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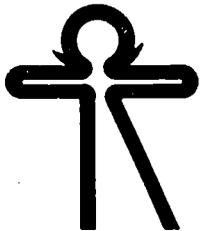
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ABSTRACT

Arguing against the "bandwagon" approach to innovation and change, and pressing for careful consideration of the potentials inherent in "openness" in education, the author explores the interactions among the phenomena of open space, open structure, and open curriculum. In examining the nature of these interactions, he sets the complex of concepts into historical perspective, inferring from the practices of recent years a set of theoretical possibilities. The publication provides information helpful to curriculum workers, supervisors, administrators, and teachers who desire to be well informed as well as enthusiastic about the new degree of freedom in planning space for learning; organizing children, time, and staff; and preparing the curriculum. After exploring some of the definitions of the concept "open," its wellsprings, and its dimensions, the author devotes three chapters to discussions of the relationship of "openness" to space, structure, and curriculum. In the concluding chapter, he addresses himself to some of the problems that teachers and others working in open schools might be expected to deal with in the process of making certain that learning under the new freedom really adds up. (Author/MLF)

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Foreword

THIS booklet on *Open Schools for Children* by Alexander Frazier is a perceptive, provocative exploration of the concept of "openness" as it does and as it might apply to schools and schooling in America. Professor Frazier is an old hand with new ideas. All of his professional life he has been up front with curriculum developments, rejecting the old clichés, and hammering out new interpretations to the propositions and problem situations which confront us in an apparently never-ending stream.

Rejecting the simplistic, dogma-type statements which characterize so many discussions of so-called "new ideas" in education, Alex Frazier has a way of helping the reader turn ideas over in his own mind; of pressing the subtleties of complex conceptualizations out into the open where they can be examined in every conceivable way. Those who seek categorical answers to complex questions will be frustrated by his exhaustive, analytical approach. Those who are fascinated with the nuances of reality and whose primary purpose is understanding rather than exhortation will be more than pleased. They will be grateful for a job well done.

In this booklet Professor Frazier explores the interactions among the phenomena of open space, open structure, and open curriculum. In examining the nature of these interactions, he sets the entire complex of concepts into historical perspective, inferring from the practices of recent years a set of theoretical possibilities which is both reality-based and comprehensive.

A beautiful illustration of theory generation, the discussion moves from specific instances in practice to broader concerns to general guidelines and back again. And throughout the descriptive process Dr. Frazier heightens the reader's interest by comparing recent developments to older practices in such a way that the evolution of the concept of "openness" takes on rich and broadened meaning.

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Implicitly he argues against the "bandwagon" approach to innovation and change, but explicitly he presses pervasively for a careful consideration of the potentials inherent in "openness" in education. In his own words, we need "to be as well informed as we are enthusiastic." This booklet should be extremely helpful to curriculum workers, supervisors, administrators, and teachers who are interested in trying to achieve that goal.

August 1972

JACK R. FRYMIER, *President 1972-73*
Association for Supervision and
Curriculum Development

1

An Idea with Many Dimensions

WHEN schooling becomes overstructured and unyielding, everyone suffers. Learners are shortchanged, teachers are frustrated and made ineffectual, society itself is impoverished by the lack of personal fulfillment in the lives of too many of its members. Today many American schools can be charged with being authoritarian in organization and operation. The conventionalized circumstances and conditions to be found in their classrooms are damaging, even perhaps deadly. Ways must be developed to free the schools from restrictions that impede or limit or prevent learning.

Such is the message that comes through to us from current critics of our schools. All of us, in schools at every level, are being urged to work for greater freedom and less authoritarianism. And openness has become the key concept in the whole movement. The most powerful and germinal idea on the scene today, openness has many dimensions.

Our purpose here is to examine what is happening to the open concept in the education of children. Such a review, it is hoped, may help persons working toward a new degree of freedom in planning space for learning; organizing children, time, and staff; and preparing the curriculum.

Even as we announce our intentions, we are struck by the fact that the very language we use is now under question. Planning, organizing, and preparing—these are terms for activities familiar and acceptable to most of us. Yet to some zealous advocates of nonauthoritarianism, the need for such undertakings in setting up schools for children is arguable (see Exhibit 1, p. 2). Perhaps as we go about our attempt to make sense out of the movement toward greater openness,

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we can try for a new and more acceptable vocabulary to use in describing how good schools come into being.

Sources of Support for Openness

Part of the strength of the open concept is that it is buttressed by support from so many sources. These draw on or represent experience and theory, inspiration and logic, personal feeling and social vision—a strange combination of notions, some of us may feel. Yet they combine to provide a broad and solid base.

Innovations in Grouping and Staffing

For more than 20 years, American elementary schools have been trying to free children from the lockstep of chronological or age-graded grouping. Nongraded or interage grouping now has its own literature. The options are numerous, with the value of three-year multiage or

Exhibit 1. Differences Between Authoritarian and Nonauthoritarian Schools (Representative Language)

	Authoritarian Schools		Nonauthoritarian Schools	
1 Attributes and qualities	arbitrary identical irrelevant oppressive orderly	preplanned rigid single silent specified	democratic diverse episodic exciting free	intense meaningful natural spontaneous unique
2 Artifacts and aspects	boundaries curriculum discipline grades routines	standards structure tests textbooks walls	choice community exploration interests involvement	issues options participation possibilities self-evaluation
3 Actions	control cover establish follow get through	impose lay out spell out suppress tell	change develop experiment help enable	reorganize share stimulate trust uncover

"family" grouping (ages 5-7, 7-9, and 9-11) newly underlined by recent interest in how it works in some British Primary Schools.

During these years, team teaching became a favored approach to helping children and teachers break out of the isolation of separate classrooms in "the eggcrate school," as it was often called. By planning together for larger numbers of children and regrouping for some instruction, teachers were believed to be able to meet the needs and interests of individual children more directly and also to bring to all children a richer range of teacher competencies.

As we moved into the sixties, a good many new schools were built with space and facilities that could be more easily shared by larger numbers of children and teachers. Collaborative planning and teaching, some persons believed, were forwarded when more children could be housed together. Early proponents of open space were content to replace fixed walls between adjoining classrooms with movable partitions. Thus, two teachers or occasionally three could throw their rooms together as they saw fit. One of the teachers might present or "teach" something to the larger congregation of children, or the combined groups might simply share an audience-type experience such as viewing a film or listening to an outside speaker. Children could also be regrouped for remedial or specialized teaching more readily in an opener setup.

By the end of the decade, more and more schools were being built with a minimum of interior walls so that planning for larger groups of children could be facilitated. Instead of single group ratios like one teacher to 30 children, new multiple group ratios came into being—four teachers to 120 children or sometimes, with the addition of an aide, five adults to 120 children.

Today the battle to open up the closed-off classroom and to free the isolated teacher seems to have been won. In the process, the notion of nongradedness in grouping has been partially absorbed. We are no longer thinking much about how best to constitute separate groups, any more than we are about teacher trade-off or exchange of groups as a way to share teacher competencies. Older issues or concerns of grouping and staffing have thus disappeared or been redefined as the movement toward greater openness or organization has tended to prevail.

Emancipation from Group Instruction

Another source of support for openness has been the growth of varied approaches to freeing the learner from the so-called "tyranny of the group." Nongradedness of instruction was one aspect of this move-

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ment. What was to be learned by everybody was laid out or sequenced without reference to age-grade placement of content. While this development was promoted by the prospect of being better able to group learners by appropriate achievement level rather than by age, once the sequences had been set up it became apparent that the learner could be put at the right place with little or no reference to what kind of group he might find himself in. Placement could become individual regardless of the group setting.

The concept of open access to curriculum so defined was supported in the early sixties by refinements in the preparation of self-teaching study materials. Programmed sequences became more widely available. Collections of practice exercises in the form of kits or boxes allowed for easier diagnosis of individual needs in the skills areas and the selection or prescription of presumably more immediately pertinent learning activities. Feedback and self-testing ensured that the learner could function on his own more effectively than in the past. The goal was seen to be continuous progress controlled more or less by the learner himself.

Some of the curriculum projects of the early sixties brought in an emphasis on the role of discovery and inquiry that may have contributed to the value newly given to opportunities for independent study. Arriving at insights or generalizations by examining data on one's own was what was proposed, particularly in mathematics. Simple investigative activities, in science primarily, were valued as helping children learn how to find out what they wanted to know. In such undertakings as the latter, a place was made for more variety of learnings than was true of the skills sequences incorporated in programmed or packaged materials. Openness included differences in ends as well as variation in rate or choice of alternative means to reach identical goals.

More recently, emancipation from group instruction has been accelerated by the example of the British Primary School. The space of even the most conventional classroom can be reconstructed to provide centers for laboratory and workshop activity. Children can be provided with choices and options of what to do. All children may be busily at work at once without the threat of the tedium and isolation that may have distressed teachers as they tried to use some of the paper programs for individualization of instruction.

All in all, the movement toward independent learning and away from group instruction seems to have made remarkable progress during the past ten years. Openness, while defined somewhat differently in the varied approaches, would seem in some way to be a concept that belongs to them all.

Opposition to Institutionalism

That children can be crippled by being forced to fit into the over-structured school is the most familiar theme of recent critical literature in education, as we have noted. The major villain or target has been the large-city school system. Mammoth and underfinanced, these unwieldy enterprises seem to have found survival their first order of business. Maintenance of things as they are has led, it is charged, to depersonalization, bureaucracy, authoritarianism, calloused behavior, and even cruelty.

Opening up the exciting world of learning fully for children demands of able and dedicated teachers as much as they can give and all possible aid from supporting facilities and services. When the children are inner city children, opening up may demand even more. Teachers socialized by an urban school system into becoming time-servers and experts in survival are themselves victims of the institution. Support for teachers is likely to come in the way of managerial solutions—remedial teachers, remedial sections, special classes, special schools, track systems, agency referrals, or something else equally simple to set up, administer, and forget.

In all fairness, the critics would have to concede that city school systems are not all alike. Even in the most rigid and unresponsive there may be promising projects and programs, and among them certainly are many fine teachers. Also, the impact of institutional rigidity can be found in the suburbs and small towns of America—and indeed in many aspects of our nonschool life everywhere. Yet the point to be made is that we seem to have a new awareness of how the school can close down learning for many children by the sheer weight of keeping itself going. And of how teachers themselves may come to see children as unable or unfit. Or worse yet that the first lesson learned by some children may be that school is not for them.

How to assure institutional openness perplexes us all. Short of abandoning the whole idea of formal schooling, an alternative that does have its advocates, what can be done to keep the press of institutional life from closing down on children and their teachers? Decentralization of the large-city systems is one answer being widely tested, although the resulting smaller districts may still seem to be too big. The provision of small schools within a school is another alternative, one that ties in with the new pattern of grouping and staffing already discussed. The growth of independent free schools, apparently very rapid but poorly reported, would also seem to be in the direction of greater openness.

However troubling the solution to the problem of overinstitu-

tionalism may be, we can agree that concern for the problem is another source of strong support for attention to the open concept in the education of children.

Demand for Relevance

The movement to make room in the curriculum for new content is still another source of interest in achieving greater openness in the school. The question being raised is whether the curriculum as we have known it is as relevant as it should be to the needs of today's children.

The very term *curriculum* is regarded by some advocates of more openness as implying a closed system of some sort. Curriculum is pre-planned and therefore fixed. It would be better, such enthusiasts of openness contend, to plan with children as they go so that experiences will relate as closely as possible to immediate interests and needs.

Yet most of the content critics are more concerned with what is or is not included in the preplanning than with the fact that the curriculum is set for children. Relevance becomes a criterion to be used in testing to see whether what has been laid out to be learned is really meaningful. Some persons want to know whether the curriculum as it is includes the learnings required for full and effective human functioning as they see it—and if not, why not.

Part of the current concern for meaningfulness of content seems to be directed at excesses committed by the curriculum projects of the early sixties. At that time, as we recall so well, content was reconceptualized around the structure of the disciplines. Today students and interpreters of Jean Piaget's developmental psychology are alert to the likelihood that some content so selected is too abstract for children. Are certain of the mathematics concepts, for example, truly unteachable? The experience of the British schools, with their reliance on Piagetian principles and a consequent insistence on concrete operations, is being closely studied. Relevance here is defined in terms of what is learnable from the immediate experience of children as they live and work together.

The demand that the curriculum be open to new content comes

Exhibit 2. Familiar Current Uses of the Term *Open*

1. open classroom	6. open schedule
2. open curriculum	7. open school
3. open day	8. open space
4. open education	9. open structure
5. open environment	10. open timetable

from varied elements in the population, but perhaps most forcefully from racial and ethnic groups. The ends proposed for new content in this case range from a better sense of personal identity to a juster view of the multicultural nature of our society. Other groups contend for content related to the fuller development of human potential in all children, sex education, environmental education, more realistic political socialization, and even more emphasis on aesthetic experience and the expressive arts.

The drive for curriculum openness to change based on meaningfulness in general and specifically on personal and social relevance is thus another of the sources that provide support for the open concept in elementary education.

Rebirth of Progressive Education

The message of the most zealous present-day advocates of openness often sounds familiar. Their language is very like the language of earlier progressive educators. They stand against authoritarianism in all its forms. They stand for the child and his natural will to make the most of an experience that ought to be as rich and rewarding as can be.

The new progressive education, like the old, takes many shapes. At its most romantic, it may settle for a kind of formlessness that takes such direction as it may have from the personality of a gifted teacher. Or romanticism may adopt the Summerhill model, with emphasis less on what is to be learned from formal study than on what is learned by living together in a loving and democratic environment.

Probably of more enduring interest is the variety of attempts to break out of the mold of the past within the framework of schools as they still are. Overstructured as schools may have been, too often closed to innovation or improvisation, sometimes perhaps more the creation of policy and procedure, rules and regulations, than of freely functioning professional wisdom—nonetheless our schools for children today do possess tremendous assets. Teachers are better educated than they have ever been. School buildings are increasingly flexible and well equipped, teaching resources more varied and numerous, administrative and supervisory personnel more knowing and supportive, communities more deeply concerned about effectiveness, and government at all levels more responsive to the role of education in our society.

The new progressivism in education may serve to provide the clarification needed if schools are to open themselves up to the redesign of programs for children. Honoring the child as an active agent in his own learning and the function of interaction between learner and

environment in cognitive development, understanding and valuing the role of the expressive arts in the education of children, and defining anew how teachers can plan for and guide independent learning—these are some of the elements that the new progressivism may be able to sharpen for us.

The rise of concern for openness in the education of children has thus been supported from many sides. New ways to group children and to staff the new units have freed the school to consider a variety of options for internal organization. Many developments in instruction have given us new modes and models for moving away from overreliance on group instruction. A new sensitivity to the oppressive impact of institutionalism in schools has helped us reexamine many aspects of living and working together. The demand for relevance may arise in part from this sensitivity. The revival and restatement of what are thought to be the basic tenets of progressive education offers another source of support.

Dimensions of Openness

Against this background, we will examine more closely in this report a good many dimensions of the open concept as currently related to improving schools for children. Openness means many things to many people. The term *open* is an "in" word and has been appropriated by the proponents of a wide variety of new instructional approaches and programs (see Exhibit 2, p. 6). It is also being applied to almost every aspect of school operation.

What we shall hope to do here is to identify the applications of openness that would seem likely to be of most use to us. Separate chapters will be given to three dimensions of openness:

Freeing space for learning. Some school systems are trying to find ways of opening up space in existing schools to promote shared space use and cooperative planning. Many districts are designing new open space schools that will be better suited to new forms of grouping and staffing. What do these look like and what directions are they taking?

Freeing the structure of the school. In today's schools children are being organized in larger instructional units. The open concept is being applied to scheduling of time, in ways that provide more room for ventures in nongroup learning. Team teaching, cooperative teaching, differentiated staffing—all are ways in which the organization of

teachers is reflecting concern for openness. How are schools being reorganized and what problems do they face?

Freeing the curriculum. Many efforts are being made to revitalize the curriculum, to loosen it up and replace outworn content and re-sharpen the ends of learning. A good many elements in the community are proposing themselves as partners in curriculum making—or are setting up schools of their own to demonstrate what they think is worth learning. What are the dimensions of the new openness in curriculum—and what do they mean?

The last chapter will address itself to the problems that teachers and others working in open schools may have to deal with in making sure that learning under the new freedom really adds up. The question of accountability remains. For most school people, the excitement of open education will no doubt be weighed most carefully against the assurance that structure can give. Perhaps the essence of the challenge is to try for some new, more defensible balance between openness and order.

2

Openness and Space

SURPRISE at the extent of the space is often the first reaction of visitors to a new school where the teaching area has been fully liberated. Something very much like visual shock can affect the novice when he passes through a door into an open area that may equal ten or twelve classrooms.

Something of the same kind of reaction was apparently experienced by visitors to the monitorial schools of the very early 1800's. Year by year, the halls where the children of the poor were being newly assembled seemed to have grown larger. The use of older scholars as tutors, each with as many as ten younger pupils in tow, made it possible for a strong-willed teacher to direct the lessons of hundreds of children at one time, creating a situation that visitors new to these schools found it hard to encompass. Seated at benches down the middle of long halls or racked up out of the way on risers all around a great study room, the children seem to have been kept well occupied.

Visitors to monitorial schools had one reaction not shared by visitors to modern open space schools. They were struck by the noise. Unison recitation, screeching slates, and scuffling feet combined to engender a racket to be remembered. Today's big-room schools, even when 500 children are spread out over a carpeted acre or two, almost always impress visitors as being remarkably quiet. The carpet and other elements of modern acoustical treatment help, of course. Yet the main thing is that the large open area houses something different in kind from the talk-centered school program of the past. Indeed, the space itself may be moving the new school toward a program even more work-centered than we can find elsewhere in today's schools.

Visitors to monitorial schools and visitors to new open space schools agree on one point: the high standard of pupil behavior in both places. Monitors were trained to make learning lively and exciting.

They knew how to elicit prompt and snappy choral responses. They accustomed their charges to hold their slates up high for inspection and correction—and more or less immediate feedback. Himself a master psychologist, Lancaster established an early token economy in his schools—two prize coupons for a bag of sweets, three for a kite.

In today's open space schools, visitors note few instances of obvious tomfoolery. Somehow the removal of space constraints seems to take with it some of the random jostling and shoving that may on occasion characterize the interaction of children in box-like enclosures. At any rate, visitors and also staff are less likely to be concerned in open spaces with problems of overt misbehavior than they may be with instances of possible withdrawal.

The earlier monitorial model of open space schools never did catch on widely in the United States. In most schools, children continued to recite for the master, regardless of the size of the schoolroom. By mid-century, children in city schools were beginning to be grouped roughly by age or length of school experience. The new separate schoolrooms might hold as many as 50 or 60 children, with small groups called up in turn for recitation. However, overall size was controlled, and soon thereafter the goal of graded grouping became well established. Promotion practices and policies were a favorite topic at teachers institutes; schoolbook publishing expanded to turn out more carefully sequenced teaching materials. We have had at least a century of experience with size-controlled and age-graded classroom grouping.

Thus, some of us may be understandably perplexed by the rapidity with which the application of the open concept to school building has led to the radical clearing away of internal partitioning and the throwing together of children into what at first glance may look like a single congregation, so to speak. What were the stages by which this open space idea came into being? What further developments, alterations, or alternatives in open space design can be anticipated? Are there principles or guidelines relating to the provision of instructional space or areas that we need to keep in mind? These are the questions to which we address ourselves in this chapter.

As we begin, it may be well to remind ourselves that accounts of open space schools sometimes use other expressions containing the word "open" to describe their schools—open structure, open education, open environment, open classroom, or even open curriculum (see Exhibit 2, p. 6). Occasionally, the substitute expression may refer to other kinds of openness actually present in the situation. More often than not, however, the users are merely seeking some kind of presumably synonymous way of avoiding overuse of "open space" in their reports. We

will use "open space" here to mean any space built to house 50 or more children (two classes plus). Open space may be related to other kinds of openness, but our use of the term will not presume their presence.

Movable Walls Between Classrooms

The movement from the eggcrate school, with separate rooms for equal-sized groups of children and one teacher, to the fully open space school as we know it today began with the replacement of permanent by movable walls between classrooms. The rationale for replacement was spelled out mainly in terms of better opportunities for shuffling children around between or among teachers for one reason or another or working with them as a whole upon occasion.

Members of a team of two or occasionally three teachers, the number depending upon how many classrooms were interconnected, might take all the children in turn, the varied teaching assignments determined more or less by interest or professed competence. After lunch, for example, two teachers might exchange groups for science and social studies. Or three fourth grades might receive in turn their physical education instruction from one teacher, their music from another, their art from a third.

Trade-offs of this kind might include the basic skills areas. One teacher would teach all the reading, another all the mathematics. If a third teacher were in the mix, the language arts could become another such specialized assignment. For basic skills teaching, the children might be regrouped rather than exchanged. Two teachers would teach reading at the same time, with one teacher having the slower and the other the faster readers. Each teacher might handle his own average group.

Another pattern has been the teaching of two or three classes at the same time by one of the team teachers. "Teaching" in this instance has meant being responsible for presentation of new skills and concepts and making study assignments. The other teacher or teachers would then join the specialist teacher as monitors and helpers during the study time.

Common experiences for combined groups could include other kinds of activities. Films and speakers might be shared. Plans might be made for a grade-level party or assembly. Officers could be elected and business conducted in common. At times when one or another of the teachers needed to be away, the remaining teacher or teachers might conduct a supervised study session.

What we are describing here for the most part is the range of joint teaching ventures found in accounts of some of the earlier versions of informal cooperative or team teaching. Many of these activities, such as the exchange or trade-off of groups and regrouping, could just about as well have been done within the eggcrate format as in rooms that could be opened up. In fact, most of the early cooperative teaching was done in regular quarters; the option of open space was simply not there. Of course, instruction of combined groups over any length of time could not be conducted in separate classrooms, although when team groups needed to get together for occasional shared experiences or on matters of common business, they crowded into one classroom or scheduled time in a multipurpose room or cafetorium.

Certainly some teachers with classes in adjoining rooms with movable walls did more than we have described. They may have planned together for the total group from the beginning, setting up groups of various sizes in terms of more purposes than we have mentioned, including meeting remedial needs, satisfying special interests, and promoting unique talents. Such pairs or teams may have seen themselves as teachers of the whole group rather than of their "own" or home group first and then as exchange or specialist teachers for the children of another teacher or two.

However, in the first stage of the open space movement the key ideas were regular and large group instruction, exchange of children for instruction, and some use of specialized teacher competency. Instruction was thought of chiefly as group instruction, although the size of the groups might vary. Teaching was also defined as a highly directive process, by which content was presented with greater or lesser effectiveness depending mainly on the degree of teacher proficiency in a given subject field. Teachers were presumed to want to work together to increase the range of competence thereby available to children. Walls between classrooms were moved back or folded out of the way whenever teachers saw some good reason for sharing their children or themselves.

The planners and providers of two- or three-classroom suites obviously intended conversion into open space to be both optional and occasional. Sometimes, perhaps more often than not, teachers were organized or at least encouraged to plan together for the best use of open space. In other cases, the rooms themselves may have been expected to stimulate teachers into trying out new ways of working together. In some instances, possibly only a few, the appearance of movable walls in new schools or additions to an old school may have puzzled most of those directly affected. Who could have thought up such an idea—and why?

Pods, Clusters, and the Like

Making it possible for two teachers to put their classrooms together now and then struck a good many school people as a development with interesting possibilities. Therefore, they came to feel that perhaps more classrooms ought to be joinable. Stage 2 of the open space movement was concerned with ways to put three or more classrooms together.

By its very nature, Stage 2 involved school personnel in an active and creative collaboration with architects. The problem was one that invited ingenuity. Strange exterior shapes—circles, hexagons, shells, stars, and what looked like pinwheels—revealed the strain integral to redesign. Internally, the variety of options for movable walls included some in which the far-out possibilities of mechanics and acoustics were superbly and expensively matched. Of more lasting interest was the acceptance of acoustical floor treatment or carpeting as an essential element in the planning of usable open space.

Another aspect of the second stage was the assumption that teachers in the new suites would do a good deal of planning and teaching together. Two teachers next door to each other might be left to decide if and when to push back the wall between them. To rely on personal relations among three, four, or perhaps six teachers as a way to inspire use of their new facility made no sense at all. Certainly a high level of expectation existed that teachers housed in pods and clusters would work as a team.

Teams functioned in a variety of patterns. One was the specialization of teaching among team members. As in the simpler days of Stage 1, groups might be exchanged so that children would have the benefit of expert teaching in the subject fields. Another already familiar pattern was the regrouping of children for instruction in the skills subjects, usually in terms of achievement levels, with the staff deploying itself in terms of where it was felt each teacher might do best.

Teaching the home group might still occupy a major portion of the day for each teacher, even with the exchange of groups or regrouping for some teaching. Opening exercises, sharing time, health and perhaps physical education, social studies, and possibly music and art might be taught by the homeroom teacher. Of course, when as many as five or six groups were interconnected, the possible trade-offs between pairs of teachers were so numerous that the subjects each teacher might hold onto to teach to his own group could be unique within the team.

One aspect of open space teaching that generally got lost in the enlargement of space during Stage 2 was the idea of large group instruc-

tion. Putting four to six groups of children together for anything except occasional audience-type activities was simply not practical.

The new suites were also related or unified by easier access to instructional materials centers. Here architectural design and the idea of team planning seemed to come together. Sometimes four- to six-classroom pods were pinwheeled out from a central resource center that may have had more floor space than most secondary school libraries. Rooms arranged in clusters in more conventional buildings often had a resource room of their own. Behind this concern for accessibility of materials was the increasingly well-defined conviction that teaching in the future would require a greater abundance of varied resources. The value of a broader materials base was felt by teachers in self-contained classrooms also.

The growth of centers or libraries in elementary schools has been facilitated by the demands of team teaching, whether in regular facilities or in open space suites or quarters. Teachers planning together in Stage 2 of the open space movement tended to think in terms of trying to individualize instruction through constituting groups that would have like needs. What this meant in part was a demand for materials that had a greater range than may have been provided in the past. Thus, the materials center became very important.

Of course, there was also a concern for easier access to varied and abundant resources to meet the interests and nurture the talents of children individually and in small groups. While this concern was not confined to pod or cluster teaching, the emphasis in team planning on increased options for study and investigation certainly forwarded the provision of a more adequate supply of media and materials.

A less pronounced aspect of pod or cluster housing, but one that was to grow into significance in Stage 3, was the idea of interage, family, or subschool grouping. Some of the separate pod buildings were originally built to house children of different grades or ages in a kind of little school. This concept was perhaps never very fully tested out in practice. Most of the early pods in which it was embodied had fixed walls between classrooms. The idea apparently was to reduce the impact on children of being members in a large school, by giving them the security of a smaller situation where teachers could work together to get to know the children before teaching them and could keep some track of them when they went on to the next teacher. As the idea of open space emerged, the tendency seems to have been to put groups of like ages or the same grade together in the pod buildings, both the new ones and those older buildings that might have had inner walls that could be replaced with movable partitions.

Communities or Subschools

Full application of the open concept to space for learning has resulted in what seems like total liberation of the school from the constraints of the familiar eggcrate structure. Increasingly today, schools for children are being built without internal partitions. Toilet and storage facilities and offices are, of course, closed off. Some satellite instructional areas may also be designed for shared use. However, in Stage 3 of the open space movement, classrooms as we have known them are no more.

In the process, movable walls have been abandoned. School systems that have had experience with the pod or cluster may continue to use much the same sort of floor plan, but the new space will be entirely open inside, housing a like number of children as before, 75 to 150 (or what amounts to three to six classes). In schools that go all the way, all 400 or 500 children in the school may be housed in one large room. Or there may be two large rooms, a primary room and an intermediate room.

The allocation of space within the large room may still honor the home group idea. Each teacher may have a home turf, so to speak, where children will have some activities together. Groups of the same age range will be found in adjacent space, so that one will find together the first grade or six- and seven-year-old groups.

However, the tendency within Stage 3 is to reserve floor space for the unit as a whole. First graders are seen as one group with two or three teachers. Or first and second graders (the sixes, the sevens, and perhaps some of the eights) may be perceived as a unit. Thus a unit of 100 to 150 children with its teachers may come to be thought of as a kind of community or subschool. It has its reserved space in the large room or may be housed in a pod of its own or in a cluster room.

If it is housed in a large room, some effort may be made to define or reserve space for the new unit. Movable furniture and equipment may be placed to reduce visual distraction and regulate traffic. Bookcases, filing cabinets, storage cabinets, coat racks, and portable chalkboards may serve to define the space. Or the space itself may have been originally designed to provide some definition of area. There may be up and down levels, with access to a mezzanine housing an instructional materials center. The floor plan may offer occasional angles that assist in achieving some degree of sequestration for a learning community.

More important in Stage 3 is the expectation that the teachers of the new unit of combined class groups will plan and teach together as a staff. Home groups will no doubt be retained in most if not all

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cases to ensure security for the child and his parents (and perhaps for some teachers) and to handle the kinds of management tasks that need to be shared. Records have to be kept, reports made out, children shepherded to lunch or buses. Someone does also need to have an eye out for every child all day long, to sense his wants and to represent his interests.

Most of the time, however, children in the new learning communities will be working with teachers other than their "own" or will be working without supervision. The staff will plan the makeup of instructional groups of differing sizes for the varied purposes it is hoping to realize. The staff also will prepare or secure the kinds of materials and activities required for the increased individualization of instruction that is coming to be a part of open space living and learning.

A renewed emphasis on individualization is to be found in elementary schools everywhere. Yet the open space schools of Stage 3 have tended to make it very much a part of their operation. The amount of time given to group instruction is lessening as materials for independent study become more available, either from commercial producers or through teacher production. More or less carefully laid out sequences of lessons, packages, packets, mini-units, or units are being widely employed, particularly in the field of mathematics. Programmed and self-teaching materials are also increasingly available for use in the teaching of reading.

The staff of the new learning communities or subschools are thus in the process of rethinking the way children may be organized for a variety of kinds of learning. In the process, of course, the functions of the teacher or staff member are being reconceptualized. The movement away from group instruction calls for more attention to what the teacher does as curriculum maker, planner, diagnostician, prescriber, guide, tutor, counselor, group leader, evaluator, and monitor, to name some of the newly highlighted roles.

The older notion of the team as a collection of specialists in the subject fields who take children in turn seems to be giving way to the ideal of a fully professional staff working together with a variety of assistants to plan and administer a total program. In this program, all the adults serve the unit as a whole by fulfilling such functions as the wide variety of learning situations may seem to require at any given time. Also, even though differentiation in preparation can be assumed among teachers and assistants, there is less concern for what a teacher does and what other adults may do. Lay aides, student participants from high school or college, and student teachers fulfill a variety of

Exhibit 3. Stages of Open Space Movement

Stages	Characteristics
1. Movable walls between classrooms	Combination limited to 2 or occasionally 3 classrooms Cooperative teaching optional Cooperative teaching part-time Exchange of home groups for occasional specialist teaching Possible regrouping for basic skills teaching Occasional large group teaching or common experiences Homeroom remains dominant
2. Pods, clusters, and the like	Combination of larger number of home groups—3 to 6 Expectation of cooperative teaching Cooperative teaching in several fields Homeroom time less than before More use of grouping to meet individual needs Teams made up of specialist teachers Resource rooms or instructional materials centers
3. Communities or subschools	Absence of partitions within teaching space Large number of children—125, 150, or more Units seen as a whole rather than as comprised of several home groups Augmented staff with aides and student participants and apprentices Likelihood of interage or intergrade population Heavy emphasis on individualized instruction and independent study Less time used in group instruction Instructional materials center as part of teaching space

functions. Tutoring, for example, may be performed by all of these and by teachers as well.

Obviously in such open space learning communities the demand for varied and abundant resources is very great. Some of the totally open schools locate the instructional materials center literally in the middle of their large room. Access to the space of the center as well as to the materials themselves may become something of a problem and could lead in time to the partial decentralization of the collection.

What Lies Ahead in Open Space?

The history of the open concept as applied to the space design of schools for children can thus be traced from first providing movable walls between classrooms to planning suites of interconnected rooms in the form of pods, clusters, and the like on to the opening up of the total space for teaching, either as several very large rooms or as an entirely open interior (see Exhibit 3, p. 18). In the foregoing review of this history, the stages of the movement have been defined as successive in time although it must be plain that some school systems will have entered the open space era at Stage 2 or may have found themselves able to realize many of the instructional characteristics of Stage 3 before actually providing truly open space to house their new program of larger instructional units or learning communities. Our report on the movement has been made in terms of stages simply to emphasize that as open space has prevailed, some ideas of how it should be used have been abandoned and others have come into being. It is hoped that such a handling of what has happened may be useful in keeping track of and understanding these changes.

Has the open space movement run its course, then, as far as finding the answer to how to free space for cooperative teaching of children in larger units? We could feel that the removal of all interior walls between classrooms as we have known them might be described as the ultimate step or stage in the movement. Yet we may wish to speculate about some of the possibilities for further development in open space design. Some aspects of the present situation may trouble us enough to call for such speculation.

Relief from the Warehouse Look

To witness what the housing of hundreds of children in one vast room looks like may cause some persons more than visual shock. They may wonder whether the herding together of so many children in one

place could be a move, unconscious of course, toward the depersonalization about which anti-institutionalists have been warning us. The look of such entirely open interiors is most familiar to us in warehouses. Where storage is the only concern, open space no doubt is to the good. Is schooling, then, to become a kind of warehouse operation?

Teachers new to open space sometimes try to break it up by establishing barriers of one kind or another to live within. This reaction is usually described as an effort to hold onto the classroom idea. Yet it might also be interpreted as a frantic attempt to humanize the environment. The partial sequestration of learning communities or subschools within a larger room may also be regarded as recognition that some degree of enclosure is to be desired.

Without trying to psychologize the need, we might be willing to consider distress over the warehouse look of some very large open space rooms as a lead to one line of possible further development. Are there ways in which open space could be designed to reduce the sense of bigness and bleakness?

Architects as well as school personnel will undoubtedly be ready to try for an answer if this concern seems reasonable and can be met without sacrifice of the gains made by throwing together the rooms of the past. Ideas like these are no doubt already being explored:

Irregular room shape. The option of shapes besides the square or rectangle should be simple enough to provide—L-shape, T-shape, cross, etc.

Multilevel rooms. Changes in floor elevation could serve to subdivide space, with ramps and railings or low walls to protect against accident.

Inclusion of outdoor space. Relief might come from inclusion in plans of courtyard or walled exterior work areas with gardens, ponds, greenhouses, animal shelters, and covered space for general use.

New kinds of dividers. Frank acceptance of the value of some degree of visual and social separation might open the way to devising other kinds of dividers to add to present furniture and equipment; for example, hangings, grills, panels, or screens (all movable, of course).

Minor internal design changes. Varied ceiling heights might help, and more windows. Variety in carpeting colors, already used as a way of defining space, might be made more dramatic.

Such efforts to offset the warehouse look of open space could be further justified by the prospect of some improvement in acoustics.

Provision of Space for Specialized Use

The liberation of instructional space by removing internal partitions may have been done at some expense to the provision of space for specialized use. The intention has been to clear out everything that would interfere with the multipurpose use of space or confine it in any way to limited use. Worthy as such an ideal is, some critics may be inclined to fault the resulting undifferentiated spaces on grounds other than bigness and bleakness. Do such open spaces prohibit or reduce the structuring of some areas for specialized teaching use? This is another question that may inspire further development of open space design.

Oddly enough, the most pressing need for specialized space may be for areas where group discussion of one kind or another can take place. In the push to escape from the separate classroom and from group instruction, the clearing of space has often left no really suitable area in which groups of any size can function effectively. With their light voices, a group of children simply cannot interact well in the large open spaces now in vogue, despite the claims of acoustical engineers.

Close behind in urgency may be rethinking what to do about a place for laboratory and workshop-type activity. The triumph of total carpeting can scarcely have been properly celebrated in many new open space schools before teachers were beginning to ask for tarpaulins to spread around sinks and under easels. While the newest schools may have allowed tile to return in peripheral areas for art, science, cooking, and construction activity, the question remains even then as to whether enough work area can be provided along the outside walls, often the only walls where utility outlets are located.

Provision of adjacent or satellite rooms for special activity is another possibility for further development in the next stage of open space teaching. Presently such rooms are most often available for music and physical education; sometimes separate common rooms are provided for group discussion, film showing, and audience-type experiences in general.

Deployment of Materials and Equipment

An instructional materials center, adjacent to or near the large study areas or in the very middle of a totally open interior, has been from the beginning an integral element of open space planning. Therefore, to raise a question about deploying materials may seem a bit strange. Yet there are several trends or forces that would seem to be

moving in that direction. Equipment, too, including furniture, may no longer be seen as something to relegate to the sidelines, so to speak.

The growing emphasis on individualization and independence, for example, would seem to indicate that children will no longer be located at assigned desks or tables. Instead, they will be moving from one study station or site to another. Resources and also equipment will need to be available where the children are, not stored in a space apart or pushed back out of the way. Children cannot be expected to spend half their time lined up to check out material or take their turn with needed equipment.

In short, the concept of the instructional materials center developed in another and earlier era. Then it seemed clear that a place was needed to house a collection of printed and other materials and equipment that could be drawn on to supplement and support classroom activity. A child was sent to the center to find answers not in the book. Or a class group went together to the center to see what was available as it began or pursued some topic of common study.

Now, with less time spent on group teaching, children may want to go where the resources for study are as soon as they reach school and spend part or all of the day there. They may also want access to equipment on an unscheduled or on-call basis. The space in any one center simply cannot provide for such needs. Some new way of thinking about facilitating use of resources would seem likely to be required.

Arising in part from the trend toward individualized instruction and in part from concern for greater precision in skills teaching is the appearance of assemblages of media and equipment that demand a new kind of handling. Floor space is required as well as storage. Materials and equipment have to be kept track of. Sometimes the program is meant to be administered—if that is the proper term—as a whole, its use requiring supervision by one or more adults. If such systems prove as valuable as some enthusiasts are predicting, then quarters and service will have to be provided, presumably somewhere in the open space complex.

A more immediate prospect to ponder on is what is likely to happen to open space under the impact of the British Primary School model. The deployment of materials and equipment within a structured environment would seem to be at the heart of the new model. Floor space is cleared of the usual classroom furniture, such as tables and chairs, and reorganized into bays, alcoves, corners, or centers, suitably separated by bookcases and equipment. Each such area is provided with needed apparatus, supplies, and other materials for use in mathematics, science, reading, cooking, sewing, construction, painting, or other ac-

tivity. A good deal of the school day is spent in working in one or another of the laboratory or workshop setups, with free choice under guidance as to where each child will work.

The British model may inspire some open space planners to find new ways to deploy instructional materials and equipment. Their inventions might help solve the problem of providing specialized study or instructional areas as well as possibly contribute to reduction in the warehouse look.

The British have themselves been moving to break out of classrooms into more shared space than is available in their well-used corridors and courtyards, as is evident in new schools like the Eveline Lowe School (London). Perhaps there can be a union of inventiveness in the further development of open space for learning.

Guidelines to Opening Up Space

Open space is undoubtedly the prime example of successful application of the open concept to schools for children. Through successive stages, the open space movement has come to a point in development where the focus is on providing an environment that enables a staff of several teachers and their assistants to work with a learning community or subschool as a whole and to plan a more varied and appropriate program than was possible in the past when teaching was circumscribed by what could be done by one teacher with one group of children. Further developments in open space might well improve upon the present and provide an even more exciting environment for learning.

Are there guidelines, then, that can be proposed out of a review of the open space experience in American schools? Let us try for several that readers may wish to test against their own experience.

1. *Open space should be planned to house instructional units or learning communities of manageable size.* How large a group can become and still remain manageable may yet need to be determined. Age and age range no doubt are a factor to be considered as is also the number of adults assigned to each unit or community. Type of staff operation, ranging from exchange of fixed groups to true total planning, is of course another important factor.

The options for organizing children into larger units are many. In schools of 600, for example, there could be four units of 150 each or six of 100 or eight of 75. No doubt the planners of open space would be well advised to try for a design adaptable to occupancy by units of

several sizes if they can guard against a retreat to undifferentiated open space of the warehouse variety.

2. *Space should always be designed to contribute to achievement of the full range of valued learning experiences.* The space should be suitable for individualized study and independent learning activities of various kinds. Specialized facilities and equipment must be at hand. Space must be provided for groups of differing size to interact effectively.

Probably the greatest peril to the future of open space planning is that the space itself will be allowed to shape and determine the nature of the school program. It is one thing, for example, to choose to move to less group instruction and another to be forced into it—or, indeed, into abandoning practically all group activity because of poor space planning.

3. *Open space has or may have an impact upon the personal well-being of children and teachers that should be provided for in planning.* Again, without trying to play the psychologist, we may agree that some strain can be involved when there is a lack of privacy or provision for person-to-person intimacy or small social and instructional situations.

Probably more information on how occupants feel about living in fully open space needs to be collected. In the meantime, however, planners will want to be as sensitive and inventive as they can be in providing some places of possible retreat or quiet withdrawal. They will no doubt want to keep this need in mind as they work on the related aspect of designing space for different types of individual and group activity.

4. *Any planning of instructional space today should take into account the need to make teaching materials and equipment continuously accessible.* Individualized instruction and independent study require continuous access to varied and abundant resources. Planners need to rethink older patterns of providing materials. They also need to think through ways of maximizing laboratory and workshop facilities for children in the new open spaces.

5. *Schools for children should be designed to meet well-formulated instructional ends rather than primarily to cut building costs.* Little doubt exists that some and possibly a good many open space schools for children are being built today because it is cheaper to construct schools with a minimum of interior partitions. This architectural

opportunism includes experiments in finding out how far conventional floor space can be cut back under open space conditions. Corridor space may be let go, old standards of square footage per pupil reduced, space devoted to common facilities curtailed. Unless we are watchful, we might find ourselves conned into trying to make do with a new kind of schoolhouse slum.

What we have proposed here is a beginning set of criteria, simple indeed, that is offered only as of some possible use to school personnel trying to move toward more adequate guidelines for planning how best to provide open space for better teaching and learning.

Great gains have been made in freeing space for new kinds of programs, as this chapter has tried to indicate. Yet, unless space needs are kept alive and related to programs and unless planners remain inventive, the American elementary school might be transformed into a gigantic study hall monitored by teaching assistants and serviced as far as curriculum is concerned by buying into one or another of the pre-packaged, correspondence-type programs already available but fortunately too expensive as yet for most school districts. Let us continue to be professionally vigilant and responsible.

3

Openness and Structure

INNOVATIONS in school architecture are no doubt easier to introduce than other kinds of educational change. Buildings also often survive as monuments long after the programs they were built to house have been foresworn and forgotten. The downtown areas of older midwestern cities are still dotted with auditorium-centered schools built in the twenties to house the platoon system. Of more recent vintage, the occasional pinwheel school sighted by an air traveler as his plane circles the suburbs is as likely as not to be occupied by teachers with little notion that the satellite buildings were designed to house "family" subschools.

Changes in architecture, of course, cannot always be counted on to bring with them real changes in what goes on inside. Mention of this fact of life is in no way meant to bring into question the value of imaginative school design; nor is it to cast doubt on whether opening up space in schools for children will be accompanied by changes in organization and program. We simply need to be as well informed as we are enthusiastic, if that is possible.

Certainly the most quickly accepted innovation in school architecture since the platoon school, open space does seem to call for far-reaching changes. The removal of constraints on the use of instructional space must strike us as possessed of exciting possibilities. Once again we are reminded that given adequate ventilation, temperature control, and lighting, the greatest good that school design may be able to offer is the maximum amount of unstructured space for teaching and learning.

And in fact, the new awareness of the primacy of sheer space and of open space in particular has had all kinds of impact upon education today. Schools are being conducted in store fronts, warehouse lofts, church education buildings, and even in garages and basements. In Philadelphia, Chicago, and Seattle, classes are being conducted in free space out in the community, wherever it may be found available. High

school students are meeting in museums, libraries, and other municipal buildings, and now and again in a factory or newspaper plant or department store.

The experience under Title III of setting up common study facilities in central locations to be shared by children bused in from their home schools may be taken as another evidence of the new respect for the value of free space. The rapid growth during the sixties, with or without federal funds, of school camps and other outdoor education sites may be similarly perceived.

All in all, we can agree that most of us are looking forward with eagerness to what the new freed-up space may enable us to do that we could not do so well or perhaps at all in the past. Yet we are also agreed that it will take more than larger rooms to bring about something new or likely to endure. Again, the history of innovative school architecture can be read in the surviving buildings of any older community. The buildings remain as reminders of unrealized programs or of programs too quickly conceptualized or simply of good programs passed by, as possibly all "new" programs must be in time, for something more promising.

At this point in time, the prospects for imaginative use of the imaginatively designed new open space schools for children seem good. True enough, teachers can be moved into the new schools and set down, each with his own class, into allocated quarters around a big room; and life can go on much as it has in the past. Teachers may nest where they are and get together chiefly to define carpet corridors or walkways. Or they may reach agreements with their immediate neighbors on scheduling complementary quiet and talking times to offset the absence of partitions and to make the puzzling new environment reasonably livable. However, by and large, the new space is being occupied or lived in more creatively than this.

The point is that the open concept is being applied to the structure of the school as well as to the design of its space. A good many aspects of this application have already been touched on in the preceding chapter. In this chapter, however, the organization of the school to make the most of open space or of newly conceived limited space will be treated more fully. What are the ways in which children are organized to make the best use of the new approach to space? What kinds of time use or structure are found in the new open concept schools? What are the kinds of operations engaged in by teachers as they work under open organizational structure? These are the questions to be dealt with in this chapter.

Structure as we use the term refers to the organizational elements

of the school, mainly grouping or classification of pupils; scheduling or allocating time; and assigning teachers to serve within the framework. As we name these concerns, we may be struck by the fact that the old terminology of organizational structure already seems outdated.

Grouping and Classification of Children

With the application of the open concept to the organization of children, we must assume that the new base of instruction will no longer be the separate group or class. Instead, children will be and are being organized in larger instructional units with a staff of teachers and assistants serving each unit as a whole. If this direction prevails, then it can be contended that the old question of how best to group children will soon become a dead issue. The new units will range in size from 75 to 150, if present practice is any guide. Thus, arguing about whether groups should be like or unlike in composition will come to seem a bit ridiculous. Heterogeneity has to be assumed.

The assumption must be made that staff planning for the larger units will call for continuous flexibility of internal grouping. Of course, among several principles to be taken into account, likeness of achievement level may be one of the bases on which some subgroups are set up. But likeness can also encompass interest, talent, age, social maturity, nature of the task, and other dimensions of concern to the staff.

Indeed, with the movement away from group instruction and toward self-directed study, even less energy than in the past may go to the setting up of groups for specific instructional purposes. There remain nonetheless a good many aspects of the composition of the new larger instructional units for us to think about.

Mixture of Different Ages

In the fifties and early sixties, the factor of age in the composition of elementary school instructional groups was often discussed in relationship to nongraded grouping. A good many patterns were tested out that might help schools escape from the chronological straitjacket of putting the sixes together on school entry and keeping these initial groups more or less intact all the way through. When school programs were reorganized around achievement levels as they often were during the nongraded movement, there came to be a considerable age range in many groups. Sixes were mixed with sevens, sevens with eights, and so on.

A few schools tried for a wider range. Six-, seven-, and eight-year-olds might be put together and perhaps nine-, ten-, and eleven-year-olds.

Here the values or ends were other than the mere reduction of achievement range that, some believed, would ease teaching and ensure readier "promotion" or transference of pupils from one level to another under the notion of continuous progress.

Such ventures were for the most part still tied to the established practice of grouping children in classes of 25 or 30. The problem was perceived as one of freeing the setting up of such classes from the restraint imposed by adherence to age-alikeness as the chief criterion of composition.

With the movement toward larger units composed of three or more "classes," the problem redefines itself. Internal grouping takes care of the levels of achievement to be expected even among children of the same age. Internal grouping, since it becomes necessary within the larger units to the extent that group instruction continues to be used, also seems to invite age mixture as an option that can be examined with little anxiety. Children have to be grouped anyway within the larger unit, and thus the gains proposed by nongraded advocates would seem even easier to come by in the new learning units or communities than in the class groups of the past. Heterogeneity seems well established as a value to be consciously sought (see Exhibit 4, p. 30).

The values of interage grouping have been freshly brought to our attention by reports of what some of the British Primary Schools are doing with family or vertical grouping, as they call it. A class of 40 children in the Infant School may be composed of five-, six-, and seven-year-olds. Teachers of such groups find that the younger children learn a good deal from observing and working with their older classmates. The older can gain also through experiences in helping the younger. In addition, at any one time teachers have fewer children to work with on the more advanced or academic aspects of the curriculum, such as reading and mathematics.

Functions of Home Groups

A question that deserves close attention in organizing the new larger units is what roles are to be played by home groups. In many schools, it would seem that the larger units are still thought of as combinations of "classes." Teachers are assigned class-sized groups to begin with or gain them as they plan together initially. A portion of the open space is allocated to each home group. The group may serve as a base for checking attendance and taking care of other routines, with teachers also responsible for keeping records and reporting the progress of children in their groups. In some situations, the home group

remains as a teaching unit for some instruction by its teacher and by others on the staff.

Such internal structure can hardly be termed open. It survives out of the past and may be expected to relax its hold as the possibilities of flexible grouping for instruction are practiced and new ways found to provide for some of the functions formerly sited in separate classrooms.

However, as the older functions and even the survival of home groups may be put under study by persons eager to make the most of open structure, we must be aware that the separate classrooms of the past did provide for a number of vital elements in the schooling of children. For example, as we have already pointed out, each child deserves and requires to be known intimately by someone who will keep an eye out for him. This need is partly related to personal security, but also relates very obviously to what is being taught. Are the child's needs being met? His interests considered? His history and experience

Exhibit 4. Sample Options for Organizing Instructional Units

The school: total population of 468, with 78 children at each age level, six through eleven

The problem: organizing six instructional units of equal size

Units	Option I Units of Same Age	Option II Units of Two Ages	Option III Units of Three Ages	Option IV Units of Mixed Ages
1	78 sixes	39 sixes 39 sevens	26 sixes 26 sevens 26 eights	78 sixes
2	78 sevens	39 sixes 39 sevens	26 sixes 26 sevens 26 eights	60 sevens 18 eights
3	78 eights	39 eights 39 nines	26 sixes 26 sevens 26 eights	18 sevens 50 eights 10 nines
4	78 nines	39 eights 39 nines	26 nines 26 tens 26 elevens	10 eights 48 nines 20 tens
5	78 tens	39 tens 39 elevens	26 nines 26 tens 26 elevens	20 nines 38 tens 20 elevens
6	78 elevens	39 tens 39 elevens	26 nines 26 tens 26 elevens	20 tens 58 elevens

understood and allowed for? Who knows him well enough to interpret for him when his behavior alone is not enough?

Also, children stand to gain more than simple security from living closely together in a group where they can get to know other children very well. Group skills and ideas and information about being a responsive human being are among these gains. Cognitive functioning itself, as Piaget makes clear, calls for close and continuous social interaction among young learners.

Balance Between Individualized and Group Instruction

One of the major forces supporting greater openness in education is the movement away from group instruction toward more attention to the specific learning needs of the individual. Great gains have been made in finding better ways of individualizing instruction within a framework of common learnings, and also of setting up occasions and opportunities for independent study and inquiry beyond what is expected of all.

The practice of building the new quarters for larger learning communities around or adjacent to an instructional materials center furthers the ease with which the commitment to individualization can be carried out. Perhaps, too, the very awesomeness of some of the larger learning areas tends to work in favor of devoting more time to the quiet study activities of children on their own as against the possible noisiness of group instruction. This is to say nothing of the acoustical difficulty there may be in large spaces for pursuing group work.

Open space, then, may and probably does affect the amount of time spent on working individually and in groups. However, when we say groups nowadays, we must define what we mean. Is a tutoring pair a group? Are three children engaged at a number gameboard a group? Six children using headsets to listen to a record?

What we may be moving toward as we consider the problem of balance between individualized and group instruction is a new and more thoughtful analysis of the varied kinds of groups useful in teaching and learning.

Cohesion Within Learning Communities

What kinds of activities will serve to bring about a sense of social identity within the larger groups of children that we have been describing here as instructional units or learning communities? Seventy-five

children or 100 or 150 comprise a very different kind of living base, of course, from the classroom groups of the past.

If home groups maintain themselves in the new mix, perhaps this dimension will be of less concern to us. The total unit may become in itself a little school of sorts, with representatives of the home groups working to plan for meeting common needs and proposing various kinds of activities of mutual interest and value.

Even then, there may be new kinds of experiences that may come to characterize the living together of large units of children in open space situations. We may think at once of the sharing of films and resource persons if the space lends itself to audience-type presentations or if an auditorium or assembly room is available in the school. Audience sharing could be extended for many other kinds of potentially valuable activities of the kinds familiar from the school assembly of the past—dramatizations, unit study reports, music, and the like.

Perhaps the interchange among children in the unit will come more informally among instructional groups, home groups, and individuals. Interest may be aroused as some children observe in the large space the progress of others on some study project. Arrangements could then be made for sitting in on or visiting work in progress or for a more formal sharing of the results of such projects.

No doubt there will be or already are other questions about how to organize for openness of structure within the more sizable learning units of the new open space schools. Just being organized into larger units and occupying open space will not ensure internal openness, although these conditions surely contribute to the finding of new ways to live and learn together.

De-Structuring the Time Schedule

No one can tell how many of the various attempts to apply the open concept to schools for children today will prove basic enough to survive as more or less permanent contributions to our way of viewing space, structure, and curriculum. But if bets were being laid at this moment on the one innovation surest of survival, we would probably be wise to place ours on what is happening to the time schedule— or timetable, as our British cousins say.

We seem suddenly to be agreed that the daily and weekly schedules of the past, even those worked out to some extent in larger time blocks, have been overstructured. In consequence, instruction has been piecemeal and unrelated, with children bored or hurried as they were held back or nudged along to keep pace with the clock.

Support for our uneasiness about tight time schedules may come in part from studies of what elementary classrooms really look like. Children wait for the teacher to be free to help or to tell them what is to come next. Children are often idle or poorly employed. Yet the teacher is very busy, calling time, getting one set of books collected and another distributed, setting out materials, seeing to it that papers and pencils and pupils are all ready at the same time.

Our new distrust of group instruction also supports rethinking the time schedule. Group instruction can waste time that could be better used if both children and teacher were free to get right to work in an open situation in which study might be fully meaningful to each learner and the teacher could be close at hand to help. So runs some current thinking.

And most recently and perhaps most widely influential is the integrated day model of the British Primary School. Here openness, as we shall see, is defined to include time but also much more than time.

Let us look at several of the major aspects of the effort we are making to apply the open concept to the use of time.

Flexibility of Scheduling

To declare for flexible as against fixed scheduling would seem to be the first step in moving toward openness. Teachers in the larger learning units composed of several classes are likely to take that step, even though in some places where little staff preparation has been possible, they may be somewhat slow in getting started. The first step in cooperation, as we have noted earlier, may simply be an exchange of groups for specialist teaching, most likely within a fixed schedule. In the past, regrouping for level or remedial teaching by a team of teachers was almost certainly closely scheduled.

In open space or other team ventures today, the ideal of flexible scheduling is generally valued, and in many instances a strong effort is being made to realize it. The movement away from the class or home group as the base for most instruction has helped. Time has been freed for setting up other options of various kinds.

Several difficulties exist in flexible scheduling, once a commitment to it has been made. We have already dealt in the previous section with the problem of achieving balance between individualized and group instruction. We also noted there the need to think out more clearly what sizes and kinds of instructional or learning groups are useful.

Perhaps at present groups tend to be formed around a need for

special help more often than for anything else. Several children have revealed a lack of proficiency in some aspect of skill development. They are called together and become a group expected to exist only as long as their common need for help remains. However, in many instances groups once set up are hard to put out of business. One reason is that a group creates a culture of its own which members may value and want to maintain. Another is that the weeks slip by too fast.

More important yet, the time for staff study and planning in many if not most cooperative teaching setups is far from adequate. The major problem of ensuring that flexible scheduling is practiced in the large instructional units is undoubtedly that of trying to work out ways to free up planning time for the teachers involved.

Sound Control in Open Space

Control of noise is perceived by some occupants of open space as one concern of scheduling. For example, when home groups are maintained during most or all of the day, teachers may agree to alternate their quiet activities with group work, as indicated before, so that the sound level can be kept down. What this may result in is the blocking out of somewhat larger time allocations simply because frequent shifts back and forth would require more cross-checking and clock-watching than would seem practical.

If special facilities are available away from the open area, teachers may schedule their use in a fashion that will provide time for those remaining to engage in the tasks of group instruction and group living. Similarly, playground use may be scheduled in shifts to reduce the number of groups left in the study area and thus facilitate teacher-group interaction.

A wider range of scheduling innovations may be expected in schools where the teachers are trying to plan together for large units as a whole. Careful staff planning will be likely to reserve at any one time some parts of the space for individualized instruction and independent study. Other areas may be designated for small group activities. Another section may be set for use by a larger instructional group insulated as well as it can be from possible sound interference.

Such space reservations or internal restructuring of space will demand the scheduling of longer time blocks. Again, shifting around every 20 minutes or half hour just does not make much sense in open space operations. Frequent shifts of this kind would result in a scramble much like the old game of musical chairs.

Integrated Day Model

The "untimetabled" day of the new British Primary School has arisen out of a desire to make more room for laboratory or workshop activities and for independent study generally. The group retains some functions, of course, but group instruction tends to be minimal. Much of the day is left unstructured, with the assumption that time use will be planned for by agreement between the teacher and individual children or small groups of children. The de-structuring of time use means that group needs can be met as they arise and advantage can be taken of unexpected opportunities for worthwhile group experiences.

Relationships between and among aspects of study are forwarded by the absence of restrictions on what shall be studied and when. A child is trying to draw a house of Tudor design. Whenever he wishes, he may move from the arts to the "math" center for tools to use in his pursuit of scale. A child wanting to get more information on leaves or shells moves freely from the science area to the reading corner to search through books there. He may also turn to his teacher for help as he needs it. Released from group instruction duties by the open time "schedule," the teacher is free to go where help is wanted or needed.

Artificial distinctions between subject fields disappear as arbitrary divisions of time for their separate study go. Thus, the integrated day. Such an approach may seem familiar enough to us at the level of early childhood education. Children in our nursery schools and kindergartens do choose among options for work and play within a day minimally structured to provide for some change in pace and to meet what we think of as a need for alternation between individual and small group activities and total group experiences. And good program making for children of all ages has been committed to active learning and subject field integration for at least 200 years.

However, the new British model of the open or integrated day comes to us at just the right moment to strike us as fresh and relevant. Trying to find a way to move from group to individualized instruction within the conventional time schedule has been highly frustrating. Here, in the pattern of relatively unstructured time and much independent study, we may well believe that we have found an answer. Moreover, independent study in the British model is rooted in the handling of concrete objects and the experiencing of real life events. This alone is enough to ensure a welcome for the new way of organizing children's learning, promising as it does to relieve us from the overreliance on paper "lessons" that has come to characterize too many of our individualized programs in recent years.

The British model grew out of an effort to reorganize the single or separate classroom with its one teacher to one group. However, the use of time has relevance to open space teaching with larger units of children, as does the model's restructuring of floor space into special use areas. How these aspects of the British program are to be adapted becomes one of the challenges to American schools already committed to open space.

Staff Assignment and Association

In the old days, the assignment and association of teachers centered around the self-contained classroom, grade level get-togethers, and faculty meetings. As a matter of course, the responsibility for staff assignments belonged to the principal, although he would be expected to have consulted with teachers before making decisions about next year. The principal also was expected to propose schedules for the use of shared space, facilities, and equipment as well as for extra-duty service in the lunchroom or on the playground. The staff organization thus developed was adjustable to illness or other interruptions, but it was set early in the school term and varied little from one season to the next. Indeed, allowing for changes in personnel, it was much the same each year.

Today the idea of openness in structure has resulted in a number of live options for staff organization. Teacher assignments to home groups are less fixed, and many schools encourage at least some exchange or sharing of children during the day. Team teaching is well established in some schools. The newer idea of assigning a staff to work with a larger instructional unit or children in a kind of little school setup seems to be gaining wider acceptance. Often, but not always, this latter option is associated with occupancy of open space. In the little school, teachers may be free to organize children as they wish, including having the choice of home groups if they wish to maintain that pattern from the past.

Openness has also applied in recent years to the welcoming of subprofessionals to the staff. Regarded as intruders not too many years ago, lay aides are now accepted everywhere. Teacher education programs are tending toward the assignment of larger numbers of student teachers to the same teaching situation, partly out of necessity and partly from design. Participation before student teaching is being enlarged as a component of many teacher education programs, thus augmenting the supply of part-time staff members. High school students

and unpaid lay persons are being called on by some schools to serve as tutors and resource persons.

And of course the supply of remedial teachers and specialists of many kinds—guidance and psychological workers, home visitors, community workers, materials specialists, and so on—has grown greatly in many elementary schools, small town and suburban as well as inner city.

Open structure in the area of teacher assignment and association brings with it many concerns, four of which we may examine.

Differentiated Staff

Understandably enough, the opening up of staff assignments and association has been followed by pressure to lay out training programs and set certification standards for the new kinds of professionals and subprofessionals. And as might be expected, the drive has been in the direction of ease and objectivity of definition. The result is that some of the programs most talked about seem to have settled for conceiving of staff composition in hierarchical terms. For example, the highest pay is to go to the teacher who has the most years of training (doctorate or equivalent), works the most months in a year (a 12-month contract as against one for 9 months), and spends the least amount of time with children (one-fifth, let us say, as against full time).

No doubt this nonteaching teacher would be able to fill useful roles in many schools today, providing leadership and service to lower-level staff members. Similarly, differentiation thought of in terms of content specialization, popular in early versions of team teaching, can add talents to a staff mix. Provision of remedial teachers, counselors, and auxiliary personnel of many kinds represents still another approach to differentiation, with much to be said for it.

Today, however, we may wonder whether staffing along any of these lines is as relevant to the situation in the new open structure schools as it was to teaching in the schools of the past. Differentiation as proposed 15 or 20 years ago, and typified by the value attached to master teacher and specialist, was tied to the person rather than being thought of in relationship to function. Today the scene seems to call for redefinition of staff roles in terms of the nature of teaching and learning rather than the nature of the teacher.

Operation as a Substaff

Under open structure, teachers are likely to find themselves assigned to or associated with a substaff responsible for 75 to 150 children, which may be thought of as several separate classes or as an

instructional unit, a learning community, or a subschool. The staff and children of the unit may occupy an open space area or a suite of interconnected rooms or simply be housed in a number of separate but adjacent classrooms. The staff may and probably will be free to make most of the decisions about how children shall be organized for teaching and learning and how time shall be used.

Organization will no doubt provide for some instruction to be given in groups of various sizes, as we have already suggested. These groups will be set up within areas of study around needs, interests, and talents; most of the groups will be short-lived, with new groups coming into being as situations develop. A good deal of time—much more than in the past—will be reserved during the day and week for children to study or work on their own.

The functions to be performed by staff members within this less structured framework, once they have helped to set it up, will depend in large part on what there is to be done. Does a group of children need more help on how to use map skills? Is a child ready to be tested over a mini-unit in mathematics? Are the children at a listening station finished with the spelling tape—and ready to be deployed at other activities? Has the group planning for a week at camp reached a point where someone knowledgeable about aquatic life ought to come in? Does somebody's home group want advice on selecting a service project for Christmas? Are there two or three boys who wish to be taken to the city library for more books on space exploration? Should the children working with clay in the wet area be checked on? Can someone give a little time to next month's film order?

"Assignment" may not be quite the word to use in thinking about the sorting out and suiting of competencies to needs that is continuous in the teaching situation so described. Staff members—teachers, remedial and other specialists, paid aides, resource volunteers from the community, and student teachers and participants—will all pitch in as needed. The performance criterion can apply to teaching as well as learning. Here is what needs to be done—who can do it?

Competencies Newly Needed

Teachers working in open structure situations will be valued for all the competencies they may bring, and a good staff mix would seem to call for variety among members. Yet the new way of teaching under open structure does not put quite the same emphasis on subject competence as did the prototypes of team teaching.

Again, teaching is seen as a set of functions or roles shared by

members of the staff and fulfilled when and as need and competence meet and match. Also instruction is seen as essentially learner-centered, not teacher-centered. The teacher as talker and teller gives way to the teacher as listener and guide. Staff members plan and provide, question and stimulate, help, participate, call attention to, watch out for, keep track of, call time on, and otherwise perform all the roles demanded of adults to support and assure effective learning.

Such an approach to teaching would seem to highlight the need for increased staff competence in general instructional techniques and materials. Fortunately the field of instruction has been dignified in recent years by in-depth analysis and research. Teachers working together can find much to adapt to their own situations as they review studies of verbal and nonverbal teacher behavior, performance or behavioral objectives, simulation and gaming, contingency management, diagnostic and prescriptive teaching, and so on. Teachers who work in a program with a heavy emphasis on individualized instruction may need to learn more about selecting and organizing media and materials for use in the various subject fields.

Freedom to plan for a larger group of children also brings with it responsibility for making sure of purpose and testing the relevance of content. Thus, ease in handling curriculum concepts is newly important to the operation of teachers as substuffs.

Staff effectiveness may be forwarded or hindered by the awareness members have of how they habitually relate to others and how their behavior affects the rest of the team. Sensitivity training of one variety or another may have its value in improving staff operation.

Time for Study and Planning

If open structure is to mean anything, it must mean making room to get into the day or week everything that is important in the education of children. Therefore, it may not be surprising to learn that a common complaint of staffs working with larger learning units is the lack of time for adequate staff study and planning.

Whose business is it to make sure that time is allowed for staff and program development? It must be agreed that a staff that feels free to plan for children should feel free to plan for itself. However, something seems to stand in the way of carving out time for nonteaching activities to take place during working hours.

Perhaps part of the problem comes from still conceiving of time for study and planning as outside the regular school day. In-service education is something that occurs in late afternoon, night, or summer

meetings or courses. Preparation is done before or after school or in the evenings or on weekends.

Another impediment may arise from thinking that study and planning must always involve the whole group at the same time. Also, when groups are able to find time to spend together, their inexperience may lead them into trying to assume managerial duties rather than delegating these to individuals and using their limited time together for deliberation on purpose and policy.

Teachers may also feel uneasy about making use of simple and obvious ways to free time for staff work. Scheduling time each day or week for children to use in independent study or free choice activities while the staff works on tasks of management or meets together may seem like a breach of duty. Yet the question may be whether or not time for staff improvement and interaction is essential to good instruction under team-type teaching. Ingenuity in providing defensible time-off periods for the staff may need to be more highly valued and fully sanctioned.

What Lies Ahead in Open Structure?

While we think well of the gains made thus far in applying the open concept to the structure or organization of schools for children, we cannot of course predict that change will continue in the same direction—or even that the changes made to this point will hold. Grouping and classification of children in larger units with more mixture of ages seems to resolve a good many old issues and problems. Yet in the long run the units may prove too cumbersome or impersonal. They may be supplanted by some other way of organizing children for instruction that maximizes child-adult interaction beyond anything we can presently imagine and which might involve a reversal to smaller units for teaching. Who can tell?

Similarly, attempts to de-structure the time schedule may continue to be pursued with great vigor. The idea of more time for study by children on their own seems most attractive right now. We might even come to the point when in all truth there would be no need for time shifts except as children had to be reminded to refresh themselves—or go home! Still, there could be a retreat from or redirection of our absorption in open scheduling and the integrated day. State departments might begin to be uneasy about whether time allotments set by law were being met under programs of individualized or independent study. Parents might decide that there is too much fooling around in some open programs. Or the gain already made in informalizing the time-

table may prove to have been enough, and we might come to rest on the innovations of which we are surest. Certainly in many schools we have already moved a long way toward an opener day.

Who can say what may happen to our ideas about staffing schools for children? Our ways of thinking about how teams should be composed and how they should behave have already changed a good deal in 20 years. The new vision of staff working in an instructional unit of 75 or more children places emphasis on teaching functions rather than on personal preparation. Yet perhaps this way of working may lead to losses in the use of special teacher competence or in teacher accountability that could prove hard to justify. Older patterns may reappear or reassert themselves, or brand-new staffing possibilities may emerge.

However, despite any uncertainty we might have about the future of open structure, it would seem appropriate to try to be as thoughtful as we can be about where it would appear that energy most needs to be invested in pressing still further for the application of openness to the organization of children, time, and teachers.

Assurance of Pupil-Teacher Intimacy

When teachers are organized to share pupils in larger instructional units as against teaching separate class-size groups, they recognize one of their problems to be the loss of intimacy between a given number of children and one teacher. All-day association in a closed setup does assure a degree of intimacy between children and teacher if it does nothing else. Here we hardly need to argue that intimate knowledge of pupils is basic to effective teaching and that each pupil requires a close relationship with at least one adult in his daily school experience, both to feel right and to learn well.

Sometimes a pitch is made that the availability of several teachers in a larger unit of children opens the prospect of a richer repertoire of relationships for each child. So it may, but we may still insist that someone must be there to whom the child can turn for sure and who will keep an eye out for him all the while. Children can get lost. In a unit of 75 or more, at least a few and possibly a good many children may be hard to get to know and easy to overlook. The staff of one open space school for older children, where the size of instructional units has run as high as 250 children, has tried to lower its anxiety level in this regard by instituting a monitorial system. Children are organized in sets of seven or eight, with one child named as roll-taker. Several times a day, a check is made just to be sure that everybody is present and accounted for.

Keeping track of pupils may be a problem in some situations. Yet more likely to concern us is organizing for living together so that intimate pupil-teacher contact is active and ongoing. At present, for example, home groups may be maintained in larger instructional units even when not too much is done in them any more. The home groups do serve as a base for children to start out from in the morning and come back to now and then and end up the day in, some place that really is like home.

Can new ways be found to ensure intimacy that may do more than holding onto the old home groups? One source of invention may be the small-group experience teachers are making so much of in open space and open structure situations. Such small groups, even though they know they have been set up for a limited period of time, may succeed in creating among members a feeling of loyalty and a loathness to be disbanded, as we have noted earlier. What happens, of course, is that interaction in a group of 10 can become something different in kind from interaction in a group of 25 or 30.

A teacher might have three such small groups as a base for establishing intimate relations rather than one group of 30. With freer use of time, the groups could possibly meet for longer periods of time if less often—and be tied to some aspect of study such as language arts or mathematics. The groups might serve as centers for diagnosis and assessment even though not all instruction in the specified fields would be given there. The Parkway Program in Philadelphia sets up groups of 16 students with two staff members that operate along lines similar to this proposal, meeting twice a week for two hours at a time.

The possibility also exists that pupil-teacher intimacy could be enhanced through a series of tutorial relationships, tied in with the realization of instructional goals and assured of continuity. An increase in one-to-oneness is among the gains of open structure and perhaps more ought to be made of it. Open structured grouping and time use should admit of many new ways of working to secure intimacy. That is the point. Perhaps our challenge here is the more vigorous exercise of imagination and ingenuity.

Time To Work on Their Own

Perhaps our greatest satisfaction thus far from the application of the open concept to structure has come from the loosening up of the time schedule, as we have noted. More room is being made for the child to study and work on his own. And as we indicated in our discussion of what may lie ahead in open space, some thought is now being given

to restructuring open space to make sure that the equipment and materials needed for independent activity of one kind or another are where the child can get to them when he needs and wants to work at something.

Is there any need to make sure that time really is available for independent study in open structure schools? This question may seem pointless to those who have already committed themselves to an organized program of individualized instruction American-style or who have gone all out for the integrated day of the British Primary School. Yet for others who are striving to secure or maintain some kind of balance between group work and independent study, the question may seem worthy of attention.

One approach currently in use is to move instruction in one or more of the subject fields entirely over to individualization. Often the time reserved under the old time schedule is maintained for the subject. However, children all work at their own pace during the period. Time is assured by holding onto the schedule as we have known it.

Another possibility is to separate group instruction, when it is still felt to be needed, from time for individualized study and reserve a band of time across the week for children to work on their own along lines prescribed in the group. This band of time—perhaps first thing in the morning—may permit choice of which subject fields to work on if several are so organized, thus gaining something of the freer choice range open under the British model.

A similar kind of scheduled time for individual effort is found in some schools where an hour is allowed every day or perhaps three times a week for entirely free choice activity. While children may seek adult guidance or work in small groups during this time, the idea is to encourage the development and satisfaction of personal interests and the exercise and growth of individual talents. The activities may be related to subject fields or they may not. More will be said about such free approaches in our next chapter.

In due course, if the acceleration of interest in de-structuring time use continues, we may find that our problem will shift from the need of protecting time for independent activity to that of finding time for group work. Meanwhile, the need to ensure time for children to work on their own remains.

Improvement in Operation of Teams and Substaffs

We have already defined several directions in which teams or substaffs may need to try for improvement in their operations. Yet our concern for more effective functioning of teachers will continue to

extend itself as it always must when we talk about better schools for children.

One problem that we may need to add to our concerns is the relationship of various adjunct or auxiliary teachers to teams or staffs working in more open situations. When children are grouped in larger units and time is less tightly structured, where do remedial teachers fit in? The older practice of pulling children out of the classroom on a scheduled basis for tutoring or small group instruction would seem on the face of it no longer either necessary or appropriate.

Presumably the remedial program could be relocated within the open space and under the structure of the new subschool units. What this may call for or result in is a new way of functioning for both regular and remedial teachers as opportunities arise to relate their work more closely. Under open structure, individualized and small group work may come to play a larger part in the regular program, and the remedial role might thus be integrated within it for the strengthening of instruction all the way around.

The need to work out ways to share management tasks may bear reiteration. As the staff or a larger unit identifies routine tasks to be performed, it ought to be prompt in parceling these out among its members and careful in arranging for reports on progress toward completion of assignments. Teams that learn to share the burden of management can reduce or relieve many of the irritations that arise in living and working closely together; and also, as they come to trust one another to get jobs done and done well, they will find less need to meet on anything other than truly professional matters.

Finally, are new kinds of nonteaching support needed by teams or substaffs in open structure situations? The freeing of a few top teachers from most of their teaching duties, proposed under some versions of differentiated staffing, would seem to presume new duties in the offing. The likelihood to be guarded against, of course, is that nonteaching teachers will drift into doing what teaching teachers do not have time for or do not want to do.

In fact, teachers working in teams or substaffs may indicate that their first need is someone to take care of leftover or especially onerous clerical and management tasks. And to the extent that such duties are hard to pass around, teachers do need help. Keeping attendance records for a unit of 100 children or arranging for parent permits and buses and lunches when the children are taken to the zoo or the planetarium are jobs on which help would be appreciated.

However, supposing that some teachers can be freed for higher level services, what might these be? Earlier we noted a need for teams

and substaffs to develop new competencies in instruction, curriculum, and group relations. Perhaps it is in these realms that teachers need to be offered new kinds of help. Certainly the provision of support right where teachers live and while they are at work would seem to be in the new mode. We may need to think more about what open structure might imply for the reshaping of familiar patterns of supervision and curriculum development as well as of teaching.

Guidelines to Opening Up Structure

At the present time, the structure or organization of schools for children is moving in well-defined ways toward greater openness, as we have pointed out in this chapter. Children are being organized in larger instructional units. Time is being re-structured or de-structured to allow more freedom in its use. Teachers are being assigned and associated as teams or substaffs with an increase in shared responsibility and authority.

Open structure today is often associated with open space. Indeed, open space is frequently justified as facilitating the reorganization of children, time, and teachers—or even as requiring it. Yet, we are aware that innovations in structure preceded the appearance of open space. Also such innovations are not dependent for their operation on open space. A great deal of openness in organization can be and has been achieved in conventional quarters. And open space, as we have noted, can be occupied in highly structured ways. How space of any kind is used is what is important. Even then, we must grant that well-designed open space can invite the trying out of new ideas in organization.

What concerns us here, as we conclude our consideration of open structure, is whether we can propose a series of guidelines for schools that may want to move in this direction. Are there some considerations of which we can be fairly sure?

1. *The setting up of larger instructional units should make the most of heterogeneity.* When children are put together in units of 75, 100, or more, organization within the unit provides for differences among learners. Therefore, the use of achievement level, intelligence, or age as criteria for who goes into a unit is less likely. Heterogeneity is assumed. And indeed it may be valued. If an age range of two or three years is accepted, for example, there may be gains both from interage association and from the prospect that every child will belong to a unit long enough for its staff to do all it can for him.

Schools should take seriously, then, the opportunity they have

under larger unit grouping to make the most of differences among children.

2. *Teachers should be assigned to the new larger units as a whole and left to work out internal grouping as a team or substaff.* Unity in planning and teaching is forwarded if teachers start out as a team or substaff. In time, the teachers of several separately established home groups can learn to work together. But meanwhile time is wasted and the sense of "my" and "mine" developed. Teachers may also be more likely to be task- or function-oriented if they plan as a unit from the beginning.

3. *Internal organization should assure an intimate continuing relationship between each child and at least one teacher.* We take pupil-teacher intimacy to be essential in all schools for children. We also see intimacy as likely to be imperiled by the possible impersonality of larger learning units and multiple teachers.

Direct attention must be paid to meeting the need for intimacy, both for the security of the child as person and for the fulfillment of the professional obligation of making sure that every child is having as successful an experience in school as can be provided for him.

4. *Internal organization should provide for instructional groups of various sizes to be set up as need develops.* What we are noting here is the opportunity in the larger units for flexible grouping. Except for the home group as that may survive, fixed groups would be relatively few in number. Groups within instructional units will be set up and disbanded in relationship to the kinds of need that may call them into being—remedial instruction, interest in a topic, or acceptance of an assignment from a larger instructional group, perhaps in science or social studies.

5. *Balance should be sought between time given to group instruction and time reserved for individualized instruction and independent study.* At present, the need is for protecting time for the latter. As the interest in individualization develops, however, our concern for balance may shift to the problem of saving a place in the day for group experiences and activities.

Thus far, gains made under open structure may well strike most of us as all to the good. However, we agree that we need to keep before us guidelines that may serve to shape further reorganization of schools in the desired directions and also assist in safeguarding us from the

enthusiasms and excesses of those who may be more interested in structure than instruction.

If we have a sense of history, we must be aware that the energy of school people is sometimes diverted into the numbers game. Organizational innovations may make it possible to achieve some new curriculum ends. But they also can become ends in themselves. We will agree that we need to keep our professional wits about us as we observe and direct organizational change.

4

Openness and Curriculum

OPEN space has been easy enough to define. And as we have used the term, open structure has not been too hard to describe. When we come to the open curriculum, however, we find something more complex. Many ideas about what a freer and less conventional curriculum will look like are in the air.

In beginning this report, we cited a variety of forces that seem to have supported the growth of the open concept. As we think back, we can relate several of these more or less directly to what has happened to our ideas about space and structure in schools for children—experimentation in grouping and staffing, a loss of faith in group instruction, and opposition to institutionalism. The demand for relevance and the revival of progressivism are the other forces we identified. These are plainly tied in, we would agree, with curriculum change. Also we would have to include anti-institutionalism here again as affecting our ideas not only of how schools should be set up but of what they should teach as well.

Forces like these are difficult to relate specifically to curriculum innovation. What is meant by relevance differs from one curriculum camp to the next. The new progressivism has about as many branches as had the old. Suspicion of the school as an institution may range from the discomfort felt by a sensitive new teacher in a large school to the outright rejection of the school sometimes proposed nowadays by radical reformers.

Despite the vastness and apparent shapelessness of the forces that make for openness in curriculum, we must indicate how pleased we all are with the current curriculum scene. Something really is happening to ideas about what children ought to learn. And the variety of these ideas should be taken to represent the many-sidedness of our concern rather than being regarded uneasily as evidence of conflict or confusion.

So often in the past when we have taken a close look at school innovations, we have found curriculum change low on the list. Architects can be trusted to come up with new ideas about how to lay out

school buildings. Experts in school management and administration seem to work overtime on novel ways to reorganize for better teaching. But who can be counted on to do something about what ought to be taught or learned? The answer is hard to find.

Or so it may sometimes seem. Here is a new school, with well-designed open space instructional areas occupied by learning communities carefully staffed by teachers eager to work together. Yet what are they trying to teach? Too often it may look like the same old curriculum.

A new curriculum is not easy to come by. It involves ends, not merely means—and thus it cannot very well be farmed out, regardless of what we may have let ourselves expect from the scholars in the late fifties and early sixties. These scholars did serve to modernize the content of several subject fields, but they seldom found time to answer or even to ask the question of what the new content was good for or whether some of it was more worth teaching than the rest.

Answers to such questions require that many persons, in and out of school, work together. And today—this is the point—the new curriculum proposals before us really do arise from a base of public and professional concern wider than any we have been in touch with for many years. The proposals are far from complete, of course. Some of them may sound more like expressions of good intentions than anything else.

Yet they are coming out of a strongly felt need to take a fresh look at the goals of education and examine anew the range of children's school experiences in relationship to these goals. In short, the proposals are the result of trying to engage in the critical inquiry which remains central to productive curriculum study. Really new possibilities for children's learning may indeed be on the way.

What we shall try to do here is to review some of the current curriculum proposals. First, we will look at those that seem to be freest. Then we will look at proposals that try to combine freedom with control. Our third group is comprised of proposals that may seem to use freedom to introduce new kinds of formalism. We shall then try to think ahead to identify possible further developments in the open curriculum. We will close the chapter with a definition of tentative guidelines to be tested in developing the new curriculum or curriculums for children.

Free as Free Can Be

To the most severe contemporary critics of the curriculum, the term itself has become a kind of epithet of disgust and disapproval. "Curriculum" is taken to represent much that is restrictive and irrele-

vant about life in schools. Why should boundaries of any kind be imposed on what can be learned? "Instruction" may be included in the litany of damnation. Direct teaching constricts or diverts or dampens the flow of natural energy that can impel young learners to try to make sense out of their world and find satisfaction in it if they are given free rein.

We may be tempted to try to straighten out the despisers of "curriculum" and "instruction" by helping them find broader meanings for the terms. After all, would they not be comfortable with the idea that whatever the child experiences under the auspices of the school can be called curriculum? Or that instruction may be defined to take in all the circumstances that support and affect learning in the school? They might be. Yet if we succeed in educating our critics to use words our way, we may lose the essence of their message. And they would seem to be saying something we need to hear. Let us contend, if we wish, that their picture of authoritarianism comes in part from limited or uniquely poor experience. Even then, we ought to be able to listen and learn. Critics can be right for the wrong reasons.

Frankly, we may need to be aware that the wrong reasons could include the fact that several now veteran spokesmen for an open curriculum based their early critical reports on their own ghetto teaching. What they saw to be the problem led to proposals that go far beyond the ghetto, of course. But their image of black children and what they need may seem less insightful now than it did in the early or mid sixties. Certainly today many black parents and leaders would reject the notion of a totally "free" curriculum for their children as irresponsible if not insulting.

May we turn, then, to look as clearly and generously as possible at some of the main ideas of the critics who would have the curriculum become as free as free can be?

Life: The Unstructured Curriculum

What would happen if schools just closed their doors for good? Children would be returned to the community to learn through living. Participants with their parents in the work of the world, they would profit from the ultimate of openness. They would go to school to life itself.

Strange as this kind of thinking may seem to us, life is still the school to which most people have had to go around the globe. One out of four South Americans is illiterate, three out of four Africans, half the Asians. The idea that formal schooling is right for everybody and

everybody's right is a relatively recent notion and plainly one that even yet is not worldwide in acceptance or application.

Yet in every society, children who survive infancy do grow up to become reasonably effective human beings, capable of enjoying life and active in contributing to and maintaining the ways of living into which they have been born. Schools may play a role central to this process or they may not.

Is it possible for schools to interfere with the process of becoming a fully functioning human being? This question is not unfamiliar historically. It was asked as women began to be educated and as schools were being built for members of the working class. Today it is being asked by critics who fear the school as the source of several kinds of possible distortion.

Schools may serve to teach children repression of life instincts, substituting subservience to routines and authority for exercise of the freedom and self-direction basic to becoming happy and creative persons. Schools may serve as agents of an economic system that thinks of people mainly as replacements for its worn-out parts or as a market for unneeded and unwanted products; such schools will tend to turn out unthinking automatons rather than self-determining free men. Or—more plainly and perhaps even more grimly—schools may be so concerned with overtaught trivia and so lacking in genuine stimulation that children will be put to sleep, never to wake up.

Living fully ought to be the goal, and living freely thus has to be the means. This seems to be the message. Suburban parents who are banding together to establish Summerhill-type schools, commune dwellers in the mountains of New Mexico who are trying to teach their own children as they grow, some inner city schools for older youth that are letting them slip out into the urban arena in larger numbers for both work and study—all seem to be trying to say that life itself, unstructured and too much as it may be, has to come first.

Dependence on Quality Experiences

Occasionally we may wonder whether some critics who rail against the schools really care to think about curriculum making on any terms, open or otherwise. Trying to decide what needs to be made sure of in the education of children may strike them as both unnecessary and boring. Everybody knows the child has to learn to read and write and add and subtract. What is the problem?

Such critics may have opposed the school largely in terms of its psychological impact as an institution without much real interest in or

knowledge of what is intentionally taught there. Pressed, they may agree that they would expect basic learnings to be got—but on the run, so to speak, without interfering with the child's experiences in living. Also, some of the critics would seem to be willing to talk about the quality of one experience in living as against another and may thus come to be engaged in curriculumizing after all.

We may agree then that we would like children to have varied experiences worthwhile in themselves. Life as it goes on will provide some such experiences. Yet a school that is open to making the most of life for children will try for more than chance experiences.

Other persons are a part of every child's experience. In school, however, children and adults too are likely to be more varied and numerous than elsewhere and experiences in living and working together can thus add new dimensions to home and neighborhood experience.

The arts are everywhere. Yet in school the child may hear more kinds of music than he may outside and possibly learn to respond to music in new ways, perhaps to make music, even to compose it.

The world is all about us. Still, children may come to see some of it with new eyes as they return from a walking trip to a nearby park or greenhouse or try to sort out together their impressions after talking with a helicopter patrolman.

Exhibit 5. What Children and Teachers Do in Task-Centered and in Child-Centered Schools (Representative Language)

Kind of School	What Children Do		What Teachers Do	
Task-Centered School	begin	perform	check	monitor
	carry out	practice	coordinate	organize
	complete	pursue	develop	plan
	correct	reach	diagnose	prescribe
	execute	respond	govern	present
	follow	satisfy	keep track	schedule
	move on	succeed	maintain	test
Child-Centered School	choose	mess with	advise	observe
	compose	organize	arrange	participate
	create	plan	enable	question
	discover	play	encourage	share
	experiment	solve	guide	stimulate
	hypothesize	talk	listen	support
	manipulate	work	move around	watch

The choice of quality experiences for children does suppose that some structure will be applied to life. Yet openness to the real and the vital remains a key concern. What we may wish to ask ourselves is the extent to which room for such experiences can be found in the curriculum we now have.

Partnership of Children and Teachers

A most familiar position among the advocates of openness is that of insistence upon freedom for teachers to plan with children as they see fit, untrammelled by the expectations or constraints of a preplanned curriculum. Of course, this is the classic posture of progressive education, maintained by many teachers of young children and revived in part by the new British progressivism.

As partners, children and teachers build on and extend the needs and interests that arise out of their ongoing experience in the school. Goals for learning are defined and experiences selected by those involved. Within the plans, room is made for children to work on their own and in small groups as well as to function as a total group. The concerns and problems for exploration are kept open to admit new interests and to honor the full range of children's ideas.

The program that develops under this kind of partnership will be unique to its members. Such an approach is thought of as child-centered rather than task-centered, although the amount of work accomplished and its quality may go far beyond what is envisioned by most preplanned programs. Continuity is counted on to come from the exercise and development of the powers and purposes of the child, to use Dewey's language, and from the guidance of teachers who know not only how to help children get the most out of their current experience but also how to move children ahead into ever more adventurous experiences in learning.

Persons writing today in behalf of such freedom for children and teachers are likely to speak of the open or unstructured classroom and may combine elements of what we have called open structure in their proposals, especially freedom from time schedules and from inflexible staffing patterns. Their major emphasis, however, goes to the relevance and liveliness of the school experience that develops under partnership planning. As in the reports of earlier progressives, they propose to include more opportunities for children in the expressive and creative arts and in environmental exploration. Children compose and create, discover and experiment; teachers arrange and guide, listen and participate (see Exhibit 5, p. 52).

The freest proposals for an open curriculum, then, include the return of children to the community or to new learning situations set up there to foster learning through living, and also the provision of quality experiences selected to make the most of experiences good in themselves. They include the concept of the open classroom that would maximize the partnership of children and teachers to plan a curriculum in terms of the powers and purposes of learners. Trust is the ultimate issue—trust in the children and in the adults around them, trust in the lessons to be learned from living as meaningfully and richly as possible. Has such trust been lost in some of our schools for children today?

Freedom with Control

What may surprise us more than anything else about the proposals of anti-curriculum critics is the familiarity of much of their language. Whether they always know it or not, they sound very much like the early progressives.

Some of them—those most vehement against authoritarianism—may seem to sound a new note as they inveigh against schooling as an instrument of a sick or suspect society. For some of these critics, there appears to be a growing conviction that all present institutions must be opposed if a new and less exploitive society is to be helped to emerge. Yet even this kind of talk may remind us of the thirties. An enduring point of conflict within the Progressive Education Association was whether schools should serve society or recreate it. Of course, the activists of that era never doubted that the schools had a choice. Perhaps this is where a real difference may be found to exist between them and today's most radical critics. The latter seem to have little respect for education as a force for change, and indeed they may regard the idea as just one more fiction or trick that an obsolescent society uses to prevent change.

Most of today's opponents of the structured curriculum do have faith in education. They might be willing to see some schools closed, but not all. And they would hope that closed schools, once reopened, would be possessed of a new commitment to staying open, truly open—open to life-centered experiences good in themselves, experiences planned and selected by those involved in learning.

The familiarity of the language the new progressives use is matched for many of us by the familiarity of the doubts that assail us. Will children's experiences under a free-as-free-can-be kind of curriculum have the balance they ought to have? Will children develop the skills

and concepts they need for the effective exercise of their powers or capacities? How can we ever know that it all adds up?

Thus, we may examine two of the new approaches to a more open curriculum for children that seem to represent an effort to guard against loss of control over outcomes.

The New British Progressivism

Part of the attraction for us in the new British progressivism is the apparent control that exists in the midst of so much more freedom than we are accustomed to in most of our own classrooms. We may suspect and hope that a way has been found to make sure of learning and reduce or offset the formlessness thought to have been the major problem of the old progressivism.

The question of order has not been altogether resolved, it is clear. Most of the accounts of what goes on in the British Primary School lay heavy stress on the acceptance by teachers of responsibility for close and continuous assessment of progress. No doubt critics of the new education in Great Britain serve to stimulate this profession of vigilance. Yet it also seems to come out of an awareness new to progressivism that "checking on" children's development is facilitated by an open environment; indeed, that the ease of working to guide individual growth is among the major gains or goods of the integrated-day program.

We do know that planning in the British schools goes beyond the restructuring of floor space and the de-structuring of the timetable. We are interested, for example, in the similarity of activities reported from one school to the next. Children are measuring the width of the corridor, the length of the playground, and the circumference of their teacher's head in Birmingham and York as well as in London. Recipes are collected and tested and inscribed in hand-bound books in village schools and city schools. Bejeweled Elizabethan costumes, scale models of Tudor houses, and clock candles half burnt show up in reports of group studies from all over the kingdom. We will want to know how this replication comes about under free choice education. Agreement on a range of valued activities would seem to promise relief from the threat of chance and whim as determiners of an open curriculum.

And, more important, is there something to these agreements that goes beyond the accumulation or conventionalization of interesting learning activities that have been found good in themselves? The puzzled American teacher may have been helped over a weekend to rearrange the furniture and been reminded to take down the daily schedule posted by the door. But bereft of the guidance that comes from textbooks and

curriculum guides and the assurance derived from successful experience under more formal conditions, where does the teacher turn? Teaching informally has to involve more than watching and waiting.

The likelihood is that progressive education in Great Britain has learned how to prepare teachers so that they carry about in their own heads all that is needed to impose order on the rich and varied activities of their classrooms. They come to understand that many kinds of activities can be employed to help children learn the skills and concepts they need to know in such matters as measurement or proportion.

British teachers do have guides to help them. The Nuffield mathematics materials are a case in point. Teachers-to-be may also have active experience in schools from their first months in teacher education and thus learn at first hand how varied experiences may be used to ensure wanted learnings—and also how a given experience such as a group study of Elizabethan times may yield learnings in several fields of knowledge. Much attention in both preservice and in-service education goes to principles of learning, particularly those derived from the work of Piaget, that may be related to guiding and keeping track of children's intellectual development.

Schools are small, too. Teachers of older children may come to know their prospective pupils beforehand and under family-type grouping may be assured of several years in which to guide learning. Head masters or mistresses work directly with teachers in assessing what children know and in helping shape experiences for them. Open structure assists the provision and pursuit of ordered learning in the open curriculum.

If there is a secret of how the British combine freedom with control, it may well be found, then, in the education of teachers to be genuine curriculum makers on their own—to hold clearly to ends that they fully understand and accept as they arrange for and with children the most rewarding school experiences possible.

Options and Alternatives

One way being developed to provide freedom with control in our own schools is the planned provision of options and alternatives within the curriculum we now have. Several versions of this approach can be identified.

Perhaps the openest is the setting aside of a time or band of time for children to use more or less as they like. The assumption is that given free time, children will differ in what they choose to do with it. Interest will lead some to work on science activities, others to become

involved in art projects, still others to search out books that will help them answer their questions or provide personal enjoyment. If several wish to work together, that may lead to an experience which meets social as well as intellectual needs.

Such free time is identified as time for exploration or questing or personalized study. Behind the practice may be a concern for bringing into balance the possible overdirection of children under some programs of individualized instruction in which everything is carefully laid out and independence limited to rate of progress through the study sequences.

Another use of options and alternatives comes in cases where content to be learned is organized or reorganized as a series of short units, mini-units, or learning packets for individual study. Sometimes the units will be divided between those to be completed by all children and those from which choices may be made. Presumably the common learnings being sought will be covered by the required units, and personal interests and individual needs will be provided for by the exercise of option among the rest.

A third use of options and alternatives may be found to be incorporated in the preparation of the new-type individualized study units themselves. Following a pretest, the child is confronted by a variety of avenues by which he may fill in the gaps he has become aware of in what he already knows. He may consult one or more textbooks, listen to a recording, see a filmstrip, work with a piece of programmed material, or ask for a sheet of teacher-prepared information. His exercise of option is in the choice among alternative ways of reaching an established goal. When ready, he takes a post-test to find out whether he chose wisely among the alternatives. This use of option is supported by the belief that children differ in learning styles and will discover that one kind of material is more useful to them than another.

Such new approaches to making room for choices in what is to be learned would seem to belong in any discussion of providing greater openness in the curriculum, even though some appear in situations that have a good deal of formality about them. Teachers who have operated under a program of large-scale unit teaching or group studies may feel that the value of older ways of providing for choice ought also to be included in the arena of options and alternatives. The process of defining questions or problems for study did make it possible to bring into group plans the interests and ideas of many children even though an area of study might have been set by a curriculum guide. Organizing into small groups for getting needed information or "answers" offered some degree of option. Within the small groups, individuals might find still further room for the pursuit of their own most pressing concerns.

The value of giving children opportunity to choose what to study has been with us since *Emile*. However, our concern for making sure that openness results in experiences that add up must remain as a major element in our definition of adult responsibility in the school, as it did for Emile's tutor. The appearance of new plans for organizing to include more options and alternatives is a recognition that we do still hope to find better ways to combine freedom with control.

Freedom for New Kinds of Formalism

Openness in curriculum is also being advocated by some persons today in behalf of freedom to replace the old program with another different in design but no less formal in structure. Closure in curriculum planning is what is under attack. Room needs to be made to develop and test out competing programs that may have more to offer. Formalism, in short, is not itself the issue but whether the schools can accommodate new kinds of formalism. Structure is accepted as essential in school programs. The question to be answered is whether the conventionally structured curriculum really does what needs to be done.

The developments in open curriculum we have discussed thus far have been concerned with lifting restrictions on what can be learned in school and maximizing the role of children as participants in planning and selecting their learning experiences. Openness of this variety is not the concern here. Adults are assumed to be engaged in the proper exercise of responsibility when they plan the curriculum for children. Indeed, the selection of what is to be learned is seen as a task requiring a high level of professional competence that could hardly be delegated to children. Perhaps not even teachers are competent to make basic curriculum decisions. So advocates of the new formalism might contend.

The persons who are proposing formal substitutes for present programs may seem, then, to be different in intention from the others with whose ideas we have been dealing. Their attitude toward attempts to provide a free-as-free-can-be environment for learning might well be that such schools are misreading all the social signposts as well as indulging in sentimentalism about children. The British model of combining freedom with control might be taken to represent an undeveloped sense of accountability, attributable in large part to differences between national cultures. As to the idea of options and alternatives, the formalists would probably be suspicious of how much children can gain from free time for personal exploration. They would feel more comfortable, no doubt, if choice were confined to specified options within a closely structured curriculum.

The New Fundamentalism

Conflict between curriculum proposals rooted deeply in a desire for more freedom for children and those arising out of the drive for a new kind of formalism will certainly increase in the immediate years ahead. The strongest campaigners from among the formalists may be those committed to preplanned programs of individualized instruction.

These new fundamentalists, if we may be permitted to call the individualizers that, seem to have everything going for them. The movement toward open space has given them a push because open space invites or even compels teachers to reduce group instruction and move toward independent study. The inclusion of easily accessible learning materials centers in open space schools forwards the use of a greater variety of materials than could be housed in the classrooms of old. The developments under open structure also support individualization. Classification into large groups and optional and flexible internal grouping dispose of barriers to individualization, as does the loosening of the time schedule. Staffing by teams or substaffs makes it possible to try for new and supportive teaching roles and functions that help programs of self-directed study work well.

In addition, all the diverse developments under way during the past 15 years or so in the preparation of study materials seem to have coalesced into one fairly sophisticated body of know-how in support of individualized instruction. The undreamed of as well as the unlikely are now found possible. We can state our goals in terms of highly specific behaviors, diagnose need more precisely, select or prescribe learning sequences that have been proved more or less failure-free, and evaluate progress with greater accuracy against a wider spectrum of possibilities than we ever could before. To forward the steps of this process, materials can be organized as packages or systems of one kind or another, some with computer-assisted sequences and others with elaborate multimedia episodes. When all else fails, we can fall back on what we are learning from reinforcement theory and contingency management.

The new fundamentalism can also count on support by powerful community forces. Teaching results from the new preplanned programs are more accessible. The increasingly reluctant taxpayer wants his money's worth and may demand proof that he is getting it before responding to the pleas of school systems in danger of going out of business. State legislatures, moving slowly if surely to the rescue of local districts, are in the mood to hold teachers newly accountable. And racial and ethnic minorities whose older children came through school

Exhibit 6. Two Major Educational Movements of the Seventies:
The New Freedom and the New Fundamentalism

The New Freedom	Elements	The New Fundamentalism
<p>Walls in the school pushed out</p> <p>Learning areas equal in floor space to several classrooms</p> <p>Expansion out of doors—field trips</p> <p>Use of public facilities as study space</p> <p>Community-centered study projects</p> <p>Some space may be structured as interest or work centers</p>	1 Space	<p>Large study areas—may be several classrooms opened up to form study space</p> <p>Smaller spaces for discussion groups</p> <p>Specialized facilities such as studios, laboratories, workshops</p> <p>Provisions for individual study: carrels, stations, computer terminals</p>
<p>Larger units—like 75 to 125</p> <p>May be called learning communities, schools within schools, subschools</p> <p>Grouping may be interage, vertical, family-type</p> <p>Children may remain with same teacher or teachers several years</p>	2 Classification of pupils	<p>Pupils handled as individuals</p> <p>Grouping as such not regarded as too important</p> <p>Grouping for instruction on basis of achievement or need level</p> <p>Regrouping for instruction in basic skills</p>
<p>No bells—few fixed time divisions</p> <p>Work going on in many aspects of study at same time</p> <p>Individual pupils planning own use of time within some limits</p> <p>Relatively few occasions for work in large groups—mostly small group and individual or independent study</p>	3 Time schedules	<p>Flexible scheduling related to needs</p> <p>Regular attention, however, to major skills and content areas</p> <p>Individual pacing in progress through study sequences</p> <p>Large amounts of time devoted to individual study</p>
<p>Many resources of all kinds—may have media center easily available</p> <p>Live animals—garden—pond</p> <p>Junk or nonstructured stuff</p> <p>Few textbooks in sets—more trade and reference works in or close to wherever study takes place</p>	4 Resources	<p>Boxes, programs, learning packets, multimedia packages: super textbooks</p> <p>Diagnostic devices</p> <p>Assignments highly explicit in terms of study materials to go through</p> <p>Much testing of progress</p>

Exhibit 6.—Continued

The New Freedom	Elements	The New Fundamentalism
<p>May plan and teach together May be assigned to large group of children as a staff rather than to 25 or 30 Paid and volunteer lay workers part of mix</p>	<p>5 Staff</p>	<p>Paraprofessionals to handle routine tasks High level of accountability for getting desired results Teachers coached to ensure greater effectiveness (increased in-service education)</p>
<p>More emphasis on learning than on teaching Teacher as guide and helper Planning done by children Emphasis on learning by doing—centered on activities Stress on satisfaction and sense of growth in personal competence</p>	<p>6 Instruction</p>	<p>Mastery the goal Individualized instruction seen as ideal Ends exemplified in behavioral terms—highly explicit Tutoring relationship valued Much small group target teaching Remediation continuous concern Prescriptive teaching</p>
<p>Many options and choices for children Use of unexpected incident to lead into group undertakings Much attention to interest, sense of need, current concerns Emphasis on large or global goals Structure for learning exists chiefly in heads of teachers, not on paper</p>	<p>7 Curriculum</p>	<p>Carefully worked out lessons in basic skills and content areas Stress on scientifically determined placement of content Sequences of work very carefully planned Evaluation geared to specific content and its learning</p>
<p>Free and easy Children treated as partners Movement from one place to another informal Noise and messiness seen as likely products of meaningful activity Friendly—good humored</p>	<p>8 Environment as a whole</p>	<p>Busy and industrious atmosphere Quiet and orderly Everybody buckling down to work No nonsense Children expected to be where they are supposed to be Formal—firm but concerned with success and good adjustment</p>

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largely untaught are vitally interested in the prospect of successful learning. Teachers in Gary may not care much for the performance contracting setup at Banneker School. But the school board and the parents of children in the school have high hopes.

The goal of mastery is back in the picture again. Effort still goes to trying to discover more about the learning disabilities and deterrents that may exist in the child or his circumstances. Yet more and more, the energy of investigators is being redirected to find out what can be done to improve teaching. The conviction is growing that most children can learn what they need to if they are well taught.

Can the two movements—the one toward more freedom and the other toward a new fundamentalism—be joined in some way that may enable us to hold onto and strengthen the best in both? This may be historically the major curriculum challenge of the seventies (see Exhibit 6, pp. 60-61).

New Content for New Ends

While presently not much evidence of activity can be found, it would seem that a place should be reserved here for speculation on whether radical proposals for reconstruction of the curriculum for some children may be on the way or somewhere in the works. Are there those who want new ends set for the education of children and consequently see new curriculum content as a must?

Of course, advocates of all the approaches we have discussed will feel themselves concerned one way or another with new ends and content. Opening up the curriculum to interest-oriented and life-related experiences, de-formalizing or informalizing learning, optionalizing the paths to be pursued, and the other experiments in open curriculum under the new freedom—these do seem to envision new ends and involve unfamiliar content.

However, the radical formalists may be something else again. Indeed, their beliefs will undoubtedly strike the freedomists as reactionary. Like the new fundamentalists, the radical formalists see a need to know exactly what is wanted and to lay out in an orderly fashion what it will take to get there. They want to educate a child to be a new kind of man. And they believe they can do it through a new curriculum. What they would like to have is enough openness in the schools so they could develop such a curriculum there. For the time being, they may have to operate outside, but eventually they hope to bring their new programs into the schools.

We are thinking in particular of proposals for the education of

children from oppressed ethnic and racial minorities. Apparently there are some free schools for young children that are trying to teach for personal pride, cultural identity, and political effectiveness in new ways. With these ends is often incorporated the new fundamentalists' goal of mastery in the basic skills.

Other concerned groups in our society that may see a need for setting new ends in the education of children would include some of the environmentalists and feminists. Education in new ways to regard and respect the environment is already recognized as imperative. Rethinking what needs to be altered in the schools to help in protecting girls from socialization into subordinate roles is bound to be demanded of us in the years ahead.

The political education of all our children is newly under study as a result of investigations that reveal the poverty of our past efforts. New content from political science and perhaps sociology may become relevant if we can agree that the roots of social responsibility need real nourishment from the beginning of school experience.

The group we are calling radical formalists, then, is made up of those who accept an organized or structured curriculum but would like to see the process of curriculum making opened up to admit truly new ends and content. Like the new fundamentalists, the freedom they seek is for their own kind of formalism.

In our discussion of the open curriculum we first described those who wish to be released from all or most constraints on what they can do with children. In the free-as-free-can-be camp are those who would return children to the community to be brought up under some kind of apprenticeship system, those who believe in selection to the point of being willing to wait and value quality life experiences as a curriculum, and those who see school as a satisfactory site for learning as long as experiences are a product of child-teacher partnership planning. Another open curriculum position has been defined as representing freedom with control. The model of the British Primary School seems to belong here, as does the recently developed American idea of a more or less fixed curriculum relieved by the availability of numerous options and alternatives. Finally, we have explored freedom for new formalisms such as the new fundamentalism and radical formalism.

What Lies Ahead in Open Curriculum?

Application of the open concept to curriculum today has led to a degree of liveliness probably unequaled during the past half-century. The period that the present may most remind us of is the 1920's when

the old progressivism seemed to come into flower. Are there directions for still further development that seem to be promised out of our review of what is now going on in schools for children?

One thing we can anticipate is that the extremist position on openness is likely to be abandoned, if only because its exponents are more and more caught up in the effort to change society. Schools may be restored to the scene as useful, once a new society emerges.

Probably the most feared threat to continued creativity in curriculum development is premature agreement on one of the options before us. Yet the number and variety of the approaches and the differences among their supporters may save us from closure. The parents of inner city children, for example, will be unlikely to settle too soon for attempts to informalize all instruction in their schools, well-meaning as these efforts may seem to be. Similarly, to the extent that they understand what is going on, suburban parents are unlikely to approve the installation of an all-out correspondence-school kind of curriculum where their children go to school, despite all the promises its promoters may make.

In general, the prospect of developing a new curriculum for children has always been complicated (or perhaps simplified) by the fact that so much of what children have to learn in their early schooling is comprised of the fundamentals or what may be called the residual, the consensual, or even the untouchable curriculum. Can room be found for anything more? Not always asked right out, this question may often be sensed in the background.

Nonetheless, we can define several major areas of curriculum activity to which it would seem probable that further attention will be given.

Maintenance of Alternative Models

As we have already noted, the threat in a time of curriculum ferment comes from the demand for certainty and consensus. The hope is that the study of new ideas and possibilities can be kept open long enough to allow what may at first glance seem to be the least promising to be fully tested along with the most promising. However, we have had so little experience with this way of working that sometimes we may lack confidence in its practicality.

Certain school systems have had more experience than others in studying alternative programs. They may have tried out a variety of new science programs. Or they may have piloted competing reading programs in different schools. Almost unavoidably, districts will have

tested several approaches to the teaching of language arts and social studies. Eventually, in most cases the districts have made a decision about which of the programs in a given field they wished to adopt for all their schools. The testing of alternatives was toward that end.

Undoubtedly many school systems are using the same method to evaluate the different curriculum approaches we have discussed. A district may be testing out Individually Prescribed Instruction in one school, its idea of the British Primary School in another, and a program of options its teachers have devised for themselves in a third. The intention, as we have said, may be to compare results and choose the one they like best as the program for their district.

Another point of view in regard to the provision of alternatives may be developing that will not necessarily aim at a final choice of the best or most suitable program to be installed in every school. We may think of it as aimed at providing a permanent system of acceptable alternatives. In some few places, a single larger school may be offering parents a choice of different programs among its subschools or little schools. One may be on the formal side, another on the informal, still another the program as it has always been in the district.

Whether such a permanent system of alternatives is supportable professionally or practically will need to be argued. It would seem to supply an answer to those who tout the voucher system as a way to encourage the development of competitive alternatives to the present program. Yet a system of permanent alternatives might also seem to some to open up the prospect of separate channels or tracks for children of differing backgrounds. However, the chance to develop and test alternatives over a longer than usual period of time may need to be kept in the picture. We will return to this possibility in the closing pages of this report.

Mastery as a Major Goal

A collision has already been predicted between advocates of the new freedom and those who see the need for a new fundamentalism in the teaching of the basic skills. Unless the claims of the two approaches can somehow be reconciled, this conflict in outlook may absorb a good deal of our energies in the decade ahead.

Collision between informalism and formalism will be hard to handle anywhere, but the likelihood is that the bitterest run-in will occur in the inner city. As noted earlier, some of the most eloquent pleas for open curriculum have come from young teachers whose first experience was in the ghetto. They found their pupils more or less

untouched by prior schooling, except as incarceration in failure-centered schools may have affected the will to learn. Their proposals for change, understandably enough, often seem to involve adjustment to or acceptance of the deficiencies they discover.

Typically, in these accounts the teacher rejects the present instructional program as unsuitable because it has not taken with his group of children. Once he gets with it, the harried teacher discards the books he has been given and re-invents the experience approach to learning. Much is made of activities in original writing, relevant reading, and general remediation, mingled in about equal parts. By the time he gets everything set up, he leaves the scene for one good reason or another.

Well intentioned as these accounts have been, the new fundamental-

Exhibit 7. Goals for Varied Curriculum Experiences

Kinds of Experiences	Appropriate Goals
<i>Experiences good in themselves</i> Reading self-chosen books Playing games outdoors Listening to music Going for a walk in the woods Tasting unfamiliar fruits or vegetables	Enjoyment, deepening of satisfaction
<i>Occasions for exercise of personal powers</i> Dramatizing story read together Making animals from clay Conducting experiment with levers Investigating why rail travel has declined Writing haiku	Increase in ease and effectiveness
<i>Experiences in living and working together</i> Serving on Safety Patrol Planning an assembly Making a group mural Celebrating a birthday Taking part in a cleanup drive	More responsible behavior, increase in group productivity
<i>Study of basic skills</i> Combining subsets to make "ten" Using a ruler or other measure Focusing a microscope Breaking words into syllables Looking up words in a dictionary	Mastery

ists will see them as having missed the boat. As they see it, what is needed is a thorough curriculum cleanup that will start with the first school experience and demand mastery then and thereafter. Massive school failure has a gruesome kind of fascination. Yet surely the long-range answer is not adjustment, accommodation, or remediation for older children any more than it is intervention or compensation for the younger. The answer can only be teaching for mastery the first time around, with no fooling or folderol about it.

Any curriculum proposal for the children of oppressed minorities that does not promise more successful teaching of the basic skills is going to be suspect. This seems to be a fact. And it is quite likely that the revival of mastery as a goal will have to be reckoned with all along the line.

Probably what we are going to have to come to is clarification of the aspects of learning where mastery is appropriate. For basic skills, yes, eventually and hopefully. For some other kinds of valued learning or school experiences, however, satisfaction may be goal enough, or growth or increase in competence (see Exhibit 7, p. 66).

This clarification will be needed not only to ensure inner city children a rich as well as a successful school program but to rescue suburban pupils from the boredom of having to go to school where everything to be learned has been spelled out in simplistic behavioral terms.

A Really New Curriculum

If openness can be maintained, there may be a chance that pursuit of some of the present directions in curriculum development will mark out truly new dimensions. We know the new fundamentalists are already powerfully at work to reshape what we may hope will be seen as a part but not the whole of the program. Radical formalists look likely to come up with new content as well as new aims for teaching some children if not all. Yet more time and attention may especially be needed in understanding fully what is to be gained from freer approaches to teaching children. Here we are thinking of the open classroom in one or another of its versions, or of informal education.

At present, some zealots seem to think that escaping from things as they are is reason enough for the celebration of openness. Routines, restraints, and requirements are bad. Relief from them must be good. But is that enough? Activities, experiences, or other content does come to replace what has been let go. Is the new content identifiable as truly and significantly different one way or another from what has been

provided children under the old preplanned programs? We ought not to be afraid to ask simple questions like this.

What we may expect to find is that, whether adults will admit it or not, children's "free" selection of learning experiences does tend to be restricted by criteria of various kinds. We have noted that art experiences seem to play a larger part in free-as-free-can-be schools than in most others. Environmental exploration is also greater. Probably other fields are also favored under free choice. If we knew the kinds of experiences regarded as most rich and relevant under circumstances of freer choice making, we might be in a better position to enlarge the dimensions of the more conventional curriculum.

Have we had time yet to assess content differences between schools as we have known them and schools with new programs based on British progressivism? The control exercised over freedom in this model we have guessed to come in part from the education of teachers to carry curriculum sequences around in their heads. Yet do these sequences include areas and emphases outside the curriculum as we have known it? We must already be aware that British schools attend to movement education and creative dramatics in ways and for reasons we perhaps have yet to understand. The shape and scope of group studies in those schools may puzzle us. The amount, variety, and quality of original writing are beyond the experience of most of us. The almost compulsive attention that goes to measurement and the abstruseness of some of the calculations set for older children in this aspect of mathematics may arouse our wonder.

In short, we need time to learn what is possible under opener approaches to curriculum and instruction. The search for information will surely continue if we do not cut short the process of curriculum development by making decisions too early about what we like best.

Guidelines to Opening Up Curriculum

As discussed here, the proposals in open curriculum are both numerous and miscellaneous. In the most extreme position, which we have called free as free can be, we have included the proposal that schools as we have known them be abandoned and children returned to the community for some form of life education. Here also belongs the notion that while some choice may have to be made, experiences good in themselves can be counted on to add up in the life of the learner. A third less extreme position is that full child-teacher partnership planning will ensure quality and continuity.

A second classification of open curriculum proposals covers those that seek to combine freedom with control. Here we have looked at the model provided by the new British progressivism and the American maximization of options and alternatives within a fixed program.

In the third category, freedom for new kinds of formalism, we examined the new fundamentalism found in highly preplanned programs of individualized instruction as one example of how advantage may be taken under openness to urge a new structured program to replace the old. The radical formalism of curriculum proposals expected to emerge from oppressed minorities, among other sources, was identified as another development in which structure is accepted but new ends and content sought.

Against such a variety of proposals, any attempt to define guidelines for open curriculum development may seem unlikely to yield much help. Here, however, is what we would propose at this point.

1. *Planners of open education for children should be aware of the primacy of basic skills and the renewed demand for mastery.* Open classrooms and informal education may offer better ways to develop basic skills than our present program. Some parents will want to be sure, however.

Some parents may demand more than just better teaching. They may expect teaching for mastery to be a goal of any innovative program whose promoters seek their support.

2. *A balanced curriculum for children should encompass experiences for which there are other ends than mastery.* Skills-centered teaching is not enough. Programs need to provide activities enjoyable in themselves, opportunities that call out and challenge the personal powers of each learner, and experiences in productive group living.

Some of the paper programs of preplanned individualized instruction need our close attention to make sure that their claims do not usurp the child's entire day.

3. *New ends and new content should be seen as required by a truly new curriculum.* We need to guard against adopting or adapting half-understood new practices or pieces of a program imperfectly or hastily studied. This may be especially true of rushing into imitations of the British model. There is more to such an endeavor than rearranging the furniture and discarding the time schedule.

The development of truly new curriculum requires a tremendous investment of energy. The proposals of what we have called radical formalism will deserve our respect and study when or as they emerge.

4. *Alternative programs for children should be developed and tested as a part of the process of curriculum development. Alternatives, as we have discovered in recent years, can provide us with the data for comparison that may keep us from succumbing to the overpublicized or the faddish.*

The application of this guideline needs to be checked for abuse in developing separate schools within a school. Yet the idea of thorough testing of alternatives as well as the eventual possibility of defensible options for schooling seem highly attractive to us today.

5. *Planning with children to incorporate and honor their interests should characterize instruction under any curriculum approach. Regardless of how formal a curriculum may be, there should be room in it to check out the relevance of proposed learnings to children's past experiences and present state of being. We have to acknowledge also that structure tends to assert itself in even the openest situations. Thus, continuous reference to learners is needed to locate the boundaries within which they feel themselves to be operating and to release or open up the circumstances for optimum learning.*

The contention between curriculum models that may lie ahead ought to be welcomed as a part of the process of arriving at better decisions. Guidelines will be needed to help us find our way through. Any that we start with will need to be kept under critical study and revision as we go. Openness is bound to have its unknowns and its dead ends as well as its pleasant surprises. But as professionals perhaps we would have it no other way.

5

Will It All Add Up?

THE open concept applied to schools would seem to promise children a better deal all around—and society, too, in the long run. To the extent that greater openness works to remove or reduce present restrictions on learning, it would seem to be a good or gain that hardly has to be argued. Still, we may want to keep check on how well the movement is actually working out. Some elements or approaches are bound to prove more central than others. A few may be found to matter very little or perhaps even to stand in the way of genuine changes in the direction of better schooling for children. Also, in our assessment of what is happening, we may be able to alert ourselves to overlooked or underdeveloped aspects of openness to which we ought to attend. And all of us must continue to be concerned about locating the point or points at which openness and organization have to come together.

What we may wish to do here is first to review the gains we seem to have made thus far in applying the open concept to space, structure, and curriculum. Then we may find it useful to identify some areas where we may feel that further implications for effective schooling require consideration if the impulse toward openness is to maintain and strengthen itself.

Gains That Have Been Made

As we have defined it, openness is undeniably the most powerful single concept presently being applied to schools for children. We see its impact on school architecture, sense its presence in every aspect of changing school organization, and find it one way or another behind or within a great variety of new curriculum ventures.

Gains in Space

Open space seems already to have established itself as the first goal of new elementary school construction. The movement has proceeded through a series of stages from providing movable walls between adjacent classrooms through setting up suites of adjoining rooms to the design of entirely unstructured space. Most new open space schools are being built with the fewest possible internal constraints on organizing children for learning. The eggcrate school would seem about to become a thing of the past.

Moreover, many older schools are being provided with open space either through additions built in the new mode or by extensive alterations within existing buildings that facilitate ease of movement from one "room" to another and that rescue corridor and courtyard space for instructional use.

One very obvious gain in the application of the open concept to space has been our return to a kind of primitive appreciation of the value of space as space. When all is said and done, the criterion that really matters most in the provision of space for instruction is how much we have that we can make use of as our own and have as ours all the time. The use of nonschool spaces such as vacant stores and warehouses in various public school and independent or free school enterprises has helped to broaden our appreciation of space.

Further study of how best to design open space will continue. Better provision of areas and facilities for laboratory or workshop-type activities may be one need. Quiet places for interactive instruction would seem likely to be another. Some degree of space separation or psychological protection for the larger learning units or "little schools" into which open space occupants now tend to be organized may also need to be sought.

Yet the gains already made in open space design would seem to promise that refinements will not be hard to come by. More likely to be a challenge to the further development of open space, and indeed to its survival, is the matching of this achievement with equally bold innovations in structure and curriculum that will make full use of freed-up space.

Gains in Structure

The gains in open structure or organization are obviously less visible than those in open space. Yet open space if it prevails, or as it does, would seem to call for new ways of grouping or classifying chil-

dren, structuring or de-structuring time, and assigning staff to teaching units. A recent study of 25 open space schools in Ohio indicates that innovations in these aspects of organization are likely to accompany living in the new quarters. Of course, greater openness in the organization of schools for children is not confined to open space schools but seems to be on the increase everywhere.

Organizing children into larger instructional units has become accepted as a way of resolving many of the grouping problems that have plagued us in the past. Regardless of how we have tried to set up separate classroom groups, we have always come to realize that no set of criteria for classification has worked very well. Children are not all of a piece, so to speak, but possess many dimensions of concern to us. The shift to larger units, composed of several classroom-sized groups, has made it possible to deal with these dimensions by flexible internal grouping. Growth in our competence to individualize instruction has helped. Altogether, under the new approach of organizing schools into subschools or "little schools," grouping can be said to have become largely a dead issue. Nongradedness is easy to come by and continuous progress may be taken for granted. The gain in freedom is plain to see.

The use of time in larger instructional units as well as in regular classrooms is undergoing critical review. Flexible internal grouping in the larger units as well as increased time for individualized study clearly require much more openness in scheduling than before. Classes taught by a single teacher are also being freed of the rigidity of the fixed daily schedule. Here the model of the British Primary School, with its emphasis on time for independent work in a variety of interest areas, has inspired many teachers to reduce the time formerly spent on total group instruction. The day may be organized into large blocks of time, with children choosing among activities and the teacher working to help individual children or small groups as need arises. Reduction in the loss of time spent in waiting for what comes next or waiting for help is a gain to be valued.

The movement toward new staffing patterns also promises more openness. The earlier practices of team teaching have been built on, but the tendency now is to staff the larger instructional unit as a whole. Teachers decide among themselves the way they wish to group internally or how their competencies and the children's changing needs may best be matched. Adjunct personnel are seen as part of the staff and are likely to work within the unit rather than to draw off children for separate attention. Differentiated assignments are made, of course, but perhaps less in terms of specialized teacher preparation than in terms of the nature of a given instructional need and demonstrated competence to

meet it. Lay aides and student assistants may thus become much more a part of the mix. The gain comes through maximizing the talents of all available adults.

Of course, open structure or organization creates as well as resolves problems. There remains a need to try for new ways to assure each child of an intimate and continuing relationship with a teacher who can be counted on. Attention needs to be given to providing teams or sub-staffs with time for study and planning as well as teaching. Team functioning in general can no doubt be improved, perhaps in part by new kinds of support from nonteaching personnel.

The improvement most to be sought may very well be related to staff competencies required for the development of genuinely innovative instructional programs. Here, again, use of the concept of openness seems to be pointing the way to certain gains.

Gains in Curriculum

Free schools and alternative programs within largely conventional schools seem already to have made considerable progress in testing out the extent to which the removal of preset expectations and prescribed curriculum may inspire the development of more meaningful experiences for children. Such explorations include the incorporation of schooling into new life patterns, emphasis on quality experiences in living felt to be good in themselves, and more prototypically perhaps a return to the kind of teacher-children partnership in planning believed to have been characteristic of progressive education in the years before World War II. The gain has come in the renewal of our trust in the learning that can come through vital experiences that honor and extend the concerns of children.

The new emphasis on openness in curriculum is also represented by approaches that seek to combine freedom with control. The pattern of the British Primary School, with an integrated day that frees children to work individually or in small groups on self-selected tasks or group-developed projects, is being widely and profitably studied. The provision, in an increasing number of schools, of options for study within established sequences or for individual exploration in "questing" time freed for personalized learning is another effort to provide choice within a framework designed to ensure room to move around in.

Curriculum openness is being tested by those who want freedom from the program as it has been to try out new kinds of programs that may be as formal as the old but are aiming at new ends. Freedom from too much structure is not the issue here. Rather, it is whether openness

will admit a restructured formal curriculum. The very powerful movement toward individualized instruction has revived mastery as a goal, with support from a great variety of sources. This new fundamentalism seems likely to be a major challenger of the freedomists heretofore described. A movement just getting under way is what may be called the radical formalists. From several vantage points, they seem to be seeking to create, through new content and experiences, a new kind of person. Freedom to try out formal replacements of the present curriculum has already been gained by the new fundamentalists and will be sought by the radical formalists.

These, then, are some of the gains that have been made by the application of the open concept to space, structure, and curriculum in schools for children. On the face of it, the excitement such changes have aroused may seem enough in itself to justify the expenditure of effort and imagination that has already gone into their development. Yet we may wish to pursue further the kinds of continuing concerns that openness gives rise to or that we may feel have to be dealt with by all schools for children, whether old or new.

Areas of Continuing Concern

Schools for children do seem to have moved very rapidly toward a new degree of openness in space, structure or organization, and curriculum. Despite the gains thus far, we may find it profitable to examine more fully certain aspects of the new openness.

Reconceptualization of Space Needs

Emanicipation from the eggcrate design of separate classrooms opens the way to rethinking our space needs. Completely open space, as we have noted, does not in itself supply an adequate answer. Open space enables us to make a fresh start, to take a new look at the kinds of instructional areas and facilities we would like to have. What we must do now is learn to live comfortably and productively in the new patterns of pupil and teacher or child and adult association made possible by opener space. As we do, our long-term space needs will no doubt come clear. We really have not had time yet to find out what these may be.

The energies of some of us are fully absorbed at the moment by the excitement of coping with newly occupied open space quarters. Designed with as much intelligence as we presently possess, the new

facilities no doubt meet most of the guidelines proposed in Chapter 2, being laid out to house learning communities or instructional units of manageable size, provide for the full range of valued learning experiences, secure the personal or psychological well-being of both children and teachers, and ensure that materials and equipment are readily accessible. Too, it is hoped that the quarters have been designed principally to meet new instructional goals rather than to cut building costs.

Others of us may be in the midst of advising on the design of the next wave of open schools in our community. If so, no doubt we are alert to the most urgent of the space needs of which we are now aware as identified earlier in this chapter—the need to provide activity areas for laboratory and workshop pursuits and quiet places for interaction, as well as to maintain a continued concern for psychological comfort.

We may lack time, then, for thinking ahead about what our space needs may be when everything gets shaken down. And we know our experience has been limited. Perhaps the best that we can do is to remain aware that teaching many children in an open arena need not be the ultimate answer. Some internal space differentiation may be desirable to support new ways of living together. We need to give ourselves a chance to find out.

Meanwhile, our chief peril could arise out of overadjustment to the attributes of totally open space. However, let us look at this possibility further as we consider the next couple of concerns that center on changes in instruction related to open space and open structure.

Place of Self-Directed Learning

Concern for the place of self-direction in learning is not confined, of course, to those schools committed to open space and structure. This movement has affected many schools still operating along otherwise conventional lines, with separate and largely self-contained classrooms. However, emphasis on more room for self-directed learning is found in most schools experimenting with open space and larger instructional units. New ideas about how to reduce our reliance on group instruction have been welcomed by everybody.

At the same time, we must maintain a concern about the way in which the emphasis on self-directed learning is yet to develop. For one thing, there is more than one kind of self-direction. Personalized learning, as this term is being used in a good many situations today, is close to the notion of time off from the regular program for pursuit of interests beyond the common curriculum. Independent study, as

represented in particular by the British Primary School model, is generally perceived as a substitute for group instruction. The goals for learners remain common, but alternative avenues to the goals are made available. Also, in the British model there is much dependence on inquiry and discovery as methods of learning. Individualized instruction, as we most often use the term, is also regarded as a substitute for group instruction. However, as compared with the British model of independent study, a common path of carefully sequenced lessons or mini-units is laid out through which all must eventually go, even though learners are free to proceed at their own rate toward the established final goals.

What we may need most to try to do is to resist the tendency of advocates of one or another of these approaches to self-directed learning to put down or replace the others. Each may have something of its own to offer, without which we would be the poorer (see Exhibit 8, p. 78). We can anticipate that the major battle, if it comes, will be between advocates of the creativity-oriented freedom believed to characterize independent study (British model) and the mastery-directed fundamentalism of diagnostic and prescriptive individualized teaching (American style).

Also of importance will be the determination of the point at which self-directed learning needs to give way to group experience. Before turning directly to this concern, we may note that the movement toward self-direction may have been accelerated unwittingly and unwisely in some open space schools simply as a result of the impact of unfamiliar visual and auditory factors. Certainly this kind of overaccommodation needs to be guarded against.

Place of Group Experience

Despite our commitment to the idea of making more room for self-directed learning in the school program, most of us are also aware of the many values of group experience. Some kind of balance needs to be sought, we will agree, between learning on one's own and learning in a group setting. As we relinquish group instruction in favor of self-directed learning where we can, what is left to or for the group? Or we may prefer to put the question this way: What are other persons good for in learning?

If we are students of Piaget, we will find him helpful in alerting us to the need to provide a social setting for even the most independent kind of learning. Checking with others on what he thinks he is finding out is the way each learner builds a reality-oriented world. The social process affirms, corrects, and extends perceptions of all kinds. It is

Exhibit 8. The Learner on His Own: Three Kinds of
Self-Directed Learning

Kinds	Characteristics	Values
1. Personalized learning	<p>Questing: informal exploration of new possibilities, follow-up of interesting ideas</p> <p>Development of hobbies or leisure-time activities</p> <p>Study of noncurricular but related areas</p> <p>In-depth study of topic or field not of common concern</p> <p>Advanced study in conventional curriculum area</p>	<p>Maximizes interest as factor in learning</p> <p>Allows for enrichment of common program</p> <p>Supports development of talent</p> <p>Alerts adults to possible need to change curriculum</p>
2. Independent study	<p>Choice of topic or problem within curriculum area</p> <p>Active learning in laboratory or workshop setting</p> <p>Emphasis on inquiry and discovery</p> <p>High priority on creative work and original approaches</p> <p>Use of varied materials, including community resources</p> <p>Common learnings arrived at more or less independently</p>	<p>Develops skills of finding out</p> <p>Recognizes need of learner to make learnings his own</p> <p>Honors interest by choice among alternatives</p> <p>Promotes creativity</p>
3. Individualized instruction	<p>Diagnosis and continuous assessment to ensure proper placement</p> <p>Progress through common program at own rate</p> <p>Carefully sequenced lessons</p> <p>Use of feedback and other reinforcement devices</p> <p>Eventual completion of common learnings by all learners</p>	<p>Meets differences in where learners are and how fast they can go</p> <p>Elicits and makes use of high level study materials</p> <p>Ensures curriculum coverage</p> <p>Holds to mastery as a goal</p>

fundamental to cognitive development. And in the moral and ethical realm, interaction with others is of course the very stuff of learning. As Piaget sees it, in all kinds of learning people are not merely important, they are essential.

Out of our own experience, we will want to rethink ways of relating self-directed learning and group activity. In unit study, for example, group planning may need to be curbed where it threatens to oversimplify or reduce alternatives for independent study. Some of the material we have covered in the past through group assignment and discussion might better be replaced by materials designed for self-study. More time may need to go then to individualized instruction and perhaps to independent study, with group time reserved for the kind of activity in which interaction is really vital—in sharpening problems, for example, or questioning answers or weighing differences in points of view or proposals for action.

As we reflect on it, we know we will find many different kinds of worthwhile group experiences that deserve and indeed demand to be retained in our school program. Children will continue to respond to audience experiences, such as being read to, listening to music and seeing films, and enjoying drama. They will continue to delight in joining in the many activities that require others—dancing, playing games, engaging in team sports, putting on plays, and the like. And, of course, they will continue to seek out informal companionship in free time and in work time, toward building the community in which we all learn to be human.

Certainly we will not allow group experiences to disappear from our schools. Yet we may need to take thought to maintain our perspective. Some schools trying to come to terms with open space and structure have not yet taken the time needed to cope with the question of when and where learners will get together and in what combinations. Hopefully, if we can assume professional competence, perhaps the question will take care of itself through inventive organization within the new-sized learning communities or instructional units.

Nature of Teacher Competencies

At present, teachers are learning how to operate in open concept schools more or less as they go. They learn to deal with open space by living in it and to function as a member of a unit staff responsible for 125 children by surviving in the situation. They learn how to free up the curriculum by moving around within the program as it has been, relaxing their demands and waiting to see what happens, discarding the

old and trying something new, or perhaps starting deliberately to rebuild the whole program one piece at a time--but all of it on the move or as they go.

The excitement of such learning by necessity may have a good deal to be said for it, as we will indicate a little later when we discuss curriculum creativity. However, some elements or factors of open concept schools are already on the way to becoming established. The next generation of teachers will not be pioneers. Therefore, the question is: Do teachers in such schools really need competencies not previously required by teachers of children? Finding sensible answers to this question must surely continue to concern us.

Fortunately, we have several sources from which we can draw information and ideas that may help us decide whether the education of elementary school teachers needs to be reshaped and, if it does, in which dimensions or directions. One source is the in-service education of teachers in open concept schools. For example, the problem of learning to give and take in open quarters and in unit teams or staffs is being approached variously by experiences or short courses in group dynamics or one form or another of sensitivity training, and by guided efforts at cooperative analysis of specific teaching successes and failures.

Also, new instructional insight is hopefully being developed as teachers study together to learn how to write behavioral objectives and prepare individualized mini-units or how to organize equipment, materials, and time to provide more opportunity for children to engage in independent study.

Another source is the experience of well established open-type schools that may have had considerable success in securing teachers who fit their needs. Where do they find their staff? What do they hope for in preparation, and how much are they willing for newcomers to learn on the job? What would they suggest ought to be added to bring teacher education programs up to date? Observation of the teaching in these established schools by analysts from outside should also yield data of value. For example, what does differentiated staffing actually look like in action? We need to know.

And of course, we will want to look closely at innovative teacher education programs. What new competencies are being sought? How do the programs differ? What kind of child does a new program have in mind? What kind of world? How independent a teacher?

Quite possibly, teacher independence is the critical issue in the definition of new competencies. At the elementary level, the curse of teacher education has been the search for the right way to do everything, a curse also borne at that level by supervision and perhaps by

curriculum development. Yet the movement toward greater openness, if it is to mean anything, must mean freedom for teachers to make on their own the decisions that matter most. What teachers need to learn that will help them make defensible decisions may be different in kind from what was needed to follow manuals and guides. A look at the whole business of accountability may help us appreciate the larger perspective in teacher education to which we may have to hold in the years ahead.

Question of Accountability

When a group of children is assigned to one teacher and housed in a classroom all its own, the question of who is responsible for the children scarcely arises. In an open space school, however, where a multiple-member staff is supposed to be looking after many children, the question comes alive. Does someone have an eye on every child? By its very nature, openness can make all of us, school personnel as well as parents and other concerned lay persons, a little nervous.

This level of anxiety may seem almost physical. Are we going to be able to keep track of children so that they will not wander off or waste time or get into mischief? But of course our concern goes deeper than this. Every child deserves to have his needs understood, his wants anticipated, his interests elicited. Successful teaching, we are convinced, demands continuous intimate assessment as a base for planning next steps with and for each learner and for the group or groups to which he belongs. Some adult has to be there, not just on call but in command.

We have already noted that assurance of this kind of intimacy between every child and at least one adult must continue to concern us in the operation of the new larger instructional units of open space schools. Ingenuity may lead to devising new kinds of home base groups, perhaps smaller in size than the old class groups of 25 or 30. Also, the devotion of more time to self-directed study of one variety or another may actually increase the opportunity for child-adult interaction, just as multiple-member staffs may make it possible for some and perhaps most children to have close relationships with more than one adult. We believe we will find ways to maintain teacher accountability for individual children.

Yet there is also the question of accountability in the larger sense. Can we hope that education as a whole will amount to more under this new way of going about it than it did under the old? Will all of the changes brought about by openness really add up? This would seem to be the ultimate question. But a question of such size, if we are to

try to deal with it intelligently, has to be spelled out much more explicitly. Add up—to what? For whom? Under what circumstances? For how long? At what cost? And so on.

Refinements in the call to accountability could be many, even though we may seem a little slow at coming to them in our general enthusiasm for the many different aspects of and approaches to greater openness in the education of children. As a case in point, we can consider briefly the whole issue of raising the level of achievement in the basic skills. No other demand has had a more varied and, one would assume, more vigilant public behind it. Leaders from the minorities, federal government, many state governments, the education industry, instructional technology, many school systems, and some colleges have combined to revive mastery as a goal in basic education and to reestablish fundamentalism as one position within curriculum openness.

These leaders have been strangely passive in the face of several rapidly growing movements in the education of children which seem to reject the mastery goal out of hand, most often as ungermane to their interests and less frequently or openly as unrealistic. The free-as-free-can-be schools are plainly not achievement-oriented, putting their emphasis on the other kinds of school experiences (see Exhibit 7, p. 66) rather than on learning the fundamentals. Most programs of individualized instruction, achievement-oriented as they certainly are, expect and accept a great range of achievement levels within any given age group. The new push for independent study under the British model would seem to place emphasis on higher order learnings rather than primarily on basic skills. Being concerned about reading test scores may seem rather unexciting when we are dealing with how to make more room in children's lives for critical thinking and creative activity.

If the call to account were being pursued vigorously by the advocates of mastery, such programs might well be under serious challenge as curriculum cop-outs of one kind or another. Their proponents could be charged with ignoring or even trying to obscure the issue of helping the children of the poor and oppressed get a better start in school. However, this kind of quarrel has yet to develop, although eventually it could and perhaps should. At the moment, what we seem to be experiencing is a remarkably uncritical and even solicitous acceptance of any and all programs that lay claim to coming under the umbrella of openness as we have defined it. We seem to be open to openness.

Perhaps our hospitality and suspension of judgment are part of the greater movement against the mass culture and loss of identity that we have cited as helping to give rise to the open concept in the first place. Indeed, we seem to be moving into a new era in which the ancient

plague of childhood education, the drive to find the right way to do everything and thus the one and only way, may be replaced by a respect for variety. Let us examine this possibility in our closing pages.

Alternatives as a Way of Life

Could the development and maintenance of a variety of alternative school programs really become a way of life for us? As Americans, we know we have a more or less bred-in-the-bone commitment to change. We welcome change and even seek it out. Usually, however, we have valued change because we have seen it as the avenue to improvement. The old order passeth, giving way to the new—and better.

Somehow it seems unlikely that as members of a dynamic society we could ever give over our faith in progress. Today it is true that we are increasingly concerned about the long-term impact of change. Nonetheless, as heirs of Western civilization we must remain of a mind to try to resolve our common problems through experimentation and reasoned change.

Perhaps, then, the question we need to ask ourselves is whether the maintenance of options and alternatives in the schooling of children can be reconciled with this tradition. Might we see whether we can formulate a series of possibly tenable positions on the function of alternatives in relationship to school improvement?

1. *We may come to support the provision and maintenance of alternatives to meet validly different needs and ends.* How far we would be able to go with this position we may well wonder. Some alternatives no doubt would be more easily accepted than others. An ethnically-oriented program for reservation-bound Navajos makes reasonably good sense and perhaps a Spanish-language primary program in a country school along the Rio Grande and possibly a skills-centered program somewhere in a hard-core ghetto. Yet we would wonder who meanwhile might be profiting from programs that put their emphasis on exploration and enrichment and on informal and self-directed study. Still, even there we would be wanting to bring to bear our customary insistence on balance among the various kinds of learning, toward assurance that there would be a productive as well as a happy and humane school experience.

Certainly if we are to support the provision of alternatives as a way of life, we will have to think through the many aspects of the position with all the pros and cons (see Exhibit 9, p. 84). What we

Exhibit 9. Rationale for Provision of Alternative School Programs

Aspects	Yes	No
<i>Way of trying out and comparing new programs with old: then selecting preferred program for all schools</i>	New programs given more time to prove themselves if offered as alternatives and thus selection of best program more likely	Professionals should be able to make decisions on basis of principle and prior proof from tryouts elsewhere or under limited local testing
<i>Volunteer base for developing new programs: work only with interested teachers or schools</i>	Ideas can come from many sources, honoring initiative and creativity of individual teachers or school faculties	Main or regular program could become out of date, with possibility that "experimental" programs could themselves become fixed and unyielding to change
<i>Maintenance of openness to flow of new ventures: no fixed commitment to continue present array of alternatives</i>	Innovations will come and go, and thus the school may avoid being saddled with programs that prove to be of limited interest or value	Schools could become showplaces for faddish or ill-founded programs and lose coherence and continuity in the curriculum
<i>Way of meeting community demand for change: always open to new proposals of program change or inclusion of new emphases</i>	New ideas can be tested out without having to undergo debilitating procedures of official evaluation and installation	Local control could lead to programs difficult or impossible to defend on professional grounds
<i>Provision of parental choice among programs: availability of several programs would honor parental option</i>	Parents can test innovative programs without having to hold to choices forever; those who wish may opt for regular program	Parents often lack understanding of what is really needed by their children and should not be expected to make such decisions
<i>Avoidance of need to sell new program: maintain old along with the new</i>	Programs have chance to prove themselves (or be found wanting) without all parents and teachers being involved and possibly upset	Professionals should accept responsibility for making curriculum decisions and interpreting any changes in the program
<i>Support for broken-front approach to program development: trust to innovations to prove worth or leave residue of some value</i>	Many new ideas can be tried out and possibly adopted or adapted by regular program without having to decide beforehand what is going to be useful	School system would never be sure that its program was really getting better; risk of institutionalized disorder as a way of life

would be moving into is a genuinely new world with many implications for changes in supervision, curriculum development, and teacher education.

2. *We may come to value the existence of alternatives as broadening the base for producing new knowledge.* We may seem ready enough to consider such a possibility because of our extensive and disappointing experience during the middle and late sixties with testing out short-term alternative programs. Heavy federal subsidy, while it could not produce results to order, perhaps served us well by bringing so many of us into the enterprise of seeking to improve our schools through experimentation. As we look back, we may concede that the hope of finding "proof" so quickly was as much an evidence of professional inexperience as of political innocence and urgency.

New knowledge is hard to come by, we must now agree. Therefore, we may well grow to accept the continued existence of alternative programs for children as the only way we can ever hope to be able to come up with better answers to common problems.

3. *We may learn to trust that an increase in long-term experimentation will enrich the fund of common agreements.* The body of professional wisdom is probably affected less by singular or dramatic additions than by the upgrading of the shared experience over time. Assuming that members of a profession are free to make use of new knowledge on their own terms and obligated to contribute to it as well as they can, then growth in competence ought to be assured by the paired processes of exchange and challenge. The existence of many different programs should increase the flow of information; the new respect for teacher independence found in the various approaches to openness perhaps could serve to offset the institutionalism that has so often seemed to urge us toward uniformity.

If we can come to terms with the ferment and furor of experimentation as a way of life, we ought to experience a broader advance as well as a richer mix in the fund of common agreements about how and what to teach children than we have known in the past.

Perhaps we can edge ourselves into the new era of alternatives, if it is to prevail, by professing a willingness to continue to examine the claims and contentions of the various approaches to openness as long as the proponents are willing to respond to critical questioning. Challenge has to be maintained even in the midst of diversity. The first to profit from a more rigorous professional criticism will be the innovators themselves as they become sensitive to what matters to us. But every-

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body, of course, will profit if we can build a broader base for the better schooling of all our children.

We must recognize that the open concept movement offers us a challenge at every level of our present operation. What a pity it would be if we were to make any uneasiness we may now feel an excuse for curtailing our welcome or closing down on our own openness! We still have so much to learn.

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