which involved the entire school. Not infrequently the narrator of a radio or television program acted as the adult instructional director of a class, and the regular teacher played a subsidiary role.

Approximately thirty percent of all adult contact children experienced during the observations was with persons other than their own teacher. The predominant nature of these other adult contacts was of the showing, telling and controlling varieties (eighty-six percent was, to be precise). This finding did not surprise me, as the primary purpose for regrouping in classes or exposing children to other teachers was to conduct specific instruction for a particular purpose.

As noted previously, the most dominant teacher activity in both classrooms was the listening-questioning pattern. Often this took the form of a child's showing his teacher something he was working on, asking for assistance, information or permission, or telling about an experience he had had. Although the teacher occasionally provided information, reaction or direction, more often the teacher's response consisted of raising questions designed to draw the child out further with respect to his feelings, his plans or experiential details.

Because of the greater evidence of this type of elicitation of additional information in the British Infant School than in our schools it seemed important to study the specific types of questions teachers raised. A tape recording was made of a show and tell class discussion a teacher conducted one Monday morning. Although weekend experiences constituted a major portion of the content for this discussion, children were permitted to bring up anything that seemed important to them--and encouraged to talk with an opening question such as "Who has something he wants to tell us?" The teacher would ask the child responding a number of questions about the experience until a rather full elaboration of details covering the experience was forthcoming.

Typically this listening and questioning on the part of the teacher took the form of an open dialogue between the child and his teacher. Other children were permitted to ask questions, furnish additional details (if they had also been involved) and make related comments only after the particular child involved seemed to have completed his story.

The teacher would hush another child temporarily with such remarks as "We are listening to John now. Your turn will come." At other times, she would

purposely bring other children into the discussion by asking such questions as "Who else has been to the Cutty Sark?"

The frequencies of types of questions and comments made by the teacher during two approximately 10-minute intervals are presented in Table 4. The teacher used a considerable variety of questions and comments in the conduct of this discussion. For example, question type #2 was used frequently as she asked the child to repeat what he had said, "What did you say?" Or automatically she asked for reaffirmation of a statement or the feeling being expressed, "Did you?," or, "Did she?" Or she responded intermittently with reactions (question type #10) such as, "I see" or "How lovely"--sort of spontaneous reactions intended to keep the child talking by providing reinforcement for what he was saying.

As indicated in Table 4, #11, a rather low percentage of comments were directed toward other children. Number 11 (with six excluded because in six they were supposed to respond) exemplifies the dialogue quality of the interaction with the one child who was speaking at the time. It also reflects the general attention other children had in this dialogue. Statements directing other children to listen or wait their turn to speak were classified here also. Disturbing behavior from other children would have necessitated a greater number of teacher comments in this category.

A high rate of teacher questioning was found. An average of 8.3 teacher comments or questions were made per minute during the show and tell episodes analyzed (over twice the rate I found during ordinary independent behavior).

Now, a few words about pupil behavior. At any given moment, four mutually exclusive possibilities existed for the overall classification of a child's behavior: he could be in contact with an adult; he could be in contact with a peer; he could be involved with an appropriate task; or he could be distracted, responding to internal stimuli, working on an inappropriate task or actively disrupting others.

Over the entire group of 1,080 observations, children were found to be in contact with an adult twenty-nine percent of the time, in contact with a peer twenty percent, involved with an appropriate task twenty-nine percent, and distracted or responding to internal stimuli (that is, wandering, daydreaming, or working on an inappropriate task) twenty-two percent of the time.

Consistent with the notion that considerable freedom of expression prevails in the infant schools, tasks and activities permitting divergent responses were the most frequently observed types in each of the classrooms. Over all, they

accounted for thirty-eight percent of the task categorizations, whereas, convergent tasks represented twenty-eight percent of the classifications. Kinesthetic types of activities, fourteen percent; chores, thirteen percent; and fantasy, six percent.

One might well ask how typical is the infant school I studied of other infant schools and in what ways it differs from other types of early childhood schools.

The first question cannot be answered until we have comparable data from other British Infant Schools. I've already referred to some similarity with the teaching patterns Lauren Resnick found in the school she studied, although a closer analysis is not possible because of differences in our observational procedures. Obviously the infant school teacher's instructional styles cannot be stereotyped too precisely as several significant differences were found between the two classrooms in which I concentrated my study.

Two rather substantial sets of data have recently been gathered which permit a partial answer to the second question. One is a report of some 10,000 observations made with PROSE materials in Portland, Oregon; Trenton, New Jersey; and St. Louis, Missouri. This was an Educational Testing Service study conducted on various Head Start model cities early childhood programs in crowded urban areas. The other study compared PROSE data collected from Montessori classrooms with those observed in more convential classrooms. The rather superficial inspection of the findings of these two studies already indicates several distinct differences between instructional patterns in the infant school I observed and those reported elsewhere. I shall mention briefly several of these striking comparisons.[2]

1. British infant children interacted almost twice as much with their classmates as comparison group children did with their classmates.
2. In relation to the total amount of contact with adults, British infant children initiated the adult contact over twice as often as did children in the comparison groups. However, they were the center

[2]Later discussions with the investigators with these projects showed substantial differences in the use of PROSE and children's ages, which makes these findings extremely preliminary. Carefully conducted comparative studies with matched groups are needed to assess the extent of real differences between schools and programs.

of special adult attention less than half as often as compared with comparison group children. These findings support the notion that British children are truly more self-directing.

3. Listening to and questioning children was the most prevalent teaching behavior manifested by adults in both the infant school and in the Head Start model cities group; showing or telling was by far the most common teaching pattern in the Montessori and the conventional classrooms of the second comparison group.

4. The most prevalent type of task being worked on by British children was divergent in its demands, while convergent tasks were most frequently observed in each of the comparison groups. As might be expected, the smallest amount of divergent activity was found in the Montessori classes.

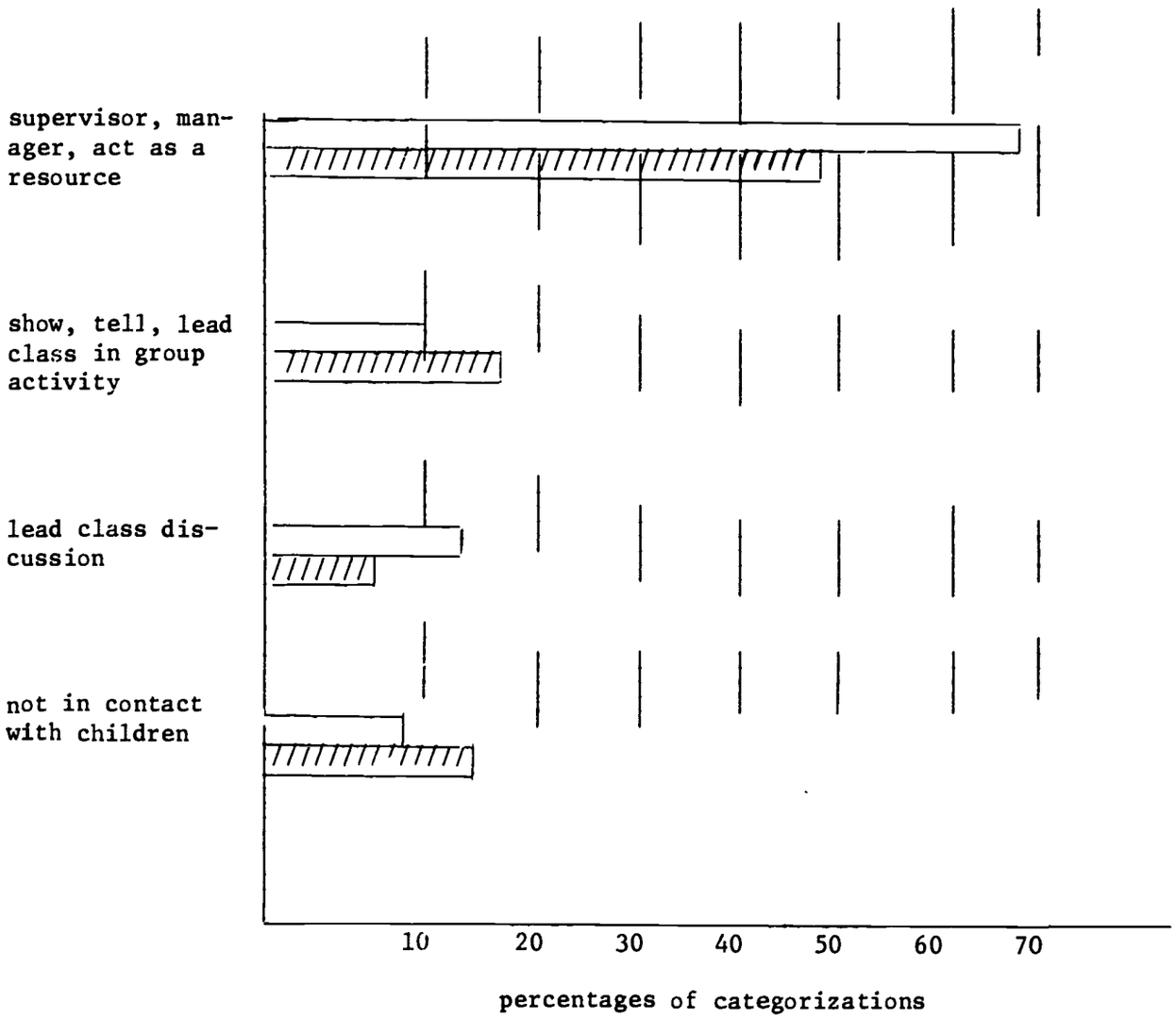
5. Approximately half of the British school day was taken up with what I categorized as a free play situation because the children worked or played on matters of their own choosing. The amount of free play was considerably less than this in each of the comparison groups, ranging from twenty-seven percent in the Head Start model cities programs to less than one percent in the Montessori schools. (Sensory training was the most dominant instructional activity in the latter.)

It is impossible to sum up in one easy statement all of the findings of this study. The school classroom, as we all know, is a highly complex place with many important interacting variables. But among the things that I learned from the study was that these teachers did have certain expectations which they regularly enforced, even though they permitted a great deal of pupil initiative and choice. These particular teachers taught me also how to interact with young children in a way that produces not only good return conversation, but, most likely, solid reflective thinking as well. Obviously, other infant schools need to be studied in similar fashion before we can generalize very far regarding the true nature of Infant School life.

Nevertheless, it was reassuring to me to find that the hard data obtained through these rather precise observational procedures tended to confirm and clarify some of the open school literature I have been reading.

TABLE 1

Teacher Role Categorizations in Two British Infant School Classrooms



(based on cycle category set #2 of PROSE with several categories combined - Brandt 5/71)

Teacher A

Teacher B

TABLE 2

Teacher Behavior in Two British Infant School Classrooms During Moments of Contact Between Target Child and Teacher

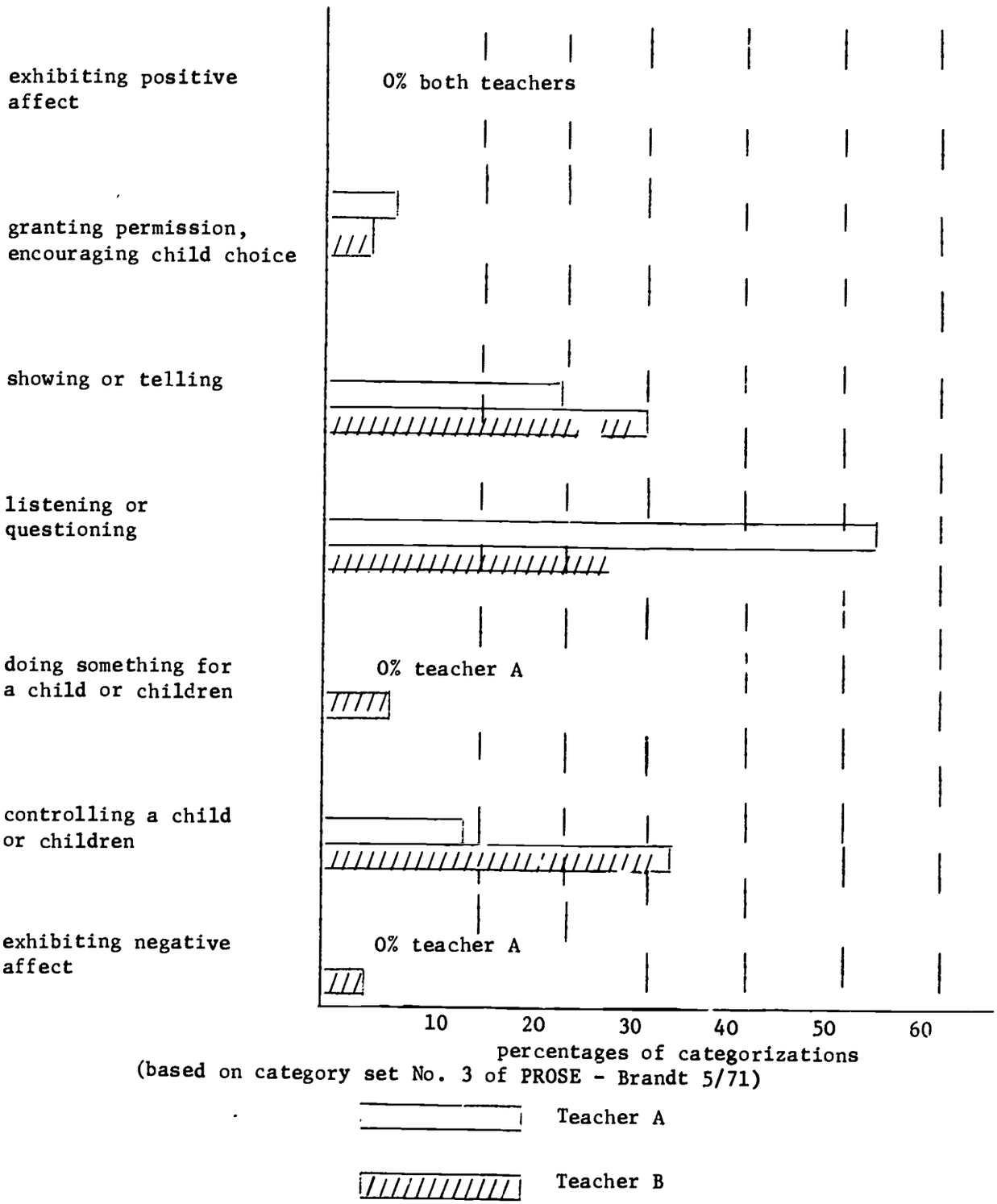


TABLE 3

The Number and Type of Approval-Disapproval Teacher Behaviors

During a 20 Minute Observation

Teacher	Type of Approval				Type of Disapproval			
	Contact	Verbal	Gesture	Total	Contact	Verbal	Gesture	Total
A	4	13	7	24	1	6	0	7
B	0	11	0	11	0	0	0	0
C	0	6	0	6	0	11	0	11
D	2	8	1	11	0	3	0	3
Totals	6	38	8	52	1	20	0	21

(British Infant School - Brandt 5/71)

TABLE 4

Types of Questions and Comments by Teacher A During Two Approximately

10 Minute Intervals Within a "Show and Tell" Discussion

Type of Question or Comment No.	Description	First Interval f	First Interval %	Second Interval f	Second Interval %
1	asks child for news	4	5	4	6
2	repeat C's statement or feeling or asks child what he said again	13	15	13	19
3	asks for specific information about the event, child, or family	33	38	21	30
4	asks open endedly for more detail	0	0	0	0
5	asks for C's reaction or feeling	3	4	3	4
6	asks other children whether they've had similar experience	3	4	3	4
7	makes evaluation of events	2	2	6	9
8	gives information herself	3	4	11	16
9	speculates on event details	8	9	0	0
10	makes spontaneous reaction	9	10	6	9
11	other T Comments	8	9	2	3
Total of audible comments		86	100	69	100

(British Infant School - Brandt 5/71)

The Open Education Program: University of Illinois

by Bernard Spodek

In order to understand our work at the University of Illinois, it would be helpful, I believe, to fill in some of the background of the open education projects we have. A number of years ago, about the time the Featherstone article first appeared in the New Republic, a number of faculty members at the University went abroad to see what was really happening in the English Infant Schools. Their reports were so glowing that we took a contingent of graduate students over shortly thereafter. Many other staff members have followed since then.

These led to a series of exchanges between English educators and ourselves. A number of inspectors and curriculum workers from England spent time with us, sharing their expertise. Faculty members also spent time in England studying classroom practices there.

Our relations with the English schools have continued to develop to the point that we now send a group of about twenty-five to thirty students to England each year to spend the spring semester studying in a teachers' college there with four to six weeks of classroom practice in the infant schools. This year, for the first time the program will become an exchange, as 15 English teacher education students came to the United States to spend a semester with us.

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*Dr. Bernard Spodek is Professor of Education at the University of Illinois, Urbana. The work reported here represents the fruit of many persons' labor, including Theodore Manolakes, Co-Director of our EPDA Project, Jerome DeBruin, Patricia Eggleston, Richard Hirabayashi, Judith Schickedanz, Steven Wlodarczyk and many others.

Our work has included much more than continual transatlantic travel. We began to help teachers develop their own model of Open Education. We have used much that was done in England as inspiration, but we have been careful not to try to turn any midwestern elementary school into a carbon copy of an English school. We started in the Booker T. Washington Elementary School in Champaign with one teacher and extended from there. Washington School is a curriculum laboratory cooperatively sponsored by the Champaign public schools and the College of Education. We have moved out into other schools, working with teachers in many other places at their request in an advisory capacity and training personnel to become teacher trainers in open education. This latter work has been supported for the last three years by a grant from the U.S. Office of Education under the Education Professions Development Act.

At present our programs consist of the undergraduate teacher exchange, the program of training teacher trainers under EPDA, the first of which will be receiving their Ph.D. degrees this June, and working with school systems in Illinois helping schools and teachers move toward open education, also sponsored by EPDA. This latter provides a practicum for our graduate Fellows as well as a service to the state. Our schools in our network, at present contain schools in Arlington Heights, Wilmette, Elgin, Champaign, Decatur and Effingham. Informal contacts also continue with teachers in other school systems.

I might also mention that the first students of our English exchange program graduated last June and a number of them are employed in schools in our network, five in one single school.

Our major concerns, then, relate to the dissemination of an approach to education that we consider to be more humane and more sensible for children than what is found in traditional schools, not by changing schools or be deschooling communities but by offering an alternative within a traditional school. The assumptions upon which we operate have been stated elsewhere and I will not burden this group with repetition, nor will I describe the classroom practice; we are helping teachers move toward what is generally labelled "openness." Rather I should like to turn now to the questions that have concerned us and the techniques that we are attempting to use in our studies. This paper will be no more than a progress report, since much of our work is just off the ground. Our work at present might best be characterized as being in the "messing about" stage.

One of our major concerns in moving teachers towards openness became

how does one determine whether a teacher is open or not or to what degree she has opened her class? Certain aspects of a classroom environment can be readily observed. And these aspects, by the way, seem to be the most amenable to change. These include room arrangements, changes in scheduling, uses of materials and equipment, the availability of displays in the classroom. All these things are evident in open classrooms. But are they the essence of openness? We thought not.

At the beginning of our work with teachers we conceived of our job as taking teachers where they were and moving them along as far as they could go. We found in our work that we would start working with teachers and would see quite a bit of progress in a short time. Most of this progress related to changes in the physical aspects of the room: the activity centers, materials and equipment and the like.

We also found that certain aspects of the curriculum seemed to be easier to change than others. Teachers would become more expansive in the area of art and craft activities. They would use more manipulative materials in science, allowing for "discovery" activities. It was difficult, however, to effect any major changes in the reading program. While we might institute a language experience approach, for example, this would be offered by the teacher as enrichment in addition to the traditional reading program. In addition, certain techniques, like the use of assignment cards, which we had borrowed from the English, would be used, but sometimes in a way that was considerably different from the ways we had envisioned. (If a teacher carefully structures assignment cards, she can use them as workbooks.)

After a while, it became evident that changing the classroom is not as simple a matter as we had originally supposed. More than modified teacher technique was involved. The classroom is a complex interrelated system of roles, relationships, expectations, and interactions. We embarked last year on a series of ethnographic studies. It was our hope that as a result of a series of observational studies of classroom culture, we would be able to develop a framework that would allow one to describe an open classroom in replicable terms and could be used as the starting point for the study of openness in schools. To date there have been a number of studies that have attempted to get at the characteristics of an open classroom, especially those by Bussis and Chittenden (Evaluation of One Approach to Open Education) and by Walberg (Characteristics of Open Education), but neither have been able to provide a framework that would

allow a person to observe a classroom and make judgments about the degree of openness thereof or to determine the crucial aspects of the classroom that are amenable to change in a move towards openness.

We defined the classroom as a micro-culture and used the framework that Edward Hall had developed in The Silent Language[1] as a "map of culture" as our starting point. This map was modified as we felt the need for Hall's Primary Message Systems that we used included:

1. Learning - vicarious or real programmed tasks, choice or assigned tasks.
2. Play/work role - play, dramatic play, manipulative play.
3. Spatial, temporal, and material use.
4. Sex.
5. Interaction - language use and other verbal cues.
6. Association - status and other relationships between children.
7. Defense - self-protection or protection of group rights.

We also found Hall's concepts of levels of culture useful. The three levels Hall has postulated are the formal, informal, and technical.

Using this framework, observations were scheduled in three classes. Each observation was preceded by an interview with the teacher to arrive at intention, and was followed by another interview to discuss the content of these observations. These interviews served two purposes: to clarify the observations and to lay a basis of trust among teachers and observer.

The observations were then analyzed in terms of goals, organization, dialogue and the relations between these elements.

In our analysis of our observations and the ensuing discussions with teachers, we found important differences in the goals the teachers set for their classrooms. While their long range goals were similar, the differences in short term goals seemed more a reflection of the teacher's personal style and system of belief than her adherence to a program. These short term goals seemed more important in determining classroom climate.

We also attempted to abstract elements of the classroom dialogue for study. Several factors seem to influence the direction of classroom dialogue. These included the purposes or intent of the teacher (whether, for instance, she was using the dialogue to extend learning or to clarify ideas), the real or

[1] Hall, Edward T. The Silent Language. New York: Fawcett World Library, 1969.

vicarious nature of the classroom learning situation, and the initiator of the dialogue (whether it be teacher initiated or child initiated).

Another part of our work last year involved the development of a parent program related to Open Education. Our feeling was that if there is to be lasting change in the classrooms in which we worked, there would need to be parental and community support. Only as parents were aware as to what was happening in these classes and the purposes of activities, would they support some of these somewhat strange, often unacademic looking activities. As we worked with the parents, we tried to chronicle the year's work in the hope of abstracting useful hypotheses to follow up later.

We found our work with these parents exceedingly complicated and not made any easier by the fact that the climate of the total school's parent relationship tended to spill over into our project. We had not become as isolated as we had originally hoped to be. In addition, the whole issue of black-white relationships which was so pervasive in the whole school also tended to affect our work. In addition, the opening up of lines of communication led to the voicing of dissent.

This year our project continues and with it the studies. We have found that the classroom culture is too large an entity to study with the limited resources we have at hand. As a result we are beginning to focus in on a number of variables within the classroom.

One of these variables is the decision-making process. Since one of the basic assumptions in the open classroom is that teachers share jointly with pupils, the decision-making power, understanding this process and the ways in which decisions of various kinds are made will help in our understanding of the open classroom and the ways in which classrooms can become more open.

There are several possible ways in which we can understand decision-making. One framework we can use is Hall's levels of formal, informal and technical. Another possibility is one I have postulated relating to policy decisions, technical decisions, and institutional decisions (see Spodek, Teaching in the Early Years, Chapter 1).[2] It will be interesting to see who really makes what kinds of decisions in both traditional and open classes.

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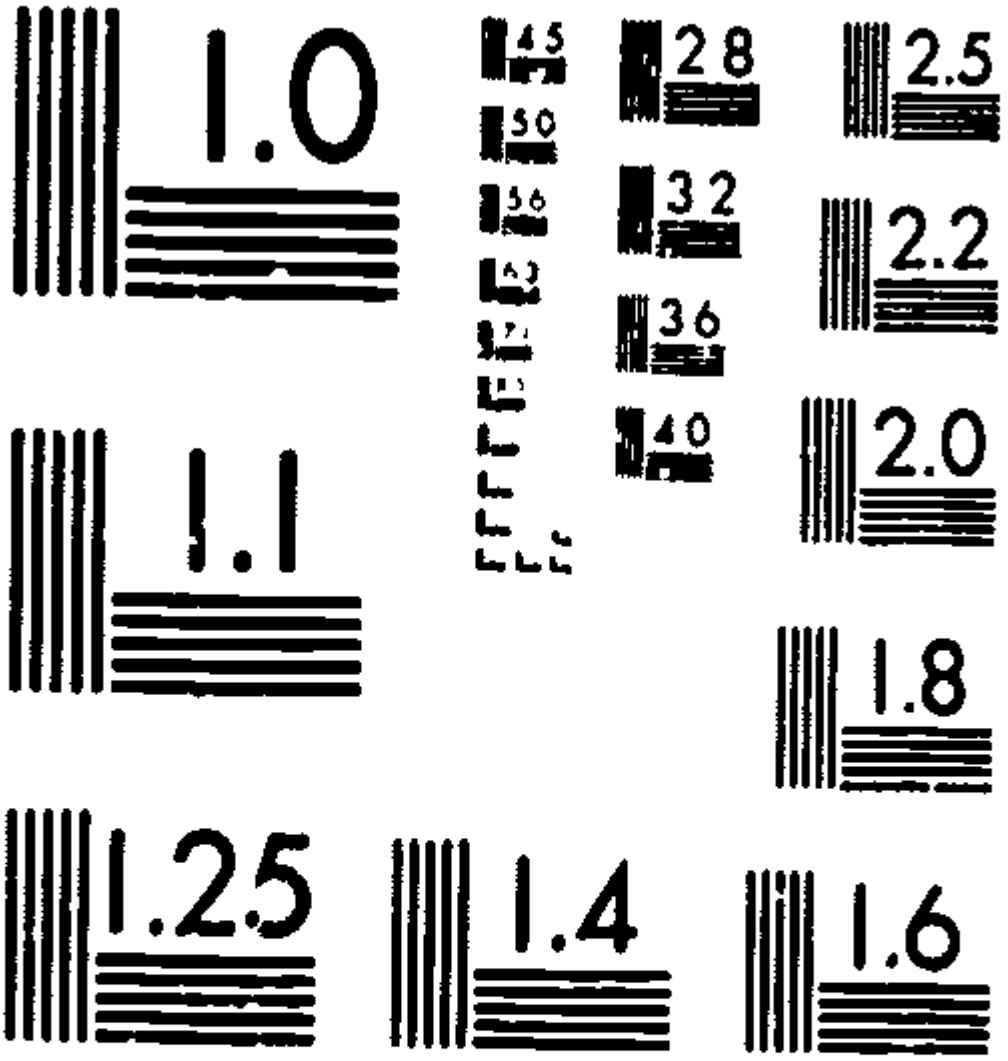
[2] Spodek, Bernard. Teaching in the Early Years. (Early Childhood Education Series) Englewood Cliffs, N.J.: Prentice-Hall, July 1972.

A second thrust in research is to look at teachers' belief systems. One of the major goals of the schools is to transmit the value system. Both the informal, unstudied curriculum of the school and the formal aspects of the school focus on values. It seems to us that some of the aspects of classroom environment most difficult to change are those which relate to the teachers' belief system. What we would like to do is establish indices of beliefs and relate classroom practice to belief systems.

Finally one other question we have relates to the effects of teacher education. In the early part of the paper I mentioned that we were sending groups of undergraduates to England to participate in the teacher training program there as well as to be involved in the practice in English Infant Schools Based upon the enthusiasm of the participants the program has been a great cultural success. Not only do they learn much about schools and children but the experience of living in a foreign country and interacting with other nationals in greater depth than they would as a tourist gives them a better perspective on American life. Our interest, however, is with the professional aspects of the program. Does such a program in fact affect their teaching?

Our first group is in the first year of actual teaching. Most of the returnees are spread throughout the state. A group of five has been hired to work in a single school, one of our projects schools, as a matter of fact. Later this year we hope to be surveying all of the graduates of this program that are currently teaching. In addition we are trying to do an in-depth study of the five; and answer such questions as to what happens to their feelings about teaching, about appropriate classroom practice as the result of an extensive period on the firing line. Does their behavior remain consistent with the model they selected? Does an exotic program such as our English experience really have any impact on beginning teachers, or do the exigencies of the situation create the kinds of pressures that lead to greater needs for control and conformity?

From what I hear, the pressures are great. They are the same kinds of pressures that all teachers have in their first years. But it is questionable if without the support of well-seasoned experienced teachers who have been involved in open education, these teachers will maintain their beliefs in openness. Perhaps it is more fruitful for us to expend our energies on retraining experienced teachers. At this point it is impossible to tell.



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In our EPDA program we are working with experienced teachers, helping them with workshops and with in-class consultation. It will be interesting to attempt to compare the impact of our work with experienced teachers with our work with beginning teachers.

I have tried to provide you with a feel for what we are doing at the present time. We are very much in process. Our training activities continue, and we try to use our training operation as a basis for generating hypothesis and developing data. For just as we hope that the teachers with whom we work will develop an experimental attitude and will learn from their experiences, so should we.

Open Education and Internal Locus of Control

by Gerald Knowles

Dialogue and arguments in favor of one program or another which focus exclusively on the cognitive and academic achievement are, I believe, overlooking a far more important aspect of human development. Such discussion often overlooks the more intangible, less visible, yet highly influential non-cognitive realm of development and learning. Because measurement in the affective area is difficult to come by and its meaning is less salient to the public eye than that of the cognitive, it is harder to articulate to concerned parents. Thus, basic and primary aspects of human behavior are placed in the background, while comparison games are played with reading scores.

It was mentioned earlier in the conference that the concept of "open" education is not new and was, in fact, proposed as early as the 16th century. That is just the point. Many valuable educational innovations have been periodically suggested, but where can we find them in operation within our schools? If the concept of "openness," along with the material support and technique it implies, is going to make it this time around and have any lasting impact on educational practice, then we are going to have to make hard data assessments which demonstrate its potency. We must then articulate this in such a manner that it gains acceptance within the evaluative consciousness of the public as they guage the quality of American schools.

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The primary position that certain affective dimensions of the human make-up play in mediating the acquisition of intellectual and academic skills, their possible role in governing the individual's ability to cope with life itself, must be demonstrated and effectively communicated in a pervasive manner such that it becomes the bread and butter of educational evaluation along with standardized reading and math scores. If we can accomplish this, we will then have taken a real step toward reframing the American educational enterprise to become one which operates to foster an integrated developmental process. Such an accomplishment will hopefully replace the contemporary conception of education which is characterized by attempts at "pounding in" content and strategies designed to construct humans with specific response capabilities to meet the narrow demands for absorption into a technological society.

An example of a small move in this direction is what I would like to discuss. I would like to focus attention upon one dimension of development in the affective area which has been identified in various forms and within various conceptual frames as a potent facet of human development and learning. This particular variable may act as an antecedent to the acquisition of the more specific cognitive elements that we are so often concerned with. This human quality is certainly central to much of the contemporary issues and social criticism. In terms of educational activity this factor received wide prominence through the 1966 publication of the Coleman Report, Equality of Educational Opportunity. In spite of the numerous criticisms that have been made about the data, methods and conclusions contained in this report, the one startling fact that still filters through and stands out among the vast data and tables is that school achievement among minority group children is more related to one single attitude than all other factors put together. The child's feelings about his ability to control his own destiny accounted more for his achievement in school than did the total effect of the curriculum, the teachers and the physical and material support to which he was exposed.

The feeling of control of one's own destiny, internal locus of control, is the facet of development in the affective domain which I would like to discuss in greater detail in terms of how it relates to other aspects of human behavior and development; and what differential effects of school programs, including an open-type system, have on the positive development of this variable.

The concept of the feeling of control or non-control over one's destiny had received considerable attention, both theoretically and empirically, prior to

the publication of the Coleman Report. The feeling of control can be conceived to be spread out along a continuum. At one end, internal control connotes the attitude that one can manipulate environments for reinforcements. One that is internally controlled sees himself as instrumental in the outcome of events.

On the other end of the contiuum, external control, the self-attitude is characterized by the feeling that all that happens to the individual is the consequence of chance, luck, fate, etc., all of which are forces and events beyond the subject's control. Interpreted in the sociological sense, external control as a group phenomenon can be conceived as being congruent with the elements of alienation, the attitudes of non-participation and non-control which prevade the social attitudes and lives of minority groups and lower class white populations. In the psychological sense, external control connotes the personal feeling of powerlessness.

Hence, the relative feeling that the indvidual or the group has about the ability to control destiny can be hypothesized to be an important antecedent in both the acquisition of many specific capabilities as well as in the general ways in which the individual or group approaches both school and life situations. Prescott Lecky[13] maintains that it is not what one is actually capable of doing that governs his actions, but it is what he believes that he can do that has persuasive control over his behavior.

A number of studies indicate that children from both minority group and lower socio-economic classes are more externally oriented than their middle and upper class white counterparts. My own research at the University of Illinois revealed great differences in internal control in favor of children from middle and upper class families. It was also found that the existence of external control was concomitant with the occurrence of lower self concept, lower achievement motivation and feeling of lack of empathy communicated by the child's teacher.

Performance in the school environment as related to internal control had been established somewhat prior to the Coleman Report. The residual aspect of all this research indicates that relatively low achievement in school is related to a feeling of powerlessness and isolation on the part of the child. Externally controlled children are found to be more dependent upon verbal reinforcement to maintain levels of performance. (Parenthetically, I would like to point out the implication of this latter finding. That is, I feel that in discussing the relative merits of various early childhood programs, such as Follow Through, we should not dichotomize ourselves into a position of open vs. structured, highly

reinforcement controlled, argumentation over programs; but we should attempt to determine what type of learning condition is most effective for what child with a given set of needs at a given point in time. I will come to this point again.)

In a more specific analysis of internal/external control and performance, Chance[3] found that the internal child's performance increases over time, while that of the external child decreases over time. Internals were also found to have greater persistence on intellectual tasks, greater reflectivity, and attention deployment. The total effect of these capabilities on the part of the internally controlled child is that his general approach to situations cause greater performance and rate of acquisition of cognitive content and skills. Thus, we can see the vital bridge that exists between the affective and cognitive aspects of development; and certainly, the above data suggests that the affective dimensions of development, such as internal locus of control, have a powerful mediating effect on the acquisition of cognitive content and processes. The saliency of internal control and its connection with academic achievement certainly provides a strong case for the latter position.

Yet, the Coleman Report accounts for only gross calculation of curriculum and program variation. A vital and yet unanswered question centers around the problem that, if internal control is very important both psychologically in the learning setting and socially in terms of aspiration and mobility, do school programs, vis-a-vis compensatory education models, have an impact on the development of internal control among children; and if so, what programs are most effective in inducing the positive development of this characteristic?

Such a question led to the work of a colleague and myself in a large midwestern city. Dr. Mark Stephens[19] of Purdue became concerned about the effects that various preschool and early childhood programs might have on the suppression or development of internal control. Dr. Stephens' concern grew out of his observation that the preschool children involved in the program we were working with appeared to be quite passive in a seemingly warm and supportive environment. This observation initiated what, at that time, seemed to be a very dubious venture: the measurement of a feeling of control among preschool populations; the finding of the existence of variance for this attribute at such an early age; and ultimately, a determination as to whether differential programming would have varying effects on the development of internal control in preschoolers. Dr. Stephens felt that he would draw a blank in attempting to obtain data to resolve these problems, which lends greater importance and credence to what actually did happen as he initiated

and proceeded in his investigations.

An interview type instrument was developed which was eventually entitled the Stephen-Delys Reinforcement Contingency Interview. The interview involves twenty questions which embody either positive, (happy, smile) or negative, (sad, frown) reinforcement. For example, the child is asked, "What makes you happy?" Answers which indicate that the child's happiness is contingent upon his own action or instrumentality are scored as internal responses. Such responses as "doing good things," "riding my bike" and "myself" would be judged as internal responses. Responses which indicate that the child perceives happiness to be contingent upon forces outside himself are interpreted as external. An example of such would be responses like "when people give me candy," "God" and "mother." Using a split method technique, Dr. Stephens found that the instrument was highly reliable and valid, obtaining a convergent coefficient of .72.

After interviewing various populations of children from Head Start and preschool programs, Dr. Stephens found considerable variation among children and apparent differences in children who were exposed to separate and distinctive programs. In fact, he found large and powerful differences. He also found that differences in teacher personalities were related to the internal scores that were obtained from various populations of children.

More intense observation and study of the behavior of the children revealed that internals are active, aggressive and exhibit much exploratory behavior and excitement about learning (which are, incidently, elements that are congruent with behaviors expected in an open system of instruction.) On the other hand, he found that externals tend to be more passive, compliant, non-exploratory and inattentive in comparison to the internals. In light of Piaget's notion that learning occurs in young children only when action or manipulation is carried out on concrete referents, the above finding, again, accentuates the crucial importance of the affective in governing cognitive processes.

After further refinement of the interview technique, a research design was set up which could get at the effects of a systematic program variation on the development of internal control in children. The logical place to look for such situations of program variation was in the realm of Follow Through, wherein consistency of philosophy, method and material are maintained through specific training and monitoring systems. Follow Through models also represented large variations in program approach due to differential philosophies and psychological bases used to construct each program.

Three distinctive learning environments were selected for comparison of their effects on the development of internal control: (1) An open type system which featured free, exploratory, interest-centered behavior; (2) A structured type situation, employing verbal reinforcement geared toward the acquisition of specific responses; and (3) A traditional type setting, which was non-Follow Through. Both black and white children were selected as sample populations.

Now, for the punch line--who won? The results of the study indicated that both black and white children exposed to the open type systems had (statistically significant) more internal control than did their black and white counterparts who had been exposed to either the structured type or traditional type systems of instruction. However, and this is important, children exposed to the structured program had more internality than did those children who were exposed to the traditional learning environment.

At the time this is being prepared for publication the results of another study have been completed which compares the effects of open vs. traditional on the development of internal control among Navajo children in the Bureau of Indian Affairs Boarding Schools.[7] In this case, wherein sampling procedures and interviewing were highly controlled, it was found that children in the open system far exceeded those children who were exposed to the traditional system.

No sweeping conclusions can be made from the above investigation. A great deal of research remains to be done. Again, we must caution ourselves against perpetuating the merits, acceptance and sweeping implementation of singular program approaches. As I alluded to earlier, we must be prepared to employ numerous sets of learning conditions, dependent upon what is to be learned and what the specific needs of the learner are at a given point in time. An example of what I mean is found in the work of Bialer[2] who discovered that controlled reinforcement is essential in developing internality among retarded children.

From a sociological standpoint investigation needs to be carried out to determine the effects that parental involvement and community control of education among minority groups and lower class whites have on the development of internal control among their children. A strong rationale can be made for the proposition that, when minority groups and lower class whites are involved in and take control of the education of their children, their traditional passivity, feeling of alienation and powerlessness decrease. Such a feeling of greater control of their own destiny among alienated groups, it would seem, would in turn increase the internal control among their children.

From a long range philosophical viewpoint we must keep focus on the total development of our culture and this ultimately involves what we do to our children in school. Are we developing in our schools those necessary qualities that are essential to a self-governing people? Eric Fromm[10] in Sane Society, maintains that in the ideal society the self is developed to the point where it has a feeling of power and confidence in striving for self-government, instead of a feeling of conformity to the demands of various situations. I would like to end on such a high note and let us all go forward in sweetness and light. But, we as educators must accept responsibility for the indictment pronounced by Charles Reich,[15] who, in his recent best seller, The Greening of America, states: " . . . of all of the forms of impoverishment that can be seen or felt in America, loss of self, or death in life, is surely the most devastating. Beginning with school, if not before, an individual is systematically stripped of his imagination, his creativity, his heritage, his dreams, and his personal uniqueness, in order to style him into a productive unit for a mass, technological society. Instinct, feeling, and spontaneity are repressed by overwhelming forces. What has caused the American system to go wrong in such an organic way? The first crucial fact is the existence of a universal sense of powerlessness." (p. 7-8)

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Evaluation of an Innovative School

by Patricia F. Carini

The Prospect School has carried out a program of research and evaluation since the school was established in 1965 to demonstrate informal education. I'd like to discuss that program of longitudinal research and evaluation, and I'll begin by distinguishing the functions of record-keeping and documentation from those of evaluation and research.

Appropriate record-keeping and the collection of children's work are indispensable activities to the school contemplating a departure from formal education. As formal school records are rendered obsolete by informal education, the task of developing records that describe the progress of individual children, the evolution of the curriculum and the impact of changes in specific classroom structures on the total educational setting is considerable. We have developed such records at the Prospect School.

I distinguish record-keeping and documentation from evaluation and research because the former are addressed to the particularities of the classroom and to the documentation of the continuity of each child's learning experience; therefore, they are the primary responsibility of the classroom teacher. Evaluation and research, on the other hand, are properly addressed to the potentialities and parameters of the learning setting per se. In making this distinction, I share Whitehead's judgment that an evaluation of the school as learning environment based only on the performance of the scholars is inadequate.

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> "Primarily it is the schools and not the scholars which should be inspected. Each school should grant its own learning certificates, based on its own curriculum. The standards of these schools should be sampled and corrected. But the first requisite for educational reform is the school as a unit, with its approved curriculum based on its own needs, and evolved by its own staff." (5, p.21)

An evaluation of the school in Whitehead's terms depends upon the articulation of testable objectives, just as research depends upon the articulation of hypotheses. The processes of evaluating and research are, therefore, at a remove from the immediate description afforded by records and documentation.

The articulation of program objectives and/or of research hypotheses is an important function since their objectification serves to reveal the assumptions and frames of reference from which proposed educational changes derive. However, these processes are not appropriately the responsibility of the classroom teacher. Rather, the school as an institution has to accept responsibility for this articulation, especially when the institution is deviating from its historically accepted objectives in the eyes of the larger community. Not to accept this responsibility is an invitation to outside agencies to evaluate the school from their own assumptions about the school's function and objectives. As these external evaluations are virtually always in terms of pupil achievement and economic efficiency, it is critical that schools equip themselves to carry out the evaluating process. By assuming this responsibility, the school establishes itself as an agency which is responsible to the community and which can appropriately assert its professionalism in determining the learning environment appropriate for the children entrusted to it.

Evaluation and Research Design at The Prospect School

The evaluation and research design at The Prospect School rests upon two major assumptions about the learning process. We assume that meaningful learning, that is, learning that accrues to the person is a function of interest. From this point of view, to learn, to understand, to grasp is to formulate one's own meaning. Interest, therefore, differentiates education from cultural indoctrination and "schooling." Indoctrination has the aim of molding the young to accept the prevalent cultural myths, and, therefore, to fit the current cultural mold. Education on the other hand seeks out a person's own meanings and interests with the intention of deepening those meanings and interests.

In the following quotations, Mark Twain comments on the antithetical

nature of education and schooling, while Froebel identifies the purpose of teaching if we accept the person's interest as the basis for his education:

> "Be careful that your son's schooling doesn't interfere with his education." (Mark Twain)
>
> "For the purpose of teaching and instruction is to bring ever more out of man rather than to put more into him; for that which we can get into man we already know and possess as the property of mankind. On the other hand, what yet is to come out of mankind, what human nature is yet to develop, that we do not yet know." (2)

It follows from this definition of learning and education that in order to facilitate learning, we must have an ever intensifying insight into the other person's point of view. Concretely, we must know the child's spontaneous involvement and formulation of events if we are to be appropriately responsive to him.

This leads us to a second assumption about the educating process: that it fundamentally depends upon an informed attitude toward children. An "informed attitude" in turn derives from a deep understanding of the process of development, especially as that process is revealed through play. Play is the natural and spontaneous realm of the child; and, therefore, it is our richest source of insight in determining children's interests. To draw once more on Froebel, he states that "Play is the highest expression of human development in the child, for it above all is the free expression of what is in the child's soul. It is the purest and most spiritual product of the child, and at the same time it is a type and copy of human life at all stages and in all relation." (2)

The Prospect School was started out of the conviction that a rich curriculum can be evolved from children's interests, and through the teacher's insightful and informed understanding of each child. Because the structure of the learning environment at the school promotes spontaneous interest and activity, it has provided an unusual opportunity for studying the changes in the child's formulation of events--of objects, of relationships, indeed, of the world itself--as a function of development.

The Prospect School has also offered an opportunity to evaluate the relative impact of its environment as it is reflected in qualities of thinking that distinguish the school's population of children from other children of the same age, socio-economic background and intelligence.

The research design gives equal weight to observation of spontaneous activity in the classroom and to more controlled observation in the laboratory.

Observation in the classroom is the source of the hypotheses to be tested in the laboratory. It is also the check on the distortions inherent in any laboratory situation. Findings from the controlled investigation that we do not see reflected in the classroom are treated with extreme caution.

Schematically, the design for the evaluation of The Prospect School learning situation can be described as follows:

1. Experimental investigations of the thinking process
2. Observations of children's spontaneous activity to provide
   a. Longitudinal definition of developmental stages
   b. Longitudinal assessment of the impact of the innovative learning situation
3. Longitudinal observations of children, and recording of observations to provide
   a. Modification and qualification of developmental stages
   b. Objectification of the continuity and transformations of affective and thematic content in the reorganization of successive developmental stages

Reasons for the longitudinal design of the evaluation include the following:

1. Initial effects attributable to the learning situation may not be stable over time.
2. Accruing effects of the learning situation may only become apparent over time.
3. Some effects of the learning situation may only become apparent as children within it reach a new stage of development.
4. The less quantifiable effects of the learning situation can only be objectified through their reoccurrence and transformation over time.
5. Initial effects attributed to the learning situation may be a function of the initial intensity and enthusiasm inspired by a new approach, rather than a function of factors intrinsic to the learning situation.*

The last mentioned point brings us to an important consideration in evaluation design. Evaluations which compare the effectiveness of innovative programs with more traditional programs have a basic flaw that produces what is commonly referred to as the Hawthorne effect. Stated briefly, this effect refers to the fact that in such comparisons, innovative programs tend to produce superior results

*See pages 166-67 in David Ausubel's The Psychology of Meaningful Verbal Learning, or Ruth Strickland's article, "A Challenge to Teachers of Reading," for a discussion of this issue.

as a function of such extraneous characteristics as the enthusiasm and morale associated with any new venture. While in long-term longitudinal evaluations this effect would be washed out, this is not true for interim cross-sectional findings that derive from a comparative design.

If two learning situations are to be compared, the only appropriate control for evaluating the effectiveness of an innovative learning situation is a second innovative program. In this design, where the aims of each program would be assessed, such factors as morale and enthusiasm would be equalized, and any differences found in the effectiveness of the learning situations could presumably be ascribed to actual differences found in the programs.

However, if the assessment of the innovative program is concerned with the development of thinking and related processes in the children involved in the program, the comparison of learning situations per se is not an issue. That is, control populations drawn from other learning situations are not construed as comparative populations to determine the relative effectiveness of two learning situations. Rather, the children in the innovative program are assessed in their performance on certain tasks relative to the performance of children who are merely the same age and intelligence. Thus, for example, if the children in the innovative program are characteristically highly productive in problem-solving tasks, the increased productivity must be demonstrated as an occurrence over and above the expected productivity of children of similar background, age and I.Q. While in this design there has to be a control population, there is no attempt to compare the learning situations through these controls. Instead, it is the expectations and aims of the innovative program which are being evaluated, and they are evaluated through the responses from children in the innovative program that are divergent from the characteristic developmental pattern associated with specific processes of thinking. The Prospect School evaluation has employed control populations for this purpose--that is, to provide the developmental information that is characteristic of all children, so that deviations from the developmental level in the innovative classroom can be documented.

The evaluation design that has been outlined has the potential to provide the following information:

1. Descriptions of the spheres of reality structured by children at different ages
2. A definition of the limits and overlapping of these stages of organization and

3. An assessment of the relative plasticity of children's structuring of events through their involvement in a particular learning situation.

The first two descriptions would have general implications for all persons interested in the development of children and in their education. The third description, which provides the specific assessment of The Prospect School Project, has more specific import, depending on the usefulness for other educators of the research techniques for assessing thinking in children. After concluding the outline design, we will turn to a discussion of these evaluation techniques.

Two final aspects of the total design should be mentioned. Although achievement of skills according to a time schedule, and the recognition of these skills as ends in themselves, are specifically *not* aims or expectations of The Prospect School learning situation, standard achievement tests are administered yearly from age eight upward. The data received from these tests makes no positive contribution to the evaluation, but functions as a check on academic achievement. Such achievement is not specifically included in the program's aims, but is valued by many educators as the only yardstick for assessing the learning situation. In addition, individual intelligence tests (Wechsler Intelligence Scale for Children) are administered yearly for their contribution to the over-all longitudinal study.

The Techniques

1. All tasks are open-ended and conversational. They involve an individual child and an adult observer in a discussion in which the child is free to solve the problems that come up without the restrictions of forced choices, selecting from predetermined answers, etc. The basic instruction procedure is similar to Piaget's. For example, the procedure for a story telling task is as follows:

> Let's look at this picture together. (Give picture to child and allow time for him to look at it; record any comments he makes. If he asks what it is or what it's about, indicate that that is what we will try to figure out. After a suitable time, suggest that the child make up a story that would go with the picture.) If this were a picture in a book, what kind of story do you think would go with it? I'd like you to make up a story to go with it, and I'll write it down. When it's finished, I'll read it back to you. (Aids in getting started, if needed: a) Maybe you could think of what happened before the part we see in the picture, and then what will happen after. b) Tell me what the picture is about. c) What do you see in the picture?).

2. Nearly all the tasks involve perceptual and manipulative materials for the child to use in resolving a problem. A few tasks are presented in levels, using first more symbolic presentation (e.g., thinking of things that are always very, very big).
3. The interpretation of the children's resolutions of problems is a matter of discovering the pattern, order and direction in each resolution. Thus, in the early studies, all the resolutions to a particular task would be lumped together and worked through again and again to find as many ways as possible to "group" the resolutions. If there is no concern for "rightness" or "wrongness," and if the task is well designed to reveal the child's intentions, a pattern descriptive of the ways of resolving a problem emerges. Taken by itself, a particular pattern may be puzzling or unclear as to its meaning, but considered in the context of other patterns and over longer periods of time, its significance and meaning become clearer.

Except where groupings and patterns are self-evident, this kind of evaluation requires the participation of independent judges to establish criteria for such characteristics of children's resolutions as originality, judgments of extreme size, etc. This process of data analysis over a four year period, in combination with observations of children carrying out spontaneous activities, has resulted in analysis of the tasks and children's resolutions of the tasks to form a scale. The scale, which is at present only partial, is the single most significant result of The Prospect School evaluation to date, as it has the potential to assess the following dimensions in the child's relationship to the world: a) what any given task demands of the child; b) the complexity and availability of the perceptual or conceptual material to the child; and c) the level of differentiation reflected in the child's resolution of the tasks. This kind of assessment to provide a definition of the limits and plasticity of a developmental stage is needed if, as Wohwill points out, we are to specify a developmental timetable.

> An attempt should be made to specify the variables and parameters relating to the materials, to the specific content and to other similar task variables which may affect the developmental timetable with respect to a particular concept or principle. Whether the role of task variables and the larger problem of the generalizability of a principle or concept can be adequately handled within the framework of Piaget's model of logical operations remains to be seen. (3, p. 445)

We have tentatively identified the task demands according to whether the child is required to select attributes, to order them or to classify them in order to resolve the task successfully. We have qualified these levels of task demands according to the number and quality of factors to be organized.

In defining the complexity and availability of materials, we have identified a continuum of object attributes from single, perceptual attributes to multiple, conceptual attributes, as these occur in actual or in hypothetical contexts. The child's resolution of the tasks is judged according to the degree of differentiation and objectification reflected in the solution, from global resolutions to integrative resolutions.

The scale which is presented in detail in my own paper "Outline of Evaluation and Research Design" objectifies a data analysis process that may be useful for educators and others interested in evaluating some of these same processes as they occur as a function of development and/or as they are modified at different stages through a learning experience. The following example from the scale illustrates the data analysis process:

Forming a Concept

Level of Task	Description of Task	Level of Response
Multiple defining perceptual attributes, perceptual attributes not present	No perceptual materials Task. To think of everything you can that is: 1. always very, very big 2. always very, very little 3. always very, very tall 4. always very, very round Presented on separate occasions. "Tall" is a control for "Big." Function. To determine bases for including an object into an exclusive category of size. To determine presence of a class concept of size that excludes objects that do not fit the criteria of microscopic, infinite, or spherical.	1. Global-contexualized: size embedded to objects in the room. Example: (Big) "the ceiling, door, desk, chair." 2. Global-diffuse a. all or varying sizes included as big (little) b. all or varying sizes included by assigning through word realism and age. Example: (Little) "Baby elephant, baby gorilla, little house, little church." c. all or varying sizes included by assigning through self-references.

Example: "I'm thinking of a little stone."

Productivity_____

3. Discrete, actual attributes, single or added, varying dimensions.
   a. productivity
      Example: (Big) "The monument's tall, a train, the sun, a redwood tree, an elephant."

Productivity_____

4. Protoconcept

   One or two extreme, exclusive items included. Example: (Big) "The room, the mountain, the ocean is deep, the sun, trees, elephants."

Productivity_____

5. Integrated: Assigns objectively big, little, or round, that is, microscopic, infinite, or spherical objects.
   a. inclusive: also includes some objects that are outside the category.

Productivity_____

6. Exclusive
   a. acknowledges the microscopic (infinite) spherical as the criteria, but includes:
      1. a class just larger

(smaller)
2. only one class of objects. Example: "Planets."

b. exclusive and exhaustive orders of objects. Example: "Space, sun, stars, constellations, atoms, molecules, particles, cells, nucleus of cell, germs, antibodies, etc."

Productivity_____

SUMMARY OF FINDINGS

A review of the findings to date in the light of our original hypotheses provides a schematic summary of the evaluation. The first general hypothesis stated that children in The Prospect School will show an increased capacity, relative to their maturity, to abstract and to conceptualize. However, conceptualization and the systematic, logical thinking associated with it is not to date reflected in any of our findings. This evidence has caused us, if not to flatly reject the first hypothesis, at least to modify it. In retrospect, it seems possible that the formation of that hypothesis may have been at least in part a function of the excitement generated by the Woods Hole Conference and Dr. Bruner's hypothesis "that any subject can be taught effectively in some intellectually honest form to any child at any stage of development." (1, p. 33)

The idea that if only children were presented with constructive, manipulative material they would find it possible to formulate concepts that are otherwise unavailable to them is attractive, and, from the adult point of view, early concept formation certainly appears a desirable goal. Of course, the term "concept" itself must always be defined. Certainly children far younger than age 5 can be said to form simple, spontaneous concepts that pull together and give permanence to their impressions of objects. "Those are both blue" or "That looks like the moon" are spontaneous concepts of this order. But we are speaking here of subsuming, classificatory concepts, those that

Vygotsky identifies as advanced concepts.

> But the advanced concept presupposes more than unification. To form such a concept it is also necessary to abstract, to single out elements, and to view the abstracted elements apart from the totality of the concrete experience in which they are embedded. In genuine concept formation, it is equally important to unite and to separate: synthesis must be combined with analysis. (4, p. 76)

Instead of "concept formulation" and "abstraction," our findings would indicate that children in the school, up to the age of 12, are absorbed in the object and the object properties. They are, in Schactel's sense of the term, "objectifying" experience, rather than conceptualizing it. In the absence of an absorption in object properties, children during the middle childhood years are reliant in solving problems on conventionalized responses and verbal formulas, some of which sound like concepts but do not contain usable meaning. The reliance on convention and verbal formulas is, of course, also a familiar recourse for adults in areas outside their conceptual competence. Thus, manipulative materials and concrete activities appear to be very valuable in making objects more understandable to the child. However, conceptualizing as a way of formulating experience and materials apparently awaits a later stage in development, as is indicated in the work of Rimat, Piaget, Werner and others. "...Thought in concepts, emancipated from perception, puts demands on the child that exceed his mental possibilities before the age of twelve. (4, p. 112)

Our second general hypothesis stated that children in The Prospect School learning situation will show an unusual capacity, relative to their maturity, to formulate original resolutions of problems and tasks. The children have demonstrated these abilities over such diverse tasks as the following:

1. Thinking of functional substitutes for an object.
   Example: anything that could be used to carry water besides a pail.
2. Thinking of the possible functions of an object.
   Example: a brick.
3. Thinking of the possible approaches to solve a physical problem.
   Example: getting to the other side of a wall that has no gate.
4. Telling stories to pictures of unusual occurrences.
   Example: a man flying through the air without the benefit of wings.

5. Forming sequences and themes to make stories and number patterns.
6. Judging object size according to object dimensions.
7. Forming categories of objects according to size, physical characteristics, etc.
8. Resolving analogies.

More interesting than the tentative confirmation of this hypothesis is the specification of the basis of this originality in the children's own activities and the breaking up of objects previously structured globally into discrete characteristics and attributes. This structuring of problems and objects is also the basis of the increased productivity of the children in The Prospect School in finding solutions to problems. The consistently high positive correlations between originality and productivity (r-.97) and the absence of a strong relationship of these qualities with intelligence (4-.27, using the WISC) is one of the most provocative early findings to result from our investigations.

At a practical level we have brought the observations and research to bear on analyses of the potentialities of such materials as blocks, sand, etc. for facilitating the learning process at different ages. We have also employed the observations and research for an analysis of the curriculum as it has evolved over the past six years at The Prospect School.

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Practical Applications of Research

by Lillian Weber

I'm not a researcher and I'm most certainly not an evaluator. I don't truly think that I am implementing research. But I do think that research questions, perhaps, should come out of implementation, especially when you're implementing a new thing like open education. I don't think that you just look at a new thing and ask the old questions. I believe that I have a contribution to make by raising research questions from a different point of view. Obviously, there is a reciprocal relationship between implementation and research.

If you have read my book,[1] you know that I wrote as someone coming from the early childhood field (twenty-five years of it)--the American early childhood field. I didn't even question whether it was possible to go into the public schools with the ideas I already had. I just accepted the framework of impossibility. What the English did was needle me with presenting another possibility.

The English had read our books and were talking about Lois Barclay Murphy, Sybil Espilona, Rene Spitz, and Lawrence Frank. I could go through a whole roster, and you'll notice I didn't even mention Dewey. They were even talking about Dewey because, quite frankly, there's still a lot for us to learn

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[1]Weber, Lillian. The English Infant School and Informal Education. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1971.

from Dewey. How much of his work have we ever implemented? You'd have to go far to find the richness of curriculum development (and I emphasize curriculum development) discussed in Dewey's writings.

The English borrowed not only from the Americans but from the Swiss and Italians as well, and they don't hide it. I looked at England and said, "Here's a starting point that happens to set my mind off."

Recently, when I was making a film on infant schools, I stood firm and refused to be limited to shots that showed only the shiniest side of the school. I wanted to make a film that truthfully presented a school than any American teacher could knock holes in, and yet have the feeling that here, in this school with all its inadequacies, was a different view of how teachers could relate to the child.

The question then became: Is this kind of school possible in our country? In Harlem schools and old buildings, is it possible to begin to turn the thing around so that you come out with some new relationships and some new possibilities?

Two possibilities are essential: 1) a possibility of creating a new floor of continuous support for continuity of the child's development; 2) a possibility of creating a new floor for the teachers' continuous development. These are the two possibilities that those of us in public education have been exploring.

In England, I saw quite average teachers--some of them bad. But because I saw quite average teachers, and yet a different climate in the classroom, I examined the climate of the classroom. How come, with quite average teachers they were able to do this? What was the role of the head? What kind of interaction was there? What was the organizational dynamic that helped quite average teachers grow?

In New York City in 1967, student teachers were reporting to a supervisor on a twenty-minute lesson, four times a term. No one questioned that, but everyone was saying, "Lousy teacher training." I took a different view: that it was not possible to have good teacher training unless the place of operation--the site--changed along with all the training requirements. This holds true not only for teacher training, but for teacher retraining as well. You can't retrain a teacher just on workshops, lectures, and marvelous conferences. The teacher must be retrained in a changed site that begins to draw on her for for different expertise, for different concepts, for different kinds of knowledge.

The problem as I saw it was to start--without stopping to worry about evaluation--to change the organization in terms of what I already knew about how children learn. It seemed to me that it didn't matter how much you understood the child, if you couldn't implement a different way of working and learning for the child. So the minute we worked out a different organizational format for training teachers, ten colleges in New York City began to use it. Why? Because they saw a chance of putting together theory and practice, and they saw the possibility of a new way to train student teachers and retrain the teacher already in the field.

One thing we were looking at was the grouping of teachers. Something I think is basic in child learning--also in adult learning--is that social interaction is not just a socializing, humanizing process of knowing how to take your turn, but is embedded in the cognitive process; that just as the exchange between children is vital to their learning, so is the exchange between teachers vital to their learning. This is why we've kept saying that it was important to break through the isolation and closed door of the teacher.

Now, here's a research problem. There are separate, individual classrooms all over the country where teachers have begun to move toward openness all on their own. And there are schools where a group of teachers are doing this together. I think one could raise some interesting questions about what happens, how long a teacher is able to stay with it and so on. I'm saying that the questions for research ought to come at least in part from what the problems are.

I also keep saying that people involved in open education should focus not only on what has happened with a child in terms of his achievement, but on outlining goals for each program, describing what problems the program has tried to solve and what has succeeded or failed. Then some external evaluators can come in and help--the kind of "appreciative critics" who are committed to helping you refine and go further with what you're committed to so that you'll break this box of "I tried it for two weeks; it didn't work. I tried it for six months; it didn't work." If a teacher comes to me and says her principal said she could try open education for six months, I say, "Don't accept." It's important not to accept that kind of box. If we believe in development of children, we must believe in the development of the teacher as well; we must believe in the refining process within development.

Here's another question I'll throw out to the researchers. As we have worked, we have brought in external advisors. Other people are working all over the country without advisors, trying to figure out problems for themselves.

In the last analysis, each teacher must find the way to make open education work for herself; but, nevertheless, there is something to compare, isn't there? What about the many teachers working on their own? What about the ones that work with an advisory?

Then there's an additional question: How long should (or can) an advisory stay in that relationship? What is happening with bringing the supervisors closer to this advisory role? Are the supervisors being eliminated? Are they being turned into advisors?

I raise another very serious question. How long can we depend on external funding? My whole aim with the City College program was to see how much could be done with minimum funding to begin a process of change. There are many, many ways of doing this; but one ought to take a look at what their implications are for the future. There are some programs that have put in maximum input in order to create an example, a demonstration program where people can go and see what it's like when it's done well. And I think that is absolutely essential. We need that. Right now, in the twelve New York City schools I'm working with, we do have external funding to develop a core of advisors, with the hope that these advisors will go back to their schools with a new acceptance of the idea that a supervisor can be an advisor--and have a helpful relationship to a teacher instead of a "You have a messy blackboard" kind of relationship.

Now I want to talk about voluntarism. We stand firmly for voluntarism. We think it is essential. We do not think that it is possible for people, teachers and administrators to get the energy to change, unless they get really taken with something (and we believe this about children as well). I'm talking about interest. We think that teachers who want to change must be helped to understand that this doesn't just mean saying, "Yeah, sounds interesting," but that it means a commitment to follow through the implications of what it is they want--with all the hard disciplined work and soul-searching this requires.

When you are not doing just additive learning, but are actually changing, then you must restructure your framework. This means the kind of pain that it takes when you're confronted with discrepancy, with something that doesn't quite match your frame. All the implications of making this kind of change must be explored.

This is what I have meant by voluntarism--an active outreach--which is quite different from being willing to try open education because you think you might get extra material and a little extra help, and maybe better hours.

I think it's quite possible (and all over the country this is happening)

for systems to encourage their teachers along, and I believe that it's a good thing if an administrator gets interested enough in open education to offer a professional library, workshops and discussion forums on a regular basis. But I think that when a system begins to mandate open education, then what you will get will be unwilling teachers with dragging feet.

While we encourage every teacher who joins us to have read, visited, joined a workshop, to have thought about open education for six months and inevitably to have begun in small ways to try it out, I don't think you ought to move toward open education if you don't believe in it. There are good formal teachers and good informal teachers. So if you don't feel that the traditional education provides too narrow a match with the human potential of the child, then I think you shouldn't move toward open education. That's what we mean by voluntarism, too.

In spite of all the reading in the world, a teacher will still have a fumbling period at the beginning. Just as the cure for being young is to get older, so the cure for beginning is to begin and therefore, no longer be a beginner.

But the beginner must examine every step of the way: Did this work in terms of my view of goals for the child? Did that work better? And this should happen every day, every week. In an organized kind of program such as ours around City College, this is what the advisor does with teachers twice a week as she meets with them. But there's no way of insuring that the teacher (because she has read or observed) will start out with smooth silk and velvet feet. It does not happen. We must give room for the teachers to begin to see the implications, to begin to observe children. I would contend that in whole class teaching there is very little real observation of children. I think it is when children have other options that the teachers really begin to observe them. And I believe this observation is essential to the further growth and development of the teacher, and the honing and re ining of whatever program has been set up.

Here's another question to be explored. What happens to open education when it is diluted--by school systems promoting it without voluntarism? What often happens is that totally formal methods (not based at all on really observing the child's input) are used, and what you end up with is individualized instruction, not open education. I do think that's better than whole group instruction; but it is still totally teacher-managed, with no trust at all that the child can learn on his own.

If the teacher has a view that she has no input, that she only observes and diagnoses, she may get over-burdened with record-keeping, with thinking "Oh,

does he conserve? Is he pre-operational or operational? Is he doing reversibility? Is he at that level?" The fact of the matter is, that what you want is a teacher who grows in intenseness of observation as to what each kid is grappling with, and who can extend that thing. If you hand the teacher a million tests or a million check lists, you will take away from her the important teacher role, that of being an interactive participant in the child's learning, responsible for extension and adaptation. This means she must interact, join up, grow in observational skills, and not just consider herself as a great diagnostician!

I don't go around with a thermometer and say, "This is open. This is ninety percent open. This is 95.2 percent open." What I am looking for is an environment where the teacher is thoughtfully reacting to what she sees, where the teacher is responding to the child's potentialities.

Although we often work out with the teacher a temporary structure that will help a particular child, what we don't do is say, "Certain children need more structure." In open education, whatever gets the child going is the responsibility of the teacher. And, therefore, of course, there may be structures, even tight structures for a while.

Another interesting question I want to raise is: What is happening to children in the traditional classroom? Why are we being presented with the idea that these children in Harlem schools, for instance, who were sitting in the principal's office, thrown out of the classroom, sent to CRMD classes or even to institutions, were handled better in the traditional way?

When someone asks me a question like "Well, is every one of your open education children reading on grade level?" I say, "My God, someone has reported that eighty-five percent of school children read below grade level--and I'm supposed to turn out a perfect score! I 'm not!"

A colleague of mine in open education made the comment (in a recent paper) that the floppiness and sloppiness of attempt "has thrown us back further than we were before we ever heard of open education." Now, I don't think there's any research on this "too far, too fast" bit. On the contrary, in the midst of a crisis on education--with everyone unhappy--we now have at least the end of the monolithic system. Whether you're for open education or not, at least there is a discussion going on. Is it a bad thing to raise our level of general feeling and awareness and to take part in a nationwide discussion? I think it's ridiculous to say that we are further behind than we were in 1967, when there was no discussion. It is a good thing to open the box, to realize there will be fumbling and take the conse-

quences, and to raise the kinds of questions which will help us go further.

Now I'd like to get back again to questions about advisory staff: "How long should an advisory stay?" "Should an advisory be attached to a district?" "Is there a way of building this in but still taking it out of the very direct relationships of the schools?" I feel that very, very soon, advisors must say to schools, "Okay, we helped you out for a couple of years. Now we'll be available if you have questions." I think that must happen. I think the advisor will have to get out of the schools. But all over the country, I hear people saying to their teachers, "No, we don't have an advisory in our school, so you may not try open education!" The same distrust they have of children exists in their relationships to the teachers, and I think this must be looked at.

I raise the question of how the public structure is going to take over the funding. I'm grateful to the Ford Foundation for supporting City College in developing an example, but we have done it minimally. We have only tried to train advisors; we haven't asked for thousands of dollars for materials or anything else. We have asked the principals only for minimal change. We ask, can this group of voluntary teachers interested in open education be put near each other? And then can we be allowed to try to work out with them the implications of opening their doors to each other with a common focus--a view of how children learn? That's all.

Nevertheless, there is the question of who is going to provide necessary funds for continuing advisory help in just the trouble shooting places, teacher centers. Are we always going to ask for external funding? Well, let's look at England again. England is not a very rich country, but London now has twenty teacher centers, funded by the local authorities. Most of these teacher centers are available on a twenty-four hour basis, a few on an after school basis. They give courses. They have materials. Teachers are released from school to go there, sometimes for weeks, sometimes just for a series of separate days in a week.

I believe that the advisor will have to get out of the schools and this will have to happen as the next stage. But right now we're trying to create a bridge by assuming that there can be volunteer supervisors, principals and assistant principals, and that the ones who are interested will join us in the same hard pursuit the teachers are involved in. Then in those schools we would feel that we could get out and leave because a basic change has occurred.

Basic changes are occurring. For instance, in District 3 in Manhattan, educators are even questioning the sacrosanct character of the Metropolitan Achievement Test. They have looked at the Metropolitan Achievement Test and

raised the question, "Is it really a test of reading?" The I.Q. test was outlawed in New York, but the reading test remains a hidden I.Q. test with trick questions and all kinds of difficulties that are not equated with the child's developmental level. So what happens is that a parent is given a failure image of his child at age seven plus.

Is it really possible to know where a child is in reading level? I think it is quite possible that an informal reading test can tell you where the child is. If just a fraction of all the money that's spent on things like standardized testing could be given to a few good researchers who would take six months to do a sample (or even hold classes on an informal testing test), they could help us work out some measure that would tell us what the reading level is, but not superimpose the methodology of the tests on the classroom.

Children who have been in open education, where the curriculum has not been centered around the test, have not done any worse on this test; and in almost every instance, they have done a little better. We now say to the formal teachers, here's a chance for a united front; this test hurts your kids at least as much as it hurts ours. So let's hold off on this test and use that time to work out something better. I think it is the responsibility of researchers and evaluators to help us practitioners with this.

One more very simple question is: What are the implications of changing the organization, and what are the possible questions and research that may arise from such a change? For instance, what is the role of a principal in a large school which has developed a good bit of open education? Will he be able--even with the best intentions in the world--to do something that worked successfully in England because the schools were small, and because the principal always remained an educator, part of the teaching force? In our training of the principal, we must emphasize the idea that the principal must foster an open relationship with his teachers if the teachers are to have an open relationship with the children.

SUMMARY

And now I'll try to sum up briefly the general drift of what I've been talking about. The main point I want to make is that application grows out of theory and corrects and redefines theory so that possibilities for growth of application and theory are reciprocally connected.

But the present direction of research and evaluation has had little effect on our application. Present evaluation still tends to center narrowly

on the single dimension of reading achievement. Teachers have tended to put the onus of evaluation, the focus of questioning on the individual teacher, on the child. They have looked askance at the teacher who takes the risks of change and have not helped her take the necessary next steps for her development. (Interestingly, the questioners have not looked at the danger of the use of the name "open" by industry, systems and whole areas. They have not perceived as dangerous the shallow, officially stabilized plateau, which is without further developmental potential.) As I examine the role of researchers and evaluators I see this context of poorly focused or wrong questions, unexamined or "external" questions, questions external to and ignorant of the rationale of what is being attempted.

The developmental description of how children learn is not up before the evaluators--that's our commitment as educators. What evaluators and researchers can do is help us know more about what and how the child learns in the changed situation. Until evaluators and researchers involve themselves with the changed organizational definitions, they will not develop the questions pertinent to what is being attempted, but will only continue to ask the same old questions pertinent to the old unchanged organization.

If researchers and evaluators would enter the changed settings, they could contribute. They could help us carry out our commitment to find the way to organizational support of development. They could help us reexamine our attempts and refine them, compare different ways of implementation: help us know more about the development of the child in these changed settings. Then we could more clearly assess the complexities of the voluntarism we have set as organizational necessity for change--as the necessary ingredient which provides energy for the pain of change. The possible different formats of an advisory, its ties to the situation, the desirable duration of these ties--might all be better examined. The relationship of questions of funding, the changing role of supervision, the use of a resource room, the staff-children ratio and the parent role could be examined.

Research and evaluation are needed, but as aids to better implementation of the development undertaken--not as external judgments of a process not understood.

Summary

by Bernard Spodek

My summary will not be a conference summary, because you really can't summarize a conference like this. A summary gives a sense of closedness, of a finish, or an end, and I hope that for me and a lot of people in this room, this is rather more a beginning than an end.

I think this was a difficult conference in terms of the number of ideas, the need to share, and the limited amount of time we had available.

What I want to do is to share with you some of the ideas that I've gathered from this conference (some of which were there before, but were extended).

Open education is kind of an educational Rorschach: it's diverse and broad enough for people to be able to find something in it that they want to find in it, and this creates some of our problems. Many of our problems with open education are problems of discourse. I would like to suggest that we need to personally look at some of the basic philosophic statements that have been made about open education. What kind of assumptions do we make about the child?

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About a teacher? What should a child be in school? What should we expect of him? What should a teacher do? What do we mean by learning? Is learning the same thing for all of us? What do we mean by development? Do we really believe in development? And, finally, what do we mean by schooling? What's the role of the school? What's the function of the school? And how does all of this fit together?

I think we need to look at the relationships between all these things. One of the things that struck me earlier in the conference was that a lot of people were talking about love, the communication of love. I was a little disappointed when I heard no one talk about respect--because it seems to me that one of the basic notions of open education and early childhood education is respect for the individual, for the person. I think this needs to be the basis for all our programs.

I think we also need to take a good, hard look at some of the sources of open education--this business of let's look at the English. What the English experience does is show us what can be. But this is not what open education comes from. I think it comes from many of our own traditions of early childhood education. We can go back to Froebel and his concept of development and the importance of play in children. We can go back to Robert Owen with his concept of freedom and the role of the school in developing of the individual (you know, the character of the person to live in a new society). We can go back to Rachel and Margaret McMillan with their concept of nurturance as the basis of education, that you can't think of the child as a learner without thinking of that child as a growing human being in an environment that has many, many more needs than textbooks and manipulative materials.

We talked about the source from Montessori with the concept of freedom within the schools. We need to look at the progressive education movement as one of the sources also, and, parenthetically, we also need to remember that the progressive education movement stood for the scientific study of education, which was the precurser of the standardized achievement tests as well as the philosophy of John Dewey. And where do we go from here?

As we get a better understanding of play--i.e., what <u>is</u> play--we tend to get hung up on the play-work dichotomy. I would suggest to all of us that we need to look at play not as an all or nothing thing, but at the degrees of playfulness or non-playfulness that we find in activities, and the need for internality in play. That is, play as the function of the individual, the internal thing.

I think we need to look again and again and again at developmental concepts--the whole idea of how people grow and change as a result of experiences. We need to look at this in terms of what it really means for schools and school experience.

We need to look again at the curriculum development movement. It seems to me that many of the things we're able to do with children in schools today are a result of the kind of techniques and materials that were developed in education. And we really need a further explanation of what is curriculum, and how we develop curriculum, and how we generate learning experiences for children.

I think we need to look at values. A friend of mine said a long time ago that one of the things that was great about the progressive era was that it made us aware of education as moral activity--that what we do to children in our schools is a value-based activity. We need to look at the values that underlie our behaviors as teachers, as principals and as researchers.

And we need to look at the relationship between society and schools. Schools are supported by society, and I don't think you can change schools in a vacuum. This relationship of schools and societies has all kinds of implications.

We need to look further at the sources and at the characteristics of open education. This may need some additional explanation--the observation of attributes of open education. Can we look at open education in terms of materials, equipment, organization of time, space and people? I think not. I think we need to look at it in terms of interactions and action. We need to begin to use some of the naturalistic techniques of research, or what I was calling ethnographic studies, the kind of work done in terms of "Let's see what happens in classrooms so that we can better understand the interactions; so we can be better appreciative of the nature of dialogue between teachers and children and between children and teachers."

I think we need to look at belief systems that teachers have and their relation to behavior.

And, I think we ought to take another hard look at pupil outcomes. We need to go beyond the standardized testing in these things. We need to develop some ways of assessing what the children really know. What kinds of problem solving techniques do they have? What about their self-concepts? What about internality, or externality of locus of control?

This all needs to be part of our evaluation, which needs to be long term rather than short term. This is rough for researchers and it's awfully hard on teachers as well, because the teacher has to go in on Monday and work with a bunch of kids, and she can't wait for seven years until a researcher gets through with a longitudinal study. You just can't hold the kids off that long. Yet, there's no way of getting that kind of knowledge except as a function of time, and this is a real bind that we're in here.

It seems to me that when one looks at open education, one needs to again become aware of the role of the school as an institution. There's an administrative structure. There's a bureauracy that needs to be taken into consideration. I mentioned earlier that we worked in a school that was built in the 1870's, and one of the interesting things that struck me at one point was the fact that this school was about ninety years old, and it didn't even bother us except that it didn't have an electrical outlet for us. A school that was built ninety years ago could fit education as it is in the 1970's! Can you conceive of any other institution that would not require any change in the physical structure that housed it?

What about the rituals of schools?, this business of indoctrination and acculturation that Pat Carini said is not the same as learning. Does this wipe out our learning? Does the style of education that goes on in classrooms really make any difference if these other attributes are so pervasive? I think if we're going to make a difference here, we must look at what it is we need to do in order to effect changes in schools and whether, indeed, we can effect changes in schools. I don't know.

Finally, my great concern is in this bridge between research and practice that we keep coming back to and back to and back to. What about dissemination? There are people who are studying. There are people who are practicing, and somehow, how do we share? It appears to me we need to look at new ways of sharing knowledge--open education, for example, has to be disseminated in an open way. Again, I go back to Pat Carini's statement, a quote from Froebel, that "Education is the bringing out from within rather than the putting in from without," or words to that effect. What does that mean in terms of the system of dissemination? How do we deal with the uses of knowledge? How do we create knowledge within the self, within the person? Knowledge is not information. Simply hearing something does not make it your own. In order for you to create knowledge--and I think knowledge is created--you need somehow to act upon

information. This is what we speak about with kids needing to be active in a learning situation. They can't simply passively sit in a classroom like sponges and soak up all things. They have to do something with what they hear, with what they see, with what they touch, taste and feel. I think this is true for adults as well, although we do it in different ways; that information needs to be integrated, needs to be internalized, needs to be made one's own. Ideas need to be tried on and turned inside out. Teachers need to discover what meanings ideas have for them not only in terms of their personal integration but in terms of the professional response they have to kids in school.

From what you've heard at the conference, in the next two or three days what difference does this make or should it make, or will it make when you go back to a classroom the next day or a week later? Unless there is a difference, I don't think you know any more as a professional person than you knew when you came here. You may have more facts, but you really don't know. Each person here somehow needs to develop personal meanings, his own integration for whatever he heard at this conference. I think this is very important.

I worry about bandwagonism, and I think Lillian Weber worries about it, too; but I don't think it's a matter of too much too soon, or too far too soon. It seems to me that one of the things we do in teacher education, in teacher conferences and lots of other things is to develop a verbal facility with slogans. Slogans are easy to have--one can go to the schools and hear teachers one year talking about teaching for discovery, the next year talking about teaching for openness, the next year teaching for creativity, and another year teaching for the structure of the discipline. Yet, you look at their classrooms and nothing has happened that's different from one year to the next. Only the slogans have changed.

It seems to me we have to go beyond verbal facility, especially when we begin to talk about open education. No conference can afford to call itself successful unless it has helped teachers see ways that will operate, ways that will make a difference in their classrooms. I think this is something that we're going to have to come to grips with as we begin to look at this whole business of dissemination; we need to go beyond the verbal facility.

Lawrence Cremin in the Transformation of the School[1] referred to the

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1 Cremin, Lawrence. Transformation of the School. New York: Alfred A. Knopf. 1961.

notion that progressive education was tried and found wanting. His po is that progressive education was never really tried in the broad arena of the public schools. It would be unfortunate from my point of view if we went through the same thing with what people are calling open education or informal education. Whether this will happen or not, I think, is not going to be the fault of myself, Lillian Weber, Ted Chittenden or any of the other speakers here, but rather will be a function of the individuals who come, who listen, who act or who do not act.

So, if you will, what I'm trying to do is say that at the end of this conference my job is over. I fly home. I know where I'm going. I hope that you will take some time to think about where you're going as a result of the conference.

Panel Discussion

Dr. Raymond Bernabei, Moderator

by Richard M. Brandt

Dr. Raymond Bernabei, Assistant Superintendent and Director of Curriculum and Instructional Services for the Bucks County Schools, Doylestown, Pennsylvania, served as moderator of the discussion session.

During this session, a list of questions (most of which had originated with participants at the conference) was presented to members of the panel for discussion.

The panel included Bernard Spodek, Patricia Carini, Richard Brandt, John Dopyera and Edward Chittenden, whose papers appear in this report; also participating were James Nations, Assistant Director, Department of Curriculum and Instruction, Montgomery County Public Schools, Rockville, Maryland; and Margaret Lay, Professor of Education and Home Economics and Director of Early Childhood Education Center, Syracuse University, Syracuse, New York.

Question 1: What evidence, if any, is available that would indicate a high correlation between open learning environments and the three following goals of education: self-concept, creativity, and understanding others?

Dr. Carini: On the matter of originality (or creativity if you want to call it that) I reported yesterday that we have in our population a very high correlation (.97) of originality with productivity (by productivity I simply mean fluency of ideas, possibilities of solutions). This, combined with a rather weak correlation of originality with intelligence, makes the finding rather interesting. The findings are leading us in the direction of considering that perhaps if you don't push the early concepts too much, if you don't give such a vertical definition to development in terms of logic, that you may instead be promoting another kind or quality of thinking which I would like to call imaginative thinking.

Question 2: List and describe in order of priority the three most important strategies an administrator must consider in implementing an open space learning environment from K to sixth.

Dr. Spodek: In the first place, I think none of us are really talking about open area or open space schools--we are talking about a concept of openness.

From my point of view the first thing you would have to do is to elicit responses of voluntarism. I don't think you can force teachers to teach this way. I think that if you force teachers to teach any way, you may get them to do it your way while you are around, but it doesn't get you very far. There have to be options available for teachers as well as for children, which means that there will be alternatives within a school.

The next thing I think you have to do is provide support for the teachers. It's nice to hand a teacher a book and say, "All right, next week you are going to do an open school--go to it." It's another thing to help teachers learn how to implement some ideas that they have read or seen or heard about in terms of what does it mean from day to day in classroom practice.

The third thing you would have to do is to involve parents and children in a dialogue about what's going to happen in the school; because just as you can't impose these ideas on teachers, you can't impose them on parents or on children.

Another thing I consider important is that you as an administrator have to communicate to your staff where you stand on this. I think that unless the teachers you are working with know where you stand, you are going to create conflicts within the school climate that will wipe out anything that happens.

Question 3: Given two buildings, one a conventional building with 24 separate classrooms, the other a contemporary building with open-space learning environment, distinguish and describe the difference in the organizational climate as it relates to staff morale in both buildings.

Dr. Spodek: I don't think the physical plant is very important, because there are so many other variables. Unless you have a faculty which communicates with one another, actually cooperates with one another, an open-area school can turn into some type of daily hell that supports conformity more than anything else. At least, a teacher who is by himself with four walls feels a certain amount of freedom or autonomy. I don't think that's the important variable. It's as simple as that.

Dr. Carini: I would just like to add that the architecturally open schools, in my estimation and experience, cause tremendous numbers of problems in implementing informal education. There aren't enough corners. Teachers have to use too much ingenuity, and often don't have the furniture there. So, overall, the morale is likely to be higher in the building with the more conventional type of structure.

Dr. Nations: I think that Dr. Spodek's point is a very important one. In my school system we have a number of open-space schools. In one of those schools, the factors that would encourage open education were not there. As a result, teachers built walls as the year went on. First of all they moved bookcases in, and then they started adding things on top of the bookcases, and finally in a short period of time in this beautiful open space there were self-contained classrooms built up. So it's not the space that makes the difference or the organization of the space. It can be a factor in helping some things to happen, but it's not the important thing.

Dr. Bernabei: Is there any research evidence available on this open learning environment concept with implications one should consider in developing educational specifications for an architect?

Dr. Spodek: I worked as a consultant for a corporation that was setting up some nursery operations in the United States, and they sent an architect out to visit some of the programs. I took him to about three or four different places. The place where we had the most alive, vital program was in a school that was built in the 1870's, with very high ceilings and oak floors and stuff like that. He got very excited, and I thought I hope he doesn't try to emulate this one. Finally his comment was that the only thing an architect can do, really, is to make sure that the building doesn't get in the way of the teacher. I was impressed with

that comment.

Dr. Nations: I think we have gone too far in many schools in making them so open you just can't do anything with them. What we need is the kind of partitions and furniture that can be moved so that the space can be organized and reorganized as the program emerges.

Dr. Lay: It seems to me that it is important to arrange for the possibility of some differentiation in space in terms of some open space and some small spaces and provision for some easy flow of children in and out of these spaces. From a very practical teacher point of view, having a minimal number of adults being able to supervise several phases simultaneously, having lots of hideway places is very nice, but it is also very nice for an adult to have visual access to at least a portion of these places.

Dr. Brandt: In the little school I was in, overall construction was quite conventional, with forty children in a room that was rather small. But I still had as my biggest problem doing research there, locating the next kid on my list because there were enough cubbyholes that I had to hunt and search almost as long as it took me to do the recording.

Dr. Dopyera: I think that one place that an architect can really have his problem solving ability taxed has to do with the research point of view. I spent a lot of time trying to get research access to different kinds of programs, and usually I became part of the woodwork. But it does help if the architect can come up with some ideas as to how a researcher can come in and have observational access without becoming a problem to the program. A researcher certainly spends hundreds of hours in a program; he's going to become part of the woodwork, but he can also be in the way.

Question 4: <u>If you're planning to construct a building which will provide an open-space learning environment for K-5 and is to be ready for occupancy, say in September 1974--would you be able now to provide some indicators or describe some way the building principal and his staff can devise a systematic model for evaluating the process and the product</u>?

Dr. Carini: Yes. You should begin to plan that you're going to evaluate your program, and you're going to evaluate yourselves within it. It's a very different thing to evaluate a program and to document the progress of the students. It's the evaluation of program that is often missing.

One of the reasons it's missing is that it requires you to sit down with the staff and arrive at some realistic objectives which you want your

program to accomplish. Once you work out your objectives, evaluation is no problem. At the same time, you should be working out how you're going to arrive at those objectives, by a process which I call schedule for change. You ought to start right where you were; and then very, very slowly you move through that calendar of change, evaluating each step, keeping that evaluation quite separate from your documentation of children's work. It's a very possible thing to do, but it takes some honesty.

Dr. Bernabei: Would you extend an additional question attached on to that? Who in the building should be involved in what you're talking about?

Dr. Carini: Everybody who's going to be involved in the program. The principal should be there. If you're lucky enough to have paraprofessionals, they should be involved. The teaching staff should be. If you're going to have student teachers, at least have them aware of what's going on. One big problem schools have is that not everybody is doing what everybody else is doing or necessarily even shares the same objectives. A tough kind of human conversation has to take place within the school, and then some agreement on a basic ethic so that the children have a certain security. Believe me, this cuts down incredibly on what are commonly known as behavior problems--disciplinary kinds of issues. And if you can get that free flow of conversation among all the people who will ever deal with the kids, you've come a long way, and you can be objective in your evaluation and not defensive.

Dr. Brandt: I have a feeling that one of the reasons so little research and evaluation is done in our schools is because nobody is really charged with that task without a lot of other tasks to do also. So it gets done in a half-way kind of way. In spite of concurring with Pat's idea that we need to involve everybody, I think that we need to have some single person, one who is interested and excited about research and evaluation, assigned to that role specifically.

Question 5: Since several states have mandated by legislative law that school districts must assess the effectiveness and the efficiency in these educational programs provided for their public school children, is it possible for any of you to describe whatever methods you have in mind that might be appropriate for implementing that particular law using the open learning environment concept?

Dr. Chittenden: One rather practical step you might take is this: if you have a testing program in the school district (for example, if the Metropolitan Achievement Tests or the Iowa Test of Basic Skills, or some other series of tests will be administered and will be considered part of an assessment and evaluation,

and you have no particular influence on this decision) I think you should insist that the test results, these skill measures, should be imbedded in other assessments. For example, if the school system values the skills of reading, does it value books? What's the library like? And what's the budget like in supporting books? I've been in a school system where the superintendent told me, "We're way above the average in reading," and I went into the library and it was like the National Archives. You couldn't get in there, and if you did, the books were all catalogued out of the way. The children never got to them. This shouldn't be allowed to happen, because that's really very dishonest. You're saying to the public, "We like the skills, but we don't like the practice."

So you can insist on an evaluation of the supporting services, and also insist on an evaluation: take a look at the children's reading habits. This can be done quite easily. You can talk to third and fourth graders about the sort of things they're reading and where they get them. Are children reading? What are they reading? Can they read? So I think you put those three things together, and you have a measure of "Can they read,?" you have a measure of "Do they read,?" and you have a measure of "Are you, as a community, putting your buck where you say you want it to be?"

Dr. Carini: May I add to that? As you know, with little kids, it depends on who tests them; half the teachers have never seen the standardization when they test on the Standard Achievement Test. There's another sad percentage trained to test. So if you're evaluating a program (as opposed to always letting the kids demonstrate that the program has come through), you can offer that evaluation as something to embed those other standardized test results in, if you can't get rid of them per se.

Annette Guenther: Doesn't this place a great responsibility on all of us to make our views on this known to the public? I know of some legislators who would like to legislate the kind of measurements that would be done by the outside people. Perhaps we should say "we're not measuring just the skills, but all the components it takes for reading."

Question 6: Is it possible to define instructional accountability as it relates to open learning environments?

Dr. Nations: Of course it's possible. Repeatedly, people at this conference have talked about the varied specific kinds of objectives. Very clear definitions of objectives of an open educational program have been laid out by various people. Once you have that kind of definition and that kind of clarity

as to what you're trying to achieve, then accountability is a matter of people defining their roles in relation to those objectives.

(The following questions originated from members of the audience.)

Question: Are some children better suited to an open classroom than others? What do you do about children who are so unself-directed that they can't find themselves?

Dr. Lay: They probably aren't initially, but certainly in moving from a highly structured situation to an informal, open program there are difficulties for some children in making the adjustment and getting to the point of being able fully to make use of the learning opportunities that are available to them in an open setting. Over the past year-and-a-half of working with forty three- four- and five-year-olds, I've used a very open setting, with many adults and many activities available to them. I've kept careful documentation of what children do, how they use those settings, how they use the adults. My fears of young children making use of open settings have been almost eliminated. The incidence of children who don't make use of any particular area is just zero. All children use all the areas. For young children coming into an open program there are not problems. For older children who have become used to another kind of structure and then move into an open setting, there are.

Dr. Nations: If what you mean by open education is recognizing the interests, the needs, the skills that youngsters already have, if you're really building a program and designing opportunities for youngsters to function where they are, then there is no reason why the youngster wouldn't fit.

But, if you have a little kid who comes into school absolutely frozen, you don't put him in a great big space and say, "Now, go and learn." You might have to structure with him, very specifically, what he's going to do. And if we are not responding to what kids bring to the setting, this isn't open education.

Question: Since language in the open classroom is based on the abundant use of language on the part of the child, what about the child who comes from a language-deprived home? What tool does he have to use when he comes into this open environment? And can the open school from kindergarten on up provide something that will make up for what this kid didn't get at home?

Dr. Carini: That's a complicated issue, and it depends in the first place on an understanding of the extent to which language is spontaneous. I've

had considerable experience with children coming to school at the age of five from very deprived language backgrounds, and I can tell you what kinds of activities and materials I've found useful.

You have to start from the premise that at this point the kids are not going to learn language by listening to adults, nor by interacting with them, but by interacting with other kids. You get them into a fairly mixed kind of a group of children if you can (if you can't, that's all right too) and you recognize that language is very related to drawing, so you try to get the drawing language thing going, and use all those materials that promote speech--sand, water, clay, etc. And you listen as hard and harder for the dynamic noises that a kid may begin to make in those settings than you do for any specific language function. Because if you've got noise, and if you've got responsiveness, you're well on the way.

One child came to us with no speech at five, and speech came through color and painting in her instance. But we have to recognize that language is not communication, it's expression, and go on from there. Later it becomes communicative.

Question: Isn't there a need to follow up these kinds of things with a concentration on learning tasks, with the teacher recognizing what these tasks are and breaking them into smaller components?

Dr. Bernabei: Can I back that up with another question? With children moving about "freely" in this learning environment space, will it become more difficult or easier for the teachers to diagnose children's needs?

Dr. Brandt: If I had to sum up my impressions and research and readings of what openness is in teaching style, it is the teacher who is busy most of the time moving from one child or small group of children to another, listening and watching what they are doing. In other words, it's a monitoring personalized tutoring kind of situation. And, in a more informal way it requires that the teacher take a very close look at what the tasks are and what they mean to each child as he moves through the school day.

Dr. Spodek: Let me make two points. If you know a kid is on page 67 of the second primer, in a class with 15 other kids, you know nothing about his ability to read. So I think there's a much more intimate knowledge of children in an open setting.

I think, also, you need to differentiate between the analysis that the teacher does of learning tasks (from watching individual children work) and the way in which she presents learning tasks to the children--not necessarily in that

analytic, small step, programmed instruction type thing. I think you need to differentiate between the two.

Dr. Carini: I would like to add we're always far from the mark whenever we try to take a bit of curriculum or a task or whatever and analyze it from our points of view, as we have a conceptual development that's so different from the child's. That's why yesterday I was stressing that this is an attitude, an informed, (and I do mean informed) knowledgeable insight about development, and then that is made specific to each child. But the logical type of thing has always just led to more curriculum tinkering, and we get prettier curriculums that appeal to adults.

Question: I wonder if there's been any research done on the effectiveness of the open classroom in American-Indian education?

Lillian Weber: (From the floor.) Vera Johns is working with us at Yeshiva University, and the focus has been the Navajo Indians. She's working with us because it came to her very strongly as a linguist that the modalities of ways of reacting and of ways of people coming in to knowledge were varied. That unless one started with that, there was nothing. And therefore she has become an adherent of open education.

Question: Could any of you make an attempt at presenting an operational definition of instructional accountability with respect to three specific components: acquisition of skills, acquisition of concepts, and acquisition of knowledge or information? When we talk about tasks, I find it important to make a distinction about who you mean, a three-year-old, a five-year-old, a seven-year-old.

Dr. Bernabei: I'll give you my definition of instructional accountability, and you can apply it, I believe, to any situation. If we look at instructional accountability as a logical and orderly means of collecting evidence of educational growth of children from K-12, we can do one of three things as educators: maintain the educational programs; throw away the educational programs; or redo the educational programs that we're providing our children. And until we look at educational accountability perhaps with that kind of understanding, I'm afraid we're going to have external agents coming in and telling us what it's all about.

Question: You used the term "educational accountability," but I had earlier used the term "instructional accountability." I think there's a difference.

From the Floor: I think we have to make a distinction and have very clearly in mind what it is we have as objectives for a particular interaction. We have to prepare for it, and we have to know. And in working with parents I find that they're able to make this separation in their minds and that we deal quite differently with a child when we're preparing to help him acquire skills and concepts, and when we're preparing to help him acquire knowledge or information. And it's not until we have all of these aspects integrated with experiences that we can even talk about instructional accountability.

Dr. Bernabei: Instructional accountability, as I see it, is one of the elements--or components--of educational accountability.

Question: There has been, perhaps unintentionally, in the last twenty-four hours of our time together, a halo or an aura e[illegible] built around the British Infant Schools and the instructors in them. [illegible] I was in the British Infant Schools, I saw some very rotten teaching, ar[illegible] would like to talk for a moment about the evaluation of instruction, because [illegible]believe that many of you would believe as well, that on a different scale th[illegible]nge of effectiveness in such instruction is very, very broad, that we have the tendency to think of the teachers over there as all good ones.

Dr. Spodek: I think you're absolutely right. There are some problems that we've come to deal with. One, I think the kinds of schools that we have been talking about are not all British Infant Schools or English Infant Schools but really a large minority of the schools. And within that minority I think you can find some very fine teaching going on. But whenever you talk about a group, you're going to do away with some differences between them. I don't know how to get around that when you talk about groups of things.

The other thing is, I think there's a real danger in trying to look to the British for answers to American education, because they didn't discover education all by themselves either. They used ideas from many people here in the United States.

The one thing that excites me about the English schools is that it's the only place that I know of where this form of education has really come to be such a mass movement, where a large number of schools that operate this way can be found within a geographic area, and a large number of good schools in certain areas.

Dr. Carini: My experience with English teachers has been within this country, and I've known some very good ones and some that were not so great in

certain terms, as you said. One of the things the English are very hesitant to do is to begin to articulate what it is they are trying to do within this kind of education.

I very much appreciate and sympathize with the unwillingness to articulate, because sometimes you end up with the rigidification of practices, with the stylized kind of thing that you're trying to get rid of. On the other hand, I think, that research could enter sensitively here, in the matter of trying to articulate what is the quality of the attitude toward the children that underlies this kind of education when it is carried out effectively. And that then gets us back to this matter of sitting down and speaking about the ethical objectives of open education knowing that it's not going to accomplish all things. And I realize these are not easy things, but I think they're things that we can afford to look at and talk about. Then we get closer to teacher evaluation, and we need it very much.

Preparing Educational Personnel for Open Schools

by Joel L. Burdin

Open schools--or any scheme for organizing schools--should be studied in the context of world, society and governing units. The people's objectives and statutes ultimately determine the why, what, who, when, where and even the how of education. This chapter focuses on general factors of pre- and in-service preparation of educational personnel, with some specifications for personnel for open schools. The views of the authorities whose edited papers constitute most of this book are the focus of much of the chapter. The broad principles are set in italicized type. The principles are mine, in the sense that I developed them in the forms reported previously. However, I am indebted to the innumerable colleagues who contributed to whatever insights I have, either about education in general or open education in particular.

A number of terms are used synonymously with the open education concept. Dopyera has identified the following terms: British Infant School, individualized instruction, informal education, Bank Street model, child development model, PVC model, responsive day care, responsive environment, continuous progress, Piaget-based curriculum, experimental approach, unscheduled or unstructured day and so forth.

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As Dopyera points out, relatively conventional school programs may be referred to as open education.

> ...even though children are all the same age, contrasted with multi-age and family grouping; the classroom day is time-subject segmented, instead of integrated; there is a total division of labor between administration and teachers; there is little variety in material presented for children's use; there is little accessibility to materials; and success is measured by normative group-administered tests, contrasted with an individual child's growth pitted against himself at a prior time. There is a high probability that many programs will be labeled open school even though they are far from it. This will add to much confusion and possibly much opposition to the open school movement.
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> To summarize, my concern has been to take a close look at what goes on in programs, beyond the labels, with a goal in mind of eventually better understanding the different kinds of impact which are made on different children through participation.

This section deals with an elusive concept and challenge! Hopefully, integrating the broad principles on preparing educational personnel of the other writers' ideas with my perspectives on teacher education will begin to pull together some useful thoughts for those planning, implementing and staffing programs for more open schools.

BROAD PERSPECTIVES: WORLD, SOCIETY, AND STATUTES

Preparation programs for educational personnel must be more multicultural and international to help school personnel to become pioneers in developing the frontier of human relations. Teacher education must create school personnel who can transcend distrust of people on the basis of differences and who can enrich and be enriched by direct and vicarious experiencing of others' creeds, cultures, races, nationalities and socioeconomic and personal differences. It must promote knowledge and attitudes useful in building human relations. School personnel should utilize educational forecasting--projecting what the world is likely to be--as part of a move toward better utilization of the resources of the "real world" and tooling up for an idealized-yet-possible better world for all people.

Since personnel are the basic educational resource for more open schools, they should be immersed in society-as-is and society-as-it-should-become. They become the guide for the young to learn about and meaningfully internalize society of the now and of the possible. Formal and informal study groups--including students, professional educators, and citizens--could provide a means of keeping abreast of current trends and developments, projecting current trends and goals

into the future, and assessing their educational consequences and potentialities. Participation in school-related and community groups could create educational opportunities more likely to be "real world" sound, supportive of individual needs and compatible with democratic ideals, and helpful to present-day learners in developing personally meaningful values and attitudes while preparing to be productive for the society.

Trainers of personnel must become more meaning and quality oriented, capable of preparing school personnel who will be key people in societal efforts to secure:

- *Quality, rather than quantity;*
- *Person-values rather than thing-values;*
- *Understanding and personal meaning, rather than mere knowledge acquisition;*
- *Group identity, effectiveness, and productivity, rather than blatant individualism;*
- *Development and wise use of human-natural-manufactured resources, rather than mere technical and organizational efficiency--in short, the good life for all rather than mere extension of lifespan and and affluence.*

Movement toward open schools should be made in harmony with the previous principles. To seek open education for a closed society does not make educational or political sense. Many present trends in American society toward flexible life styles appear to be compatible with the concepts and practices of the open school movement.

While it is true that educators should serve as educational leaders, it is more true that educators are society's servants and can bring about change largely through indirect means. An example is teaching critical approaches to thinking and learning. While this could remake a society, the change would occur in the hearts and minds of the students grown into adulthood and committed to substantial changes in the society. In actual practice there is a curricular relationship between educational change and the efforts of school personnel. The pre- and in-service school person should know enough sociology, political science, philosophy and other disciplines to function consistently and effectively within the social milieu.

Spodek cautions us to look at the current American context and sources of ideas on open education and avoid mindless duplication. British open schools reflect their current values, he notes. The open schools in England, he notes,

come out of "English experience." American open education should be born out of American traditions, objectives and dreams.

If American educators are to benefit from the British experience--without being slavishly imitative--some need to visit England to *experience what is going on there.** Without much first-hand, intercultural experiences, American educators might attempt to install open education in this country without translating it into the American cultural context! Of course not many teacher trainers or pre- and in-service teachers are able to visit England. If there are some able to go to England and many able to benefit from comparative education studies, it is possible that *intelligent importation of the concept* can be brought about to the benefit of American children. American open education should be home grown--compatible with what America is and wants to become.

Efforts to install open education--any educational concept--should incorporate the capabilities of contemporary cybernetics and of futurism, to help school personnel prepare for future change while living effectively today. Broadened minds and aspirations can capitalize on technological advances of today and prepare for tomorrow's promises.

There is a kind of future shock which occurs when too many educational changes take place too quickly. During the pre- and in-service program for educational personnel, a mindset should be developed toward adapting to reasonable and defensible change in the society and in the school. There is some question as to how to bring about an adaptability to intelligent change. Without question there is value in considerable reading of all kinds--expository, biographical and autobiographical. Such experiences can place the school person in all sorts of circumstances which cross class and race lines, distance and time. There are indeed limitations on how many experiences any one person can have; therefore, reading is a good supplement to direct experience and indeed can become a kind of direct experience. Clearly, it is desirable for the education person to get involved in direct experiences in as may settings as possible.

Additionally, there are other ways to intellectually and psychologically prepare for drastic change: for example, group dynamics and simulation. Such experiences can change attitudes and behavior in much the same way that direct experience can. They have the added advantage of taking place under professional

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*For example, E/K/N/E's Annual FLYING SEMINAR TO ENGLAND.

direction and providing for peer feedback immediately. They can also provide common experiences conducive to group discussions leading to needed insights on the world as-is and is-to-become.

THE RIGHT PERSON FOR THE TASKS AT HAND

The key to any educational improvement is personnel. "Necessary, but not sufficient" describes facilities, equipment and materials. The irreducible minimum in any educational endeavor is competent, sensitive and humane personnel.

Somehow, personnel seem more crucial in open schools than in traditional schools--where the curriculum and facilitating equipment and materials can be organized and ready for use. Some traditional schools are even billed as "teacher proof." Perhaps open schools force the issue often obscured in traditional large group instruction: Is the educator helping an individual child? Clearly, open schools call for individuals of exceptional skills and characteristics.

Recruitment, selection, preparation, placement and retention must be responsive to the unique demands of open schools; otherwise, one more movement is headed for the morgue. Several general principles are pertinent in staffing open schools:

Effective educational preparation programs must become personalized to develop humane, sensitive school personnel who can counterbalance the depersonalization of complex, cybernetic living and create a sensitivity to human aspirations, potentialities and problems--a key to continuous efforts to establish relevance for children and youth.

Schools require professionally competent, individually humane, keenly sensitive and intellectually strong personnel. Careful efforts are needed to get each teacher in that particular position where he can serve most effectively; encouragement is needed to retain the best teachers. This necessitates:

- *Comprehensive efforts to create student, professional and lay understanding of education, with a dedication to it and a determination to support it--ultimately very effective stimuli to the selective recruitment of future teachers, beginning at the elementary and secondary level with promising prospects.*
- *Broad participation--of all who have a stake in staffing--in selective admissions and retention procedures--and "counseling out" where needed.*
- *Plans for precise staffing patterns for each particular school to guide all involved in personnel placement activities, particularly the local staff as it assists in making final selections of*

those who can help a specific student body and community (and share in the accountability for results--a correlary to responsibility).

- *Local staff assessment of its own present assets and liabilities, and projected requirements, to plan and secure a vital in-service program in collaboration with all who share responsibilities for in-service education.*
- *Total professional responsibility for helping to develop, implement and enforce, and assess or revise state statutory provisions for creating and governing an effective and productive profession.*
- *Total and active professional efforts to influence diverse agencies, organizations and enterprises--and the general citizenry--in creating the climate and the conditions ultimately needed to retain professionals who can stimulate and facilitate the total growth of all kinds of learners.*

Open education can succeed only when school personnel care very much about children. Particularly in working in one-to-one situations, how a teacher feels about a child is communicated early and powerfully. Open education allows no hiding behind carefully prepared lectures, mediated presentations or carefully controlled dialogue. Therefore, it becomes highly necessary to select educational personnel for open schools with utmost care. Statutory requirements for accreditation and certification must be compatible with humane and individualized education. What the educational personnel *are and can do* for individual children are far more significant than their collecting course credits. Easier said than done--this is the continuing paradox in preparing educational personnel. What characteristics? What competence? What sensitivities? Though these are largely unanswered questions now, there must be *some* answers available. The suspicion persists that effective teaching is remarkably idiosyncratic!

Rogers, in talking about studies of self-concept, claims that people who "don't believe in themselves" don't produce very well. This suggests that psychotherapy should be part of the "content" of teacher education. It is important that personnel who work with young children be emotionally and mentally competent. In this situation, children are somewhat defenseless, and the teacher working with them has too little critical feedback about his own behavior.

Rogers thinks it would be interesting to determine what kinds of people are involved in open education--their beliefs, values and personality characteristics. These clues could improve recruiting and retaining teachers who function effectively in an open school environment. Vincent Rogers refers to Carl Rogers' "fully functioning personality"--that is, one who is open to his experience ,

without defensiveness; who lives existentially; and who finds his organism a trustworthy means of arriving at the most satisfying behavior in each existential situation--as "a reasonable description of what education is all about, what it is we are striving for." He refers to Carl Rogers' Freedom to Learn.[1] Vincent Rogers intimates that only fully functioning people can permit each child to explore, find his own identity, the source of trust in himself and in others. This kind of educator must be secure enough to permit children to search for and to create their own meaningful experiences.

COLLEGIATE-BASED AND "OUT THERE" LEARNING AND EXPERIENCING FOR EDUCATIONAL PERSONNEL

The process of helping a layman become a professional is a most complex and challenging task. Section IV moves from theory and foundations to knowledge accretion; to on-campus practice, experiences, and skill development; to its extension in varied off-campus places and spaces; and to seminars and practicums on and off campus to "put it all together." These pre-service components can only begin what must be a life-long professional development. Several principles are important:

While preparation of educational personnel must be interdisciplinary, education becomes a stronger discipline in its own right to enable it to develop school personnel who are among the nation's best educated persons capable of (a) relating various disciplines to teaching, and living learning; and (b) helping children and youth know and practice the structure and processes of the varied disciplines.

Preparing educational personnel must become increasingly theoretical and, concurrently, more clinical--to create conditions wherein theory and practice interact to enrich each other; (a) where theory provides an adequate conceptualization and understanding of the teaching-learning processes, (b) where theory can be tried and tested, interpreted and made meaningful. All this must keep school personnel from stagnating intellectually and make both theory and practice "honest," relevant and productive. It must develop more systematized steps of professional development--from selective admissions and retention (with numerous "exits") to individualized yet specific levels of performance relative to knowledge, skills, processes and attitudes. It requires a systems approach to

[1]Rogers, Carl. Freedom to Learn. Columbus, Ohio: Charles E. Merrill Pub. Co., 1969.

provide rational decision-making, monitoring and assessment, and incorporation of needed changes.

Rogers claims that while open classrooms initially appear to have less structure than a traditional one, in fact there is a great deal more structure. He cites different learning stations which encourage particular learnings by children. This sort of flexible, individualized learning makes it necessary for the teacher to have an extremely strong conceptualization of objectives, a sharp understanding of the structure of knowledge to help him see how things fit together, and a strong desire to help children put all this together in a meaningful way.

While attaining the values of interdisciplinary interaction and study, a teacher must become highly specialized and prepare school personnel professionally qualified for many exacting tasks, yet able to synthesize the totality of human wisdom and expertise. Such personnel should strengthen teacher education as a discipline and as a process.

In a world where knowledge-as-facts changes constantly, there is as much of a need for school personnel to learn how people learn what to learn. School personnel can relate the former to how children learn and help them. Each child's calendar of potentiality makes his mastery of learning processes and relevant content relatively easy and effective at the right age and stage.

Rogers summarizes Barth's point that children are innately curious and are inclined toward exploratory behavior without adult "intervention." A teacher must appreciate the role of curiosity in children's learning and provide that rich environment which provides for manipulation, various materials and diverse experiences.

Specific knowledge does have a place in teacher training. Rogers refers us to Piaget, Bruner, Isaacs, Bernstein and others who have put together over the years a large body of knowledge about how children develop. To understand children's discrete acts in the context of total development, educational personnel should study research, theories and ideas which educational giants have contributed. Knowledge should be blended with observations of and experiences with children. Both should create competent and confident personnel who can place varied children's activities into some sort of a large and sound conceptual framework.

Brandt indicates that the most dominant teacher activity in open

classrooms is listening and questioning. The teacher listens to an individual child's explanation of his actions and raises questions to clarify understandings and broaden them. Brandt reminds us of Marie Hughes' contention that "elicitation of additional thinking is the essence of good teaching."

Developing questioning skills to stimulate divergent responses is a important technique. Traditional teachers tend to ask questions that elicit convergent responses. Of course, questioning is not the only way to stimulate divergent behavior, but it is a crucial one. The techniques developed by B. Othanel Smith and others should be incorporated into teacher preparation programs for open schools.

Learning to listen to what children are saying--both their words and their meaning--is an important part of the teacher education curriculum. What children say and how they react are among the important ways a teacher can learn children's needs. Allen claims that in the open classroom the teacher should be listening more than in traditional classrooms.

Brandt observes that "well over half of each day is spent in informal self-selected activities. At other times the class would be involved in story time, sharing period, music, physical games or other teacher-directed activities." Clearly this requires training in directing such activities and--equally important--skill development in working with children on a one-to-one basis.

Allen points out that the open classroom is a laboratory for exploration. Teachers who have had exciting and creative exploratory activities on their own, hopefully, will provide opportunities to explore. Each teacher should continue to explore and secure some excitement to learning new things--whether directly related to teaching or to personal development. Allen advocates teachers' taking course work in anthropology, in ceramics, in music and in other disciplines and subject areas so that they learn more about themselves and their world. This is a kind of key to open education--an open mind unlocks the door to an open classroom.

Experiences like chanting, chorusing, composing, learning how sounds work--these are important to Allen. He then talks about tone bells, autoharps and pianos, about learning how sounds work. He talks about the beauty of our language as it is converted into a song and other expressive modes. The teacher who has adequate capacity to express a wide range of feelings has a great advantage in working with children who are very expressive. A great deal of personal

experience is needed with varied modes of expression before a teacher can utilize them spontaneously and yet purposefully.

Cooking is discussed in detail by Allen as a fine way to "exercise all the major features of language. The names of things, how things move, color, size, shape, texture, sound, taste, smell, emotion, contrast, comparisons....Cooking is a basic language experience and in some of the schools that I know there is a cooking station furnished as a part of the basic reading material in grades kindergarten through six."

The color of the sky, size and shape and texture, emotions and feelings about the earth--these are part of a person's repertoire if he is educated for our universe, according to Allen. In the urban world in which most adults and children live, it is often difficult to experience nature. The preparation program for open schools' staff encompasses the whole world.

Rogers points out that people can spend a lifetime studying children's play, the "principle" means of learning in early childhood. He claims that such play is a major factor in developing "power to discriminate, to make judgments, analyze, synthesize, imagine, formulate, see causal relationships, develop language." School personnel need to know a great deal about play. Teachers who participate in such play with children also learn a lot about themselves and permit children to learn much about their adult learning guide.

If open education is to be attained, teachers have to learn to plan cooperatively with children. There can be a happy balance between total teacher domination of a student's growth activity and experiences on the one hand and abdication of teacher direction and guidance on the other. The teacher as a professional knows more than the child--both about the child and about his needed competencies and knowledge. There can be no haughty superiority by the teacher. The teacher should elicit acceptance and openness by the child. This enables the teacher, as a professionally competent human being, to bring about a great deal of behavioral change in the student.

Every teacher is expected to know how to organize materials, equipment, space, and to facilitate learning. While there is considerable challenge when 25-35 children are doing essentially the same thing, it is more difficult when each child is doing his own "open-education thing" in consultation with his teacher.

Considerable logistical skill is needed in open education. Teachers

need to know not only content, but also ways of selecting materials, of storing and retrieving them, and of displaying them in appropriate places, in appropriate ways. Learning centers should be so attractive and appealing that children voluntarily seek them out and learn from them. The whole room has to be filled with learning options for dozens of children. Endless days and thousands of hours can be either a great challenge or a nightmare of sorts if the teacher does not know how to "pull all this off." The open-education teacher must be trained to become an organizer of great skill.

The training of educational personnel for open schools must go beyond the traditional school background--traditional spaces, objectives, methods, resources and ways of assessing individual performance; it must help school personnel to integrate learning opportunities in the formal school with those in other times, places and spaces--creating permeable membranes around the formal school setting and rejecting tendencies to wall the school off from its community, physically and psychologically. It must also help school personnel become social, behavioral and communications practitioners, competent in using the total learning environment and its resources: persons, things, places, knowledge and ideas. Such use should be brought about in person, through mediated means and through vicarious means.

Preparation programs must become learning laboratories wherein school personnel experience diverse teaching-learning processes and practice their own personalized, productive styles and processes. These should be monitored and adapted on the basis of professional, peer and personal feedback processes. The goal is to have them become internalized to provide a sense of professional maturity and security which in turn can give school personnel courage to experiment, to adapt and to grow while encouraging children and youth to do likewise.

Since there is much emphasis on open schools' learning at varied centers, it is important that teachers know how to build things--functional rather than fancy. Equally important, of course, is the teacher's capabilities in building learning centers. In our society, teachers for the open classroom tend to be female; in our society females tend to be unprepared psychologically or experientially for building things. Even today a chauvinist attitude prevails: Women cannot use simple tools to make things stand up or to make them work! Open education teachers should get a lot of practical experience in buildings things in cooperation with children. Working with peers and children provides teachers

with opportunities for the development of insight about teaching and about themselves.

Drummond notes that audiovisual hardware is often lacking in the English school. In American education there will always be an interest in "hardware." Therefore, there needs to be a continuing development of effective use of media. This kind of training can be put into performance-based self-instructional modules. The use of media can become an important part of the open schools, for media offers the individual learner an opportunity to transcend the barriers of time and distance. It permits the learner to secure many vicarious experiences. Instructional modules can be mediated and incorporated into learning centers. The need is for balance--many first hand exploratory experiences and some mediated experiences.

Open education is a concept rather than a way of using space. However, lots of corners provide places for many individualized learning centers. Of course, movable furniture can create many corners in a perfectly square space. The impact of spacial arrangements upon learning should be studied by educational personnel. Some laboratory experience in space arrangements and utilizations should be provided, presumably in places where open education is in operation. Some study of fundamentals of architecture should be included in the content of teacher education.

The open classroom seems confused and unorganized to the uninitiated and uninformed. This is not the case if there is an internalized discipline among the children. A key is having children engage in meaningful activities at their own rate of speed and within their idiosyncratic learning patterns. However, discipline is not semi-automatic, and no matter how meaningful learning is, there are occasions when a teacher must assist a child toward an understanding of self-discipline. There is a place for some formal study of the psychology of discipline and alternative disciplinary measures--in the positive sense of helping children to become constructively and creatively self-directing. Traditional disciplinary measures could damage the very concept of open education. Discipline should be taught in the context of open schools.

Whether learning about discipline or something else, mastering the essence of the open classroom is a real challenge! Allen speaks of "The comfortable, the quiet, the personal way in which books come into the classroom makes the difference in the children's feelings toward them. If they always have to sit

up straight and keep their marker, they don't develop a love affair with books. It's just the same as a human contact which generates love. If you always had to sit up straight with eyes forward and hands folded, I doubt there would be much love generated. Children have to caress them and play and talk to them and listen and maybe tear one up occasionally. It's a love affair we're seeking: listening and viewing." Rogers provides a good statement on the kind of sense of wholeness that comes as teachers see children in many different settings and experience them in many different ways. "We know something about the wholeness of the human learning situation. We do not learn in isolation. Drills, tests, competitions, threats, ridicule, fear of humiliation, failure: all of these have residual effects that may go far beyond the arithmetic or the spelling that is being taught at the moment." The potentialities of open schools cannot be obtained without commitment to and understanding of the concept. Seminars for pre- and in-service educational personnel can clarify the concept and provide times to exchange views and information on actual implementation.

Working together in a practicum situation, pre- and in-service teachers can convert theories about open education into instructional packages which can help children to learn. Many factors must be considered: the ways to select and organize learning experiences and knowledge, colors and shapes and relationships which help learning, the necessity of setting up a storage and retrieval system that enables the teacher to find the right ideas and materials at the right time for a particular child. Certainly there is a problem of culling, sorting and updating. A great deal of practice is needed in instructional kit planning, packaging and storing.

Crediting Barth, Rogers believes that knowledge is a means of education, but certainly not its end product. Rogers quotes Barth as saying, "The final test of a man is what he is, not what he knows. Knowledge is one part of an individual's personal experience and cannot be divided into neatly separated categories of discipline. The structure of knowledge is personal idiosyncratic and formed by each individual's experience with the world."

Since they are relatively autonomous, open education personnel should have a sound philosophy and theory of openness. Intensive readings in educational philosophy and theory are needed, along with numerous seminar experiences to facilitate values clarification. Undergirded by a sound theory of what open schools should be, the teacher can then behave in a consistent manner to

implement the concept.

An important characteristic of the British Open School is a dynamic interaction between the head of the school and the school staff. Since they have almost total autonomy, it is possible for them to collaboratively develop objectives, select content, delineate strategies and continuously assess the impact of their activities. Training in group processes is needed by pre- and in-service educators if comparable interaction is to be attained here. Whether American school staffs can and should be autonomous is another question.

ELEMENTARY-SECONDARY FACTORS IN PRE- AND IN-SERVICE POTENTIALITIES FOR IMPLEMENTING OPEN EDUCATION

It is an article of faith today that away-from-campus experiences are essential in teacher education. Particularly, personnel for open schools require much interaction with children. In-service educational personnel should have considerable autonomy in training personnel to man the schools to support the local staff's objectives, resources and style of operation.

Curriculum organization, materials development and selection, and instructional leadership and practice are responsibilities of the total staff. Extensive participation in developing organizational patterns, from local to national levels, can stimulate and facilitate sound curriculum development and improvement to support local school district, state and national objectives. Selection of instructional materials from a wide range of existing options and the conceptualization and creation of new materials especially for particular learners are desirable. Stimulation of sound instructional practices and acceptance of accountability for assessing and improving them are logical concomitants. Pre-service personnel securing practical experiences in such an environment can learn to "put it all together." In-service personnel can create open schools in which they can function best to serve particular individual children.

Rogers indicates that one major secret for successful open schools in England is the Teacher Centers there. These are places for workshops, eating and getting to know each other, making things and testing out ideas with other people, and writing instructional products--*a place where a teacher can securely experiment and explore.* People who are themselves learning are more likely to stimulate the growth of children. Such adults can sense the excitement that comes with meaningful learning and can empathize with children who yearn for such experiences. Such teachers can understand the excitement of children learning situations and get a

tremendous kick out of it.

Weber reports on the 20 teacher centers in London. These centers, she says, in many cases are open on a 24 hour basis. They run courses and provide materials. People work there on a release time basis--sometimes for weeks, sometimes for a few days or a week. There are some emerging teacher education sites in the United States. Weber cites an example of 10 colleges in New York City which are attempting to put together "theory in practice, and therefore, the possibility for a changed kind of training of student teachers and a possibility for a changed kind of education of the teacher already in the field."

A common term here is portal schools--where teachers can create and use innovative practices. Numerous difficulties are involved in putting the portal school concept into practice. Portal schools can and probably will be established under different names and sponsorships; there is a question as to what happens when personnel return to their home school if there has not been a significant change in the working environment there! Providing local teams with a portal school experience can provide reinforcement of each others' hopes and intentions for changing the education program back in their "home school." Portal schools which demonstrate open education are important instrumentalities in promoting the concept in America.

Katz has delineated several stages of development--applicable to all teachers--of preschool teachers.[2] The first is *survival*, during which the teachers need "encouragement, reassurance, comfort and guidance" as well as "instruction in specific skills and insights into complex causes of behavior..." Portal schools could help.

Since open schools are so flexible, much guidance is imperative, for it is not possible to depend on textbook or curriculum guide! No matter how good the pre-service training has been, the psychological moment of mastery of teaching arrives with the job. The training of educational personnel for open schools is enextricably woven into elementary schools during the pre- and in-service phases.

Katz's "Stage II" (Consolidation) likewise occurs in the real school

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[2] Katz, Lilian G. "Developmental Stages of Preschool Teachers." Elementary School Journal. Chicago, Ill.: University of Chicago Press.

setting. It is particularly important in staff development for open schools. Stage II focuses on individual children, on ways to answer specific questions. At this time, teachers are ready for expert information and insight, which can help particular children. Professional peer exchanges are valuable and valued during this stage. Teams of master, intern and student teachers provide natural opportunities for interaction and idea-information exchanges. (Katz's Stage III [Renewal] and Stage IV [Maturity] have implications for educational personnel in schools which will not be discussed here.)

The open school advocates tend to push for voluntarism in staffing them. them. Open school are a special way of living and teaching. It is more than the organization of space, equipment, materials, time and other such variables. It is a way of looking at self and at children to determine how learning can be facilitated. There is a lot of work in operating open programs. Without voluntary participation and the concomitant commitment, the enormous amount of work involved is unlikely to occur.

Weber additionally advocates parental voluntarism. Teachers in an open school need the understanding, support and actual parental assistance. Open schools do not look like traditional schools and may arouse parent's uneasiness and opposition. Adequately involved parents can help others see accomplishments occurring in the hundreds of activities of an open school in a given day. Parents can become open education's second best salesmen--a close second to children who find meaningful growth.

The central office personnel in the typical American school district are an important factor in establishing open education. They influence the pattern of innovation in America in critical ways. American school districts can block openness or push it before local staffs are ready.

Considerable discretion must be used in overgeneralizing from the British experience. Unlike the British local "school managers" or "board of governors," the Americal local school boards have considerable power over the total school operation, including, of course, the curriculum and the school pattern. Public information activities, therefore, are of absolute necessity if genuine open schools are to be established.

Assistance in the development of policy and procedural guidelines of instructional and learning factors such as the organization of teaching teams, space, equipment and materials allocation, and student assignments are critical

whole staff roles. This includes involvement in developing guidelines and accountability for assessing the guidelines, improving them and creating professional support for them. Management of some resources used in pre- and in-service school personnel preparation can increase support for this total professional role. Responsibility for helping to organize pre- and in-service preparation programs--in the local school system, in collaborative centers, and under collegiate auspices and for leadership in making the total profession accountable for securing sound objectives--should be increased in open schools.

The open education concept should go beyond the narrow confines of school board programs. The total community can become educative. Efforts are needed to make health, transportation and other domestic services serve educational purposes. Staff service on school system bodies can help make school-operated services support total learner growth and activities; and helping to create community services which contribute to total learner growth can broaden staff understanding of the community and open new places for children to secure experiences. Teachers must go beyond the book level in civic understanding and competence.

OBJECTIVES DEVELOPMENT, ASSESSMENT AND RECYCLING FOR IMPROVEMENT

Lillian Weber raises some questions about our having too much emphasis upon the teacher role of diagnostician, which she translates as "The concept of the teacher as knowing exactly where the child is." She further states, "The fact of the matter is...that what you want is a teacher who grows in intenseness of observation as to what was that kid grappling with, and who extends that thing. I think if you give the teacher a million tests in her hand, or a million check lists in her hand, you will take away from her that important teacher role which is an interactive participant in the child's learning...."

Right now there is relatively little research on diagnosing children's needs and the effectiveness of teaching-learning activities. Pre- and in-service open classroom teachers should have enough research data. As the teacher plans learning activities and develops abilities to bring them about, he should still be doing action-type research to find the best way for him. Unfortunately, the word research continues to be a frightening one, and it is likely to continue to be so as long as research methodology classes in pre-service and graduate courses tend to focus on rather sophisticated data collection, treatment and interpretation. It would be better to focus on relatively simple action-type research.

This gradually could develop competence in research and, equally important, confidence that would encourage the typical classroom teacher to take on more sophisticated research. Finally, the end product of research classes for the classroom teacher could add precision in assessment of effectiveness of teachers' efforts. Increasingly, such research experience is becoming a prerequisite for continued certification.

Researchers are particularly important in creating a body of school personnel who can utilize a research approach to improving educational opportunities for boys and girls. The need is particularly great in open schools, where the knowledge base is skimpy. Spodek claims that the typical research methodology is inadequate in the open school context. He advocates simulating the methods of the anthropologists: as a researcher in a new culture. To him this would allow an observer "to describe an open classroom in replicable terms that could be used as a starting point for the study of openness in the schools."

Research skills could promote effective work with laymen, students and other professionals to interpret, assess and improve learning opportunities--both within and outside the formal school locale. Continuous objective assessment and interpretation of learning progress and problems should be carried on with students and peer professionals--those most intimately affected by the curriculum. This would include active service on official study and action committees to create an informed and involved body of students, professionals and citizens.

Current efforts to assess and improve education are hampered by conceptions of what is good education. Drummond says, "At this point the American public seems to see good education as a hard dragging, highly competitive, academic race; and educational innovations fitting that image stand a better chance of acceptance than do other innovations. More's the pity because I understand in England--which has traditionally had an exceedingly competitive educational system--the movement toward drastic change in the education of young children originated and was carried out largely by professionals, and often against the wishes of parents. Vulnerability to public pressures probably causes American school people to be reluctant to adopt a child-centered approach to teaching."

If parents are going to understand the different modes of teaching and learning evident in open classrooms, it is imperative that school personnel

develop some public relations or public information competence to interpret what they're doing. Assessment and adaptation of the curriculum too often is a closed "professional" matter. With professional assistance, citizens can learn to assess realistically the pros and cons of open education.

If a parent sees busy learning activities when he visits an open classroom, he is likely to feel that it is a good place for children. If he sees confusion, if he sees clutter, if he sees disorder, if he sees children wasting time, he may have a sense of disquieting concern.

Sound public information is an important factor in providing citizens with an accurate perception of real learning potentialities in the open classroom. The teacher has a tremendous public relations potentiality--everyday he teaches! He can help children to understand what they are doing so that at home children become daily interpreters of exciting and worthwhile things going on in school. This is a public relations potentiality of unparalled magnitude!

While British schoolmasters have almost total autonomy and freedom to determine the school program, there is considerable lay control of the American school. Thus, it is important for American teachers working in open schools to know a great deal about public information activities. Rogers advocates parents' being involved in the classroom setting. He notes that this stimulates "gut-level" sorts of questions about real educational issues. This would open up genuine dialogue about the education children need and encourage action to bring it about.

Development, assessment and the recycling of objectives--and strategies for obtaining them--are a staff responsibility. The staff should develop operationally sound objectives consistent with broad, societal objectives--and create a sound combination of theory and practice, of idealism and realism, of the present reality and the future potentiality; accountability for stimulating professional efforts to make practices supportive of objectives; responsibility for helping to extend efforts to build a profession which is both an art and a science--the personalized and intuitive as well as the learned and developed.

There is a considerable emphasis upon holding teachers accountable for results. It is important to accrue solid data on accomplishments of children. Therefore, it is necessary that teachers know how to administer standardized tests on the one hand and on the other develop sound objective tests of their own. This capability is now limited, for standardized tests were developed to

measure achievement of the traditional methods!

Virginia Plunkett notes that there is a possibility of a halo effect when people enter new kinds of programs. It is important not to overly generalize on the basis of sincere and enthusiastic proponents' reports on success with the open school approach. According to Rogers, there is need for research in the schools conducted in a holistic way, in a non-experimental way along the lines of anthropologists--a detached yet interested observer of human phenomenon. Rogers reports that Barbara Biber has urged researchers to be more adventurous in observing and drawing inferences.

Rogers discusses what he calls the American syndrome toward research. I think he is saying we have a hang-up on research, that we are "terrified" of research--the evidence question. This sometimes makes us afraid to experiment boldly with environments that permit children to grow in their unique ways. Often times, we are so afraid we cannot prove something that we do not experiment at all.

The problem often is inadequacy of current assessment techniques, rather than learning activities, in my opinion. We should look for a sensible approach, learn as much as we can from educational research, particularly action research. The teacher should always be a seeker for new knowledge and understanding. They can be derived from systematic analysis, observations, pencil and paper tests, and any other methods for collecting data and organizing it into generalizable conclusions and interpretations. Rogers notes that Silberman, in doing his study for Crisis in the Classroom, did not do much with percentile ranks. He did not use chi squares to validate his claim that there is a crisis in education.

As a body of literature on open schools grows, there may be a temptation for people to memorize the facts and even relate one fact to another, but miss the important point: knowledge becomes wisdom only when it is internalized in meaningful ways by an individual.

It is important for the teacher to know more than is in the books. She needs to know how to fit everything together. Good continuing sources of ideas and information from many places and many people are important tools in the hands of the open school person. There are many demands in each day--with its hundreds and hundreds of variables in behavior calling for both competent and humane responses. Spodek points out that "information needs to be integrated, needs to

be internalized, needs to be made one's own. Ideas need to be hashed out and tried on and turned inside out. Teachers need to discover what meanings ideas have for them, not only in terms of their personal integration but in terms of the professional response they have to kids in school."

Knowing what children are like for a given age or stage, the teacher can determine how close a given child is to normal. Such knowledge also makes it possible for the teacher to monitor progress and to provide conditions which are best during a stage of development and learning to minimize those deterents--physical, social and emotional--which interfere with normal development.

Since the teacher of primary children has to be the primary person to monitor pupils' behavior, some specific training needs to be provided in monitoring student behaviors. This does not need to depersonalize the interaction between teacher and child, nor put undue stress upon easily observed activities. Ratings of student behavior do provide a useful kind of input for the teacher trying to figure out progress or lack of it and then diagnose remedial teaching-learning activities.

SUMMARY

In the above outline, four dimensions delineated by Katz of training for preschool teaching have been suggested: (a) developmental stages of the teacher; (b) training needs of each stage; (c) location of the training; and (d) timing of training.

Developmental Stage of the Teacher. It is useful to think of the growth of preschool teachers (and perhaps other teachers, also) as occurring in stages, linked very generally to experience gained over time. The training begins early in the collegiate experience and extends a lifetime.

Training Needs of Each Stage. The training needs of teachers change as experience occurs. For example, the issues dealt with in the traditional social foundations courses do not seem to address themselves to the early survival problems which are critical to the inexperienced. However, for the maturing teacher, those same issues may help to deepen her understanding of the total complex context in which he is trying to be effective.

Location of Training. The primary locus of training should move as the teacher develops. At the beginning of the new teacher's career, training resources must be taken to her so that training can be responsive to the

particular (and possibly unique) developmental tasks and working situation the trainee faces in his classroom. Later on as the teacher moves on past the survival stage, training can move toward the college campus. With experiential frames of reference, the teacher can learn through abstract means.

Timing of Training. The timing of training should be shifted so that more training is available to the teacher on the job than before it. Many teachers say that their pre-service education has had only a minor influence on what they do day-to-day in their classrooms. This suggests that strategies acquired before employment will often not be retrieved under pressure of concurrent forces and factors in the actual job situation.

However, even though it is often said that experience is the best teacher, we cannot assume that experience teaches what the new trainee should learn. To direct this learning, we try to make sure that the beginning teacher has informed and interpreted experience should be one of the major roles of the teacher trainer.

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