

Educational buildings and equipment

building community schools

an analysis
of experiences

Margrit I. Kennedy

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Published in 1979 by the United Nations
Educational, Scientific and Cultural Organization
7 Place de Fontenoy
75700 Paris
Printed by Imprimeries Réunies de Chambéry

ISBN 92-3-101583-4
French edition: 92-3-201583-8
Spanish edition: 92-3-301583-1

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Printed in France

Preface

The need to develop closer links between education and the community has been a growing concern in Unesco's educational programme over the past decade. Starting with a meeting held in Hamburg (which led to the publication of *Community Schools in Developing Countries*) this idea was later given substantial impetus by the International Commission on the Development of Education, which stated in its report:

The opening of the school on to the world works both ways. The former tends to see itself as a multi-purpose cultural centre. The school library serves as public library; the assembly hall is the local theatre; the science laboratories, workshops, sports facilities, audiovisual studios and documentation centres are made available to the community at least after school hours and during the holidays. An attempt is thus being made to give the school roots in the surrounding social context, to draw it out of isolation and fit it into the community, not only in rural districts but in the towns and urban centres too (although it is difficult to set up good schools in bad cities). In the same way, at family level an attempt is being made to integrate parents directly into the school structure, to associate them with the design of education, especially in 'community schools' or 'schools for parents'. Similarly, efforts are being made to bring the school closer to the working world, despite the fact that these are often superficial attempts to overcome the rigid dividing-line between intellectual and manual work.

At its eighteenth and nineteenth sessions, the General Conference subsequently adopted resolutions authorizing the Director-General to carry out 'studies aiming to improve the design and planning of educational facilities in the context of lifelong education making the best possible use of national resources' and to disseminate 'information about new educational policies for the renewal and reform of educational systems adapted to specific national needs on the basis of particular social, economic and cultural situations and aimed at promoting democratization of the systems within the framework of lifelong education'.

This publication, presented by Unesco in partial response to these resolutions, focuses on the architectural consequences of these new educational ideas. It is the result of a research project carried out by the Organization on the subject of 'Community Schools'. As a part of this project, five universities were asked by Unesco to prepare case studies in their respective countries. A previous document, 'Buildings for Educational and Community Use: Five Case Studies', has been issued by Unesco in its series 'Educational Studies and Documents'. This book is the product of a further study which analyses how community education programmes have been functioning in some forty countries around the world. This analysis clarifies the trends that are emerging in countries at various stages of economic and social development. Although this publication covers most major developments, significant experiences in some countries may have been inadvertently omitted. It does not mark the close of the chapter of Unesco's activities in the planning and design of community schools; rather, it is hoped that it will open up new opportunities.

The materials presented in this book are intended to demonstrate to Member States—and even more so to individual communities everywhere—that education and the community can be brought closer together. At the same time, it demonstrates clearly that there are no models of institutions in this field—rather, each community, working hand in hand with its national authorities, has to forge its own solutions to meet its own needs. It is directed primarily at those who take decisions—users and local government administrators—and at those who implement them—teachers, educators and architects.

Unesco's consultant for this work was Ms Margrit Kennedy, an architect and urban planner who has designed community schools in Africa, North America and Europe, exploring innovative methods for encouraging the various users to participate in the planning of their buildings. The book is based on the materials she has collected, her observations and her experience;

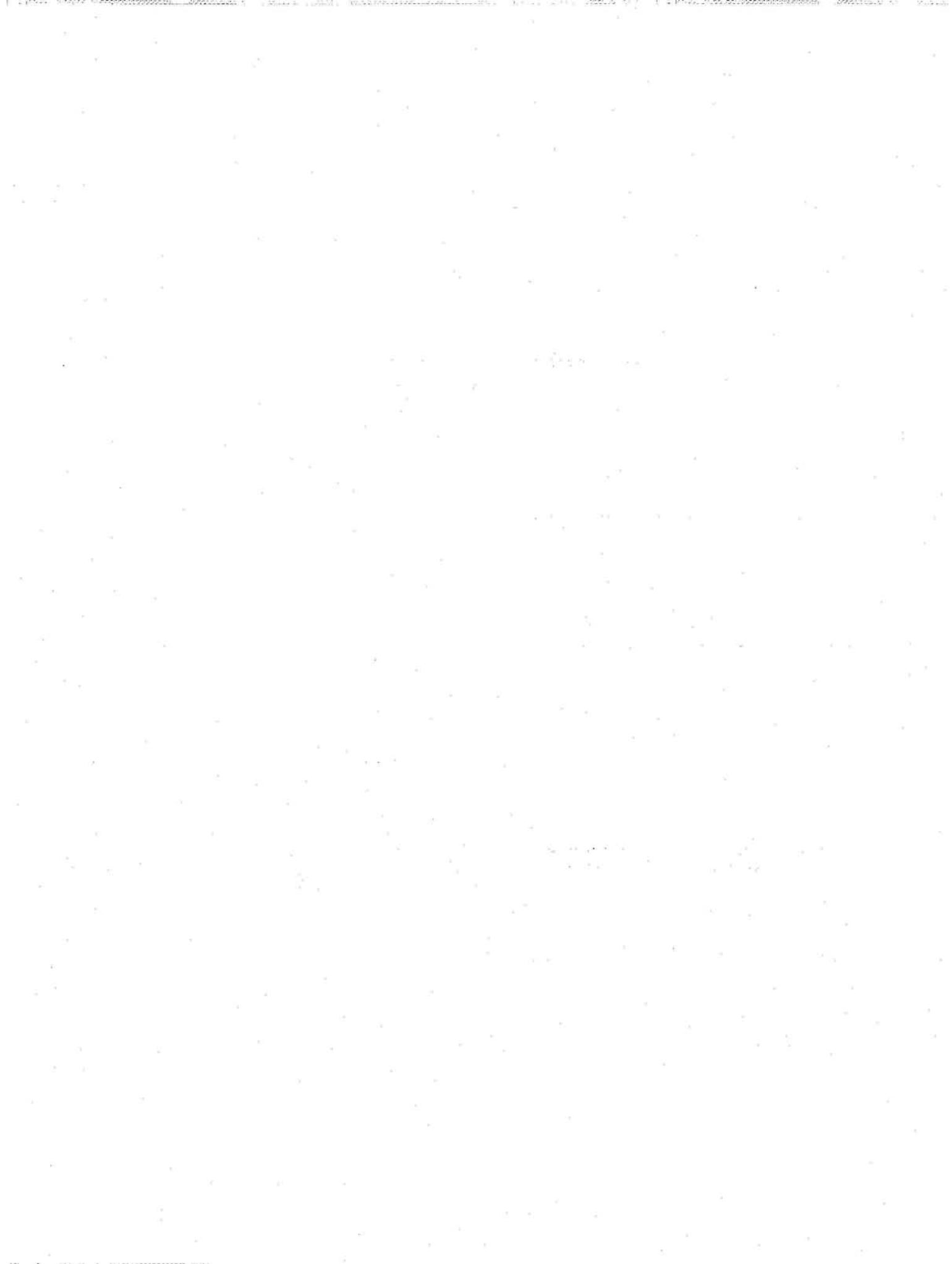
therefore, the opinions expressed herein are not necessarily a reflection of Unesco's policies and opinions in this field.

The designations employed and the presentation of the material in this publication do not imply the

expression of any opinion whatsoever on the part of the Unesco Secretariat concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation or its frontiers or boundaries.

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Introduction

Liberating the energies of the people, unleashing their creative power, heads the list of future prospects for the development of education in the world of tomorrow.—Edgar Faure et al. *Learning to Be. The World of Education Today and Tomorrow*, p. 133, Paris, Unesco, 1972.

The past fifteen years have witnessed a host of notable departures from the traditional patterns of providing education.

Education has ceased to be a matter for one age group, for a limited time and in a specific location. It has changed its structure and content to become more flexible in view of individual needs and more effective as a system.

Schools have extended their programmes to include new user groups who in turn have influenced internal activities and programmes. Schools have made use of community resources and engaged in co-operative ventures with other partners to improve their own services.

All this had its direct implications for school buildings, which often ceased to be 'schools' in the accepted physical sense of the word and became centres of community activity and development. In some cases, they grew and were physically integrated with other uses, and conversely were absorbed completely into community facilities.

The purpose of this study is to investigate the role the process of building schools assumes in the development of closer ties between educational institutions and their local environment. 'Community schools' in this context refers to those types of educational facilities which in one way or another depart from the traditional pattern of serving a particular age group for a limited part of the day, the week and the year and for one specific purpose, i.e. 'education'.

When this study mentions buildings or facilities in general, it does not mean simply design and construction but programming procedures, planning processes and the use of the building. It means maximizing resources and participation procedures to assure good functioning as well as growth, change and adaptation, simplifying construction and providing flexibility.

Linking 'facilities' in this sense to 'community' necessitates a look at supportive policies, administrative structures and the essential questions of personnel,

which are closely interrelated and often determine the shape and success of the facilities.

The central underlying assumption is that the school's co-ordination with other social services will create a dynamic effect which surpasses the unco-ordinated additive approach. The critical questions are: (a) Is this assumption correct? (b) If so, how do closer links between school and community come about? (c) How are they maintained? (d) How can they be multiplied?

One factor which obscures almost any discussion of the subject is that closer links between school and community are usually not a controversial issue. Everybody, including politicians, educators and parents, seems sympathetic to the principle, but 'practical' circumstances often seem antipathetic to its attainment. In general, therefore, there is more on paper than on the ground. And on paper there is usually more advocacy than practical evaluation.

Nevertheless, the strong current of school community literature which has evolved on a world-wide basis during the last decade, taken together, provides a good reflection of the ideas which have shaped policy and implementation.

In addition to a large number of case studies, most other investigations have been restricted either to an analysis of one country, a limited geographical area, or similar developmental situations. This study is an attempt to bring together information from many regions of the world and to compare the experiences related to various stages of development within one analytical framework. This not only corresponds to the universality of the move towards closer school/community relationships but may also contribute to an understanding of the fundamental differences and similarities in this area of planning.

This world-wide approach reveals not only that parallel problems arise and general lessons can be learned from existing experiences, but also that the subject lends itself to a stance of mutual learning. Developing countries may avoid some of the problems

that large and less effective models of school/community integration posed during the 1960s and early 1970s in most industrialized countries. And industrialized countries may well profit from a closer look at school/community/production links and self-help projects in developing countries.

The first step was to organize the overwhelming amount of material dealing with the subject from different angles. This was done by ordering the information according to the reoccurring problem areas. They turned out to be: (a) justifying innovative projects and the undifferentiated mix of underlying assumptions (Chapter 1); (b) linking local needs and resources in a participatory decision-making process based on specific cultural patterns and traditions for the provision of education (Chapter 2); (c) establishing criteria and finding ways for activating new contents, programmes and services (Chapter 3); (d) optimizing spatial demands according to new needs (Chapter 4); and (e) creating a flexible structure for financing,

personnel, communication and administration (Chapter 5).

Except for the first, all other problem areas in fact represent a certain number of key elements which are commonly needed in all organizational structures. Figure 1 shows the six main elements and their less tangible but equally important links; the diagram clarifies several requirements which seem self-evident but which in practice prove difficult to achieve: First, facilities (i.e. buildings, equipment and sites) need to be conceived and utilized in concert with other provisions such as staff programmes, financing, etc.

Second, to optimize the results of a co-ordinated education and community programme not only do all six of the elements need to be interrelated, but each element must harmonize with the other five elements.

Third, each of the elements needs to find its own unique form in each community.

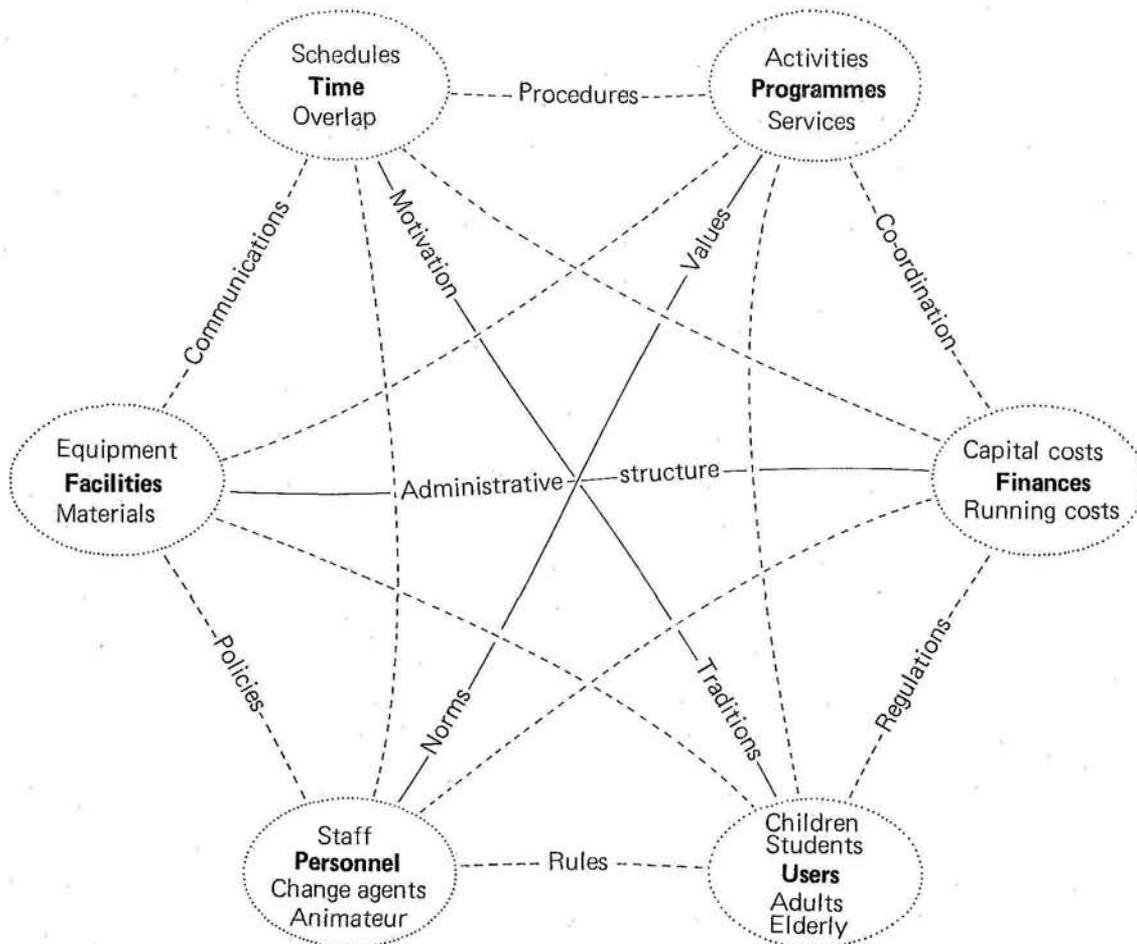


FIG. 1. Key elements for community school centres or educational and social services networks.

To a greater or lesser extent, each element exists in any locality which has education and community programmes. However, the critical elements needed to make integration work may be different from one place to another.

Among the large number of case studies and other material on which this analysis is based, practically every possible setting for closer links between school and community can be found, from the more stable, homogeneous and traditional rural communities which exist at one end of the scale to heterogeneous and continually changing urban communities at the other end.

The two major groups are, however, quite clearly urban areas in industrialized countries and rural areas in developing countries. Though these are radically different in their developmental goals and problems, there is something to be gained from comparing the two groups and drawing general conclusions.

Each chapter, therefore, contains four parts: (a) introduction to the specific problems or concepts

central to the chapter; (b) discussion and analysis of the situation in industrialized countries; (c) discussion and analysis of the situation in developing countries;¹ (d) comparison of (b) and (c) with conclusions, where possible applicable to both groups.

Obviously, this study cannot claim to be complete. It must be seen as yet another attempt to bring meaning to a wealth of detail and to extract what seems of general relevance to further plans and policies. If it helps those interested in the subject to ask the right questions to clarify their own position and prepare a more informed choice, then the main objectives of the study will have been achieved.

1. Logically we should say 'industrially advanced' and 'industrially developing' countries; however, in order to avoid confusion and to make the report less cumbersome to read we have chosen to employ the terms 'industrialized' and 'developing' countries; the latter adjective strictly applies to the economic situation and in no way refers to cultural or social patterns, for example.



The school/community issue

Defining the area of investigation

Up to now, no commonly accepted term has existed which covers the various attempts to relate both community and school more closely to each other.

Community education centres provide integrated services, and a link between education and production, in the United Republic of Tanzania's new *ujamaa* (family) villages, in the Núcleo Educativo Comunal in some rural areas of Peru, and in the *barrio* (village) high schools in the Philippines.

To call these new schools community schools or human resource centres might be appropriate in the United States, but not in the United Kingdom, where dual provision schemes indicate more precisely the link between education and recreation and multi-provision schemes include further partners. New *Schulzentren* (school centres) in the Federal Republic of Germany are often planned with extensive community facilities similar to Swedish neighbourhood schools. Schools without walls, which first started in Philadelphia, can today be found in various countries such as Australia, where learning exchanges, neighbourhood centres, 'Schools of the air' and community colleges provide some of the specific local answers to community needs.

The emphasis in developing countries is more often on the link between school and work as a means of community development and therefore *escuelas de producción* (production schools) in Cuba and Panama, *escuelas pilotos rurales* (rural pilot schools) in Honduras or *concentraciones de desarrollo rural* (rural development centres) in Colombia indicate the trends and contexts of these closer ties between school and community.

Some concepts centre around the idea of planning and operating schools co-operatively for the integrated provision of social services. Others see the school as a nodal point in the network of communal resources. The multi-use of facilities is being advocated as a means of avoiding wasteful duplication; while 'more

relevance in education' is the hope of those who try to tie education more closely to community resources beyond the walls of the school, or to the production sector. In order to reduce the high costs of education in developing countries, the principle of 'earn while you learn' has been used to link school and work.

While co-ordinated projects in industrialized countries may be rated a success if they improve, for example, the recreational opportunities in a community, co-ordination in developing countries will not be durable if it does not provide improved economic opportunities for the community and for each individual.

In order to limit the area of investigation and at the same time study all the aspects of planning and building, the following three categories of co-ordinated facilities have been included in this study.

First, schools which have enlarged their services to include new uses and user groups (e.g. adult education programmes, public library or theatre, child care centre, club for the elderly, health services, production facilities, and so on). In this case, the school sometimes grows in size and dramatically changes in aspect. It may in fact become the new district, town or village centre.

Second, schools which use community resources (human, natural or man-made) on a systematic basis (and thereby can often reduce their size): (a) human resources include parents, grand-parents, and professionals or specialists who can be effectively integrated in teaching and organizational tasks within the school or outside; (b) natural resources include farmland, parks and wilderness areas (out-door classrooms). In industrialized countries, they are most often used for biology, geography and environmental education, excursions and recreation programmes; in developing countries, they often serve production purposes; (c) man-made resources refer to private and public facilities and institutions, such as museums, theatres, post offices, business establishments, administrative

offices, higher educational institutions and workshops, laboratories, studios, etc., which substitute for the classroom.

Third, schools which come into both of the above categories and thereby possibly achieve a balance in terms of spatial needs: their planning requirements in respect of location, access, programmes and functional relationships, however, may differ greatly from traditional schools. Other definitions of the term 'community school' have been given by S. G. Weeks [1],¹ who describes them more generally as an 'organized system of education and an approach to community development', and by Educational Facilities Laboratories, which defines the community school as 'a place planned and operated co-operatively by schools and other agencies for the delivery of social services, including education, to the entire community' [2].

In what follows the various terms used in each country relate to one or several of the above three categories.

As a general rule, it can be said that no community school exists in which all possibilities of co-operation have been realized to their full extent. On the other hand, any school in any circumstances has some relationships with its surrounding community: parents participate in sending their children to school, teachers are part of the local community or region. All of the categories dealt with in this report, however, mark a departure from established practice and point to an emerging new approach of wider significance: the end of the traditional isolation of the school and the beginning of an era of the two-way, open, community-oriented educational facility.

Reasons for co-ordination in industrialized countries

The relationships between schools and their local communities in industrialized countries are changing as a result of a number of fundamental mutually reinforcing social forces. For the sake of clarity, they can be reduced to five basic groups: pedagogic, social, economic, changes in planning philosophy and demographic factors.

Pedagogic considerations

The requirements of modern society for a broadly based education have resulted in a larger proportion of young people staying at school longer. This has led to new demands for specialized as well as recreational

facilities in addition to more and better equipped classrooms.

The advent of lifelong and ongoing education has brought the adult population of the community into the school and led to a rethinking in terms of de-institutionalization and the participation of the learner in organizing his field of inquiry. In some countries, community schools are seen as a means of providing a new type of education based on an attempt to promote flexible thinking, and mastery of general principles rather than specific data; emphasis is placed on the rights and dignity of the individual and on democratic decision-making. A 'problems' approach, linking learning situations with global or national situations, and a 'teaching force' including teachers and parents for a smaller number of children per group and greater autonomy and mobility, has created a different use of educational spaces. A 'learning by doing' approach to education and increased relevance in terms of closer relationships between learning content and application have moved some learning activities to facilities beyond the school's walls [3]. Finally, there has been a recurrent sentiment that schools tend to alienate children from their communities, and this has given rise to criticism and even hostility at the community level. Communities in general seem to be becoming more conscious of their powers to insist that schools be more effective in reestablishing contact between youth and the community and more aware that traditional practices have proven ineffective. This has contributed to the feeling that school and community agencies should be more closely connected physically and organizationally.

Social factors

In the mid 1960s and early 1970s, there was a widespread international trend in favour of equal educational opportunities for all social classes [3]. Without going further into the historical background of this development, one could say that the strategies employed to increase 'equality' were quite similar. One strategy applied in several countries to achieve equal opportunity was the integration of children from different school districts separated by social class or race into large, well-equipped educational centres. These had to be attractive enough for the children of upper-class parents and at the same time large enough to house between 2,000 and 5,000 students, so as to achieve the desired social mix. The size of these centres and the

1. Figures in brackets correspond to the references at the end of each chapter.

enormous public investment that went into building them in most cases brought about an enlargement of the programme in order to serve sectors of the population other than schoolchildren, thus alleviating existing inadequacies in recreational and cultural services. Implemented often in deteriorated urban and ghetto areas, new educational and community centres provided an opportunity for remedial measures, that is to say a possibility of upgrading the social and physical environment and of providing a focal point for community development and renewal.

It was hoped that by clustering various social services around the school co-operation and communication would be enhanced among traditionally separated functions of different governmental agencies (e.g. education, health, welfare and housing), and that, in addition to the creation of missing links, wasteful duplication of services would be alleviated.

Economic factors

Economic considerations centred around the full use of facilities and the elimination of duplicated spaces and maintenance (i.e. both capital and running costs). Most traditional schools are used for less than half of the day, five out of seven days a week and stand idle during holidays; this means that they are used for about 16 per cent of the total time. In addition, sports facilities and assembly halls, as well as workshops, laboratories and similar special areas, are seldom used to full capacity. All factors taken together indicate that there is an enormous wastage of public funds in the traditional use of school facilities. On the other hand, the demand for public services is increasing quantitatively and qualitatively. New user groups are beginning to voice their needs for public support in terms of facilities: the handicapped, the elderly, the unemployed, minority groups and community groups serving a common or special cause must be housed. Specifications for their social needs demonstrate that they would practically duplicate school facilities.

Theoretically and practically, participation in democratic decision-making processes needs a physical place to happen. But meeting places like the market, the coffee house, the church or the theatre have lost their function for economic reasons and through changed social patterns. Often they have been obliterated by 'planners'. The school in many countries is the last bastion of common interest and assembly for every one and in many ways a community centre in embryo form.

Changes in planning philosophy

Based on several decades of failure with governmental programmes designed to serve the deprived, a new planning philosophy began to emerge in the 1960s. Single measures aimed at solving the most obvious problems in education, housing or health had not succeeded and often served to show more clearly the ineffectiveness of bureaucratic action.

Supported by an increasingly active citizenry, complex participatory planning procedures began to emerge as the only adequate means of tackling complex social problems. Instead of treating a person separately as a student, a family member, a patient, a citizen, etc., the respective departments saw the necessity of developing communicative and integrated programmes which would see individuals as a whole. An educational problem, it was seen, might well originate in the family situation which, in turn, might depend on the lack of adequate housing or a particular health problem. Similarly, urban problems which so far had been treated separately, such as housing problems, infrastructural, transportation or commercial problems, began to be treated in a comprehensive manner. Furthermore, some hope existed that the individual could tailor a service to suit his own needs.

Planning became more and more process-oriented rather than 'master-plan' oriented. Interdepartmental, intersectoral participatory and interdisciplinary planning proved to be cumbersome and time-consuming, but still the best hope in a sense (see Fig. 2).

This philosophical change profoundly influenced the practices of educational planning. The examples analysed in this report must be seen in this context. A readiness for co-ordination on the part of educational institutions alone could never have resulted in the currently available quantity and quality of integrated facilities and organizational structures, which may serve as testing grounds for innovative partnerships.

Architectural response

The pedagogic, social, economic and planning factors referred to above explain the situation which led to the establishment and co-ordination of educational facilities for communal use in the 1960s and early 1970s. They marked a radical departure from established building patterns (Fig. 3). However, with the advent of the world oil crisis and the decline of public funds in many industrially developed countries, 'the limits of growth' also began to be felt in the school building sector. Coupled with a demographic factor and a dramatic decline in student enrolment in many

industrialized countries, the era of new large educational and community centres came to a sudden halt and the era of reuse and rebuilding of existing facilities began.

The results of this latest development can only be touched upon in this study. As yet there are few examples, and feedback studies are scarce, particularly in regard to community schools being housed in remodelled buildings. This trend, however, will conceivably continue and gain importance in the

foreseeable future, and therefore calls for particular attention [4, 5].

In general, the reasons which have led to closer school and community ties have seldom been clearly separated. The few evaluative attempts which can be found [6, 7] show that often before the project has been built fundamental changes have occurred in the programme; overall priorities change not only according to changing numbers of users but also according to new needs and demands.

<i>Existing pattern deficiencies and constraints</i>	<i>Emerging alternative variables of future development</i>
Social problems can be solved by physical measures Planning understood as primarily land-use planning	Social problems cannot be solved without tackling social and economic issues, historical and behavioural aspects Planning understood as a complex task which affords a comprehensive approach to arrange the environment so as to maximize autonomy in the context of collective goals, and minimize the probability of exploitation of the many for the benefit of the few
Mitigation of and counteraction against the worst effects of industrialism and urbanization upon the environment	Redirection of basic forces of industrialization and urbanization to make their effects beneficial rather than harmful
Environmental blight through economic growth One best plan to fit a situation	Environmental quality as integral part of economic development
Modification of complex behaviours in 'all or none' fashion Closed systems of analysis	Identification of alternatives, range in which a possible course of action can emerge Transformation from one complex state to another involves series of intermediate states
Disciplinary frameworks for the solution of planning problems	Better understanding of interrelatedness of internal systems and external environment, units of analysis, and interdisciplinary synthesis A disciplinary framework for dealing with human problems
Goal identification area of normative concern, therefore beyond systematic consideration	Goals of population can be operationally defined and are empirically accessible
Decision-making in the hands of few specialists, unable to receive, analyse and act upon intentions of a population	Mounting evidence that people have far greater capacity to plan for themselves than has been admitted, establishment of more effective communication tools
Planner as 'master designer' with little power to enact design	Planner as mediator, raising the quality of compromise to highest level, better chance of effectiveness; many roles for planner: advocate, educator, professional visionary and specialist
Influence based on personal whims or prerogatives of power Secret information flows among top-level management	Influenced based on knowledge, understanding, leadership abilities, and technical competence Full and free information and communication, regardless of rank and power
Conflict resolution through coercion or compromise	Reliance on consensus to manage conflict

FIG. 2. Planning changes.

<i>Existing pattern deficiencies and constraints</i>	<i>Emerging alternatives variables of future development</i>
<p>Schoolhouse with clear accepted tasks and long-range commitments</p> <p>Obsolete schoolbuildings and classroom layouts for special designed learning institutions</p> <p>Fixed classrooms, all alike, stationary furniture, arbitrarily assigned seats</p> <p>Monolithic buildings, inflexible undifferentiated, 'Let it endure forever' cornerstone ideology</p> <p>Aesthetic ideology, building visually pleasing objects or environment</p>	<p>Highly variable and unpredictable demands for space, in quantity, kind and location</p> <p>'Schoolbuildings' as multi-use entities, rented or shared facilities as programmes and curriculum planning require</p> <p>Open or semi-open classroom, identifiable learning situations, mobile furniture, to suit individual or group work</p> <p>Scale in proportion to user (child and adult), warm colours, adoptable walls and structures, building as part of the change process</p> <p>Political and social ideology, building collective assembly of design decisions of users which is part of socio-economic development process</p> <p>A good environment is a basic human right</p>
<p>Class standards reflected in physical terms: poor buildings and environments for poor people, better ones for the upper class</p> <p>Inadequate recreational space; crowded insufficiently equipped play areas</p>	<p>Good recreational possibilities seen as part of educational process and essential for well-being of children, open to community and for all age groups</p>
<p>Most school sites useless for holistic educational purposes, nature study, or outdoor educational programmes</p> <p>Topography, school often placed on left-over land, physical and intellectual separation from the world</p> <p>Unused surplus space in schools in older communities wasted</p>	<p>Choice of site dependent on access for the community, ecological significance, soil types and characteristics, vegetation, historical features</p> <p>School site as integral part of community resources and open space system linked to other activity centres (shopping, institutional building), interlinkage of school and life</p> <p>Lease of surplus space to health services, social and cultural programmes, public and private associations</p>

FIG. 3. Facilities changes.

Reasons for co-ordination in developing countries

In contrast to industrialized countries, where co-ordination of services predominantly aims at improving the quality of life in urban areas, developing countries today face major problems in rural areas: mass unemployment, underemployment and mass migration to the cities. After several decades of attempts to reverse these trends, the task turns out to be much harder than may have been thought; for two-thirds of mankind, a full and happy life and freedom from a struggle for the satisfaction of basic needs still seem to be as far away as ever.

Increasingly accentuated forms of 'dual economy' not only separate the world into the rich and the poor countries, but also divide the poor countries themselves into various degrees of poverty.

Two ways of life existing side by side in such a manner that even the humblest member of the one disposes of a daily income which is a high multiple of the income accruing to even the hardest working member of the other. . . . In the dual economy of a typical developing country, we may find fifteen per cent of the population in the modern sector, mainly confined to one or two big cities. The other eighty-five per cent exists in the rural areas and small towns. . . . most of the development effort goes into the big cities, which means that eighty-five per cent of the population are largely by-passed. What is to become of them? Simply to assume that the modern sector in the big cities will grow until it has absorbed almost the entire population—which is, of course, what has happened in many of the highly developed countries—is utterly unrealistic. Even the richest countries are groaning under the burden which such a maldistribution of population inevitably imposes [8].

The critical question is whether or not there is an

alternative to the advancement of a process which Schumacher calls 'mutual poisoning' whereby successful industrial development in the city destroys the economy of the hinterland through mass migration to the city. In most developing countries today, a gradual shift in emphasis from urban to rural development can be seen. This is where the mass of the population resides and where the most serious but potentially solvable problems are found.

An analysis of the basic problems and subsequent answers as to how to go about changing the situation starts from varying angles. There are those who demand more and massive aid to compensate for neglect and exploitation in the past. Others claim that aid merely causes more dependency and the only way out is to increase support for models emphasizing 'self-reliance' [9]. A third group optimistically advocates the increased use of technology so that under-industrialized countries may be helped to bypass the industrial age and move straight into the modern age of computer technology [10]. A fourth and growing group of analysts advocates a change in our basic value structure with an emphasis on people rather than goods and on permanence rather than growth [8].

Education for community development

In some ways the development of closer links between school and community can be built upon all four of these seemingly contradictory proposals.

There is quite a number of community/school programmes which have been substantially supported by external aid. Others rely on self-help, in part or in whole. The increased use of technology is in no way foreign to the idea, as 'schools of the air', community television and radio programmes show. Finally, efforts made to upgrade rural settlements and small-scale technology and to bring basic services even to the remotest villages indicate a new trend in basic value structures.

Various approaches can often be found within the same programme, because rural development is a complicated process involving many different factors simultaneously. The complexity of the task requires a correspondingly complex approach; and a combination of the different strategies outlined above, although in some ways seemingly contradictory, probably provides the only answer to the often contradictory demands placed on the school as a catalyst for development.

In addition, it is noteworthy that rural development

programmes under very different political systems and approached from various angles ranging from radical to incremental change contain largely the same elements: agricultural programmes, schools, health services, technical training, home management and child care are all common elements geared to improve the technical and social infrastructure. The school as one of the most central services often becomes a core element around which all others can be grouped and co-ordinated.

Changing views of education

In most developing countries, education continues to be seen as an economic investment by the government as well as by the people. Both make substantial financial sacrifices in order to provide an education which is being seen as the major way to national and personal advancement. The emphasis, however, has shifted since the 1950s and 1960s. The underlying assumptions that educational development has to precede economic development and that it contributes to social equality and national integration have not been proven wrong but are seen to need correction.

Today education (which consumed up to 40 per cent of national budgets in developing countries) is not seen as the motor of economic development but mainly as a necessary burden. Although it may be worth while for the individual to receive an education, it does not always pay in terms of public investment [11]. This is particularly evident where the production capacity does not offer employment for at least the majority of school leavers.

The uneven distribution and use of educational opportunities, depending on power, status and class, has probably contributed to widening rather than closing the gap between the rich and the poor.

Education itself has probably contributed as much to national unification as to the growth of sub national cultures, with concurrent competition and rivalry.

The first change in emphasis in recent years has been from quantitative to qualitative aspects of education. New goals include a closer relationships between education and traditional culture, local needs and employment opportunities; the use of local languages; and a new balance between theoretical and practical work. As in industrialized countries, the aim is a more holistic model of education which also integrates other sources of learning outside the school. This, in the context of African history for example, presents in some ways a return to lost tradition, as Ki-Zerbo [12] points out:

it was an education by and for the community. There was no specialized body of teachers. All, according to their age, were given the duty of educating others. The goal was the formation of the social man, the useful producer and the considerate citizen.

The second change, therefore, can be seen in the reevaluation of the school as the sole dispenser of education and of its function within a total social services network. Formal and nonformal education, adult education, and ongoing education begin to draw upon all the resources (human, natural and man-made) available in the community in which they are located. The concept of 'earn-while-you-learn' provides new opportunities outside the school system and defrays some of education's costs to the learner and future employer. And part-time education and the 'sandwich' system, both aimed at increasing the quantitative capacity of the educational system and opening up learning opportunities for all age groups, require a closer co-ordination of various sectors and agencies in order to eliminate costly duplication and gaps.

In an analytical survey of national institutions for schools and out-of-school education in rural areas in Latin America, Guerrero [13] concludes that the low quality and quantity of education, illiteracy among adults and the unrelatedness of the educational system to national socio-economic development plans can only be overcome through intersectoral and inter-institutional co-ordination and functional relationships between education and work.

A third change in emphasis can be seen in the introduction of participatory planning and experiments in education. Participation of the user in educational decision-making serves as a political model as well as a strategy for tapping additional local resources for education in most developing countries today. The two should be kept separate for the sake of a clear argument.

Any development process must also involve the mass of the population if it is to really affect the population. In the introduction of new ideas, the changing of attitudes and the provision of new skills and knowledge, participation in education in the broadest sense plays a central role.

From the general discussion of changes in rural education as a tool for the improvement of the quality of life in rural areas, it seems clear that the two-way open community school can be an effective instrument for producing the desired changes and coherence which is today the objective of almost every government in developing countries. It also shows that this can be seen neither as a romantic turn backwards as some critics charge, nor as an impoverishment of

longer-term intellectual resources for short-term economic gains.

The school/community issue: a world-wide perspective

Comparison of the underlying assumptions of co-ordination

As the two analyses of main issues and assumptions which have led to closer school/community relationships in industrialized and developing countries show, the differences between them are marked.

While the under-use of often luxurious and oversized facilities and equipment has been a main factor in the co-ordination of school and community facilities in industrialized countries, the lack of facilities and the inability of governments to provide adequate funds for school buildings has led communities to build their own in developing countries.

Although creating a sense of community and belonging (and a focal point for community activities and actions) are among the primary reasons for community schools in industrialized countries, links with production, economic development and employment characterize many community schools in developing countries.

In poorer urban areas in industrialized countries, the emphasis is on upgrading the social infrastructure; mainly 'hard social services' like employment, welfare and probation offices, but also recreational and cultural opportunities. The poorer rural areas in developing countries are more often cut off from access to better developmental opportunities through a lack of technical infrastructure; lack of water, roads, sewers and means of communication.

While industrialized countries must learn to adapt to less economic growth and more leisure in view of diminishing resources, developing countries must further strive for more economic growth and the elimination of chronic underemployment.

The facilities problem could not be more different in that most industrialized countries are facing declining student enrolments and a surplus of facilities, and most developing countries will for a long time to come need to resolve the problems of lack of facilities for an increasing number of learners.

Although neither industrialized nor developing countries form homogeneous blocks and there are a large number of important differences, a few points in common may be observed. In general, there seems to be a trend away from national and international

schemes to an awareness of problems at the local level, a trend away from measuring progress in terms of gross national product towards measuring it in terms of 'quality of life' in industrialized countries or in terms of 'net increase in income of the poorest sectors of the population' in developing countries. This indicates a change in values.

The main elements of development programmes include education, health, welfare, culture, recreation, administration, commerce, trade, industry and housing though none of these alone will succeed in solving major developmental problems. Advancement must be made in all categories, and co-ordinated to avoid wasteful duplication and gaps. Co-ordination cannot succeed *without involving the user at the local level*. Schools can provide a focal point for development, co-ordination and community involvement.

In some places, planning and building schools has become a developmental and educational instrument. It can be used in the worst sense to manipulate people and to place the burden of providing cheap labour and materials on the poorest categories.

to buy local energy and initiative to make marginal impact. . . whilst significant issues of unemployment, poor housing . . . etc. are ignored [14].

But user participation in the planning and building process can also mean the emancipation of a community from an ineffective bureaucracy, replacing it with autonomy, self-reliance, independence and identification with a community effort.

The central role of 'physical facilities' as an entry point and symbol for co-ordination is of prime importance in the context of this study. It is here that lip-service to the principles of co-ordination ends and commitments have to be made: ideas of 'territoriality' have to be changed to enable various programmes to be carried out within the same spaces; capital funds must be combined with a legal framework and put to specific uses; and previously autonomous administrations are held open to question. In short, the identity of the separate partners diminishes in favour of the conglomerate, the most tangible symbol of which is the building in the physical sense.

But an analysis of points in common would be incomplete if only those trends which tend to support the possibilities of a co-ordinated action between school and communities are mentioned. There are also numerous barriers to co-ordination, the most important of which probably centre around the inherent principles upon which technological advancement is built: the division of labour, the dependency

of the individual on larger organizations, fragmentation of society into homogeneous groups, marginalization of the working class, and the domination of capital-intensive industries, research organizations and large bureaucracies [15]. Closer links between school and community, however, are built upon exactly the opposite principles: teamwork and mutual help, independence, autonomy and integration. This results in a series of conflicting demands which need to be reconciled:

The need for central governmental support versus local autonomy in determining the exact relationships between school and community.

The traditional training of teachers versus their new role as animators or community leaders.

The emphasis on locally adaptable educational programmes versus nationally uniform examination requirements.

The need for flexibility and openness to spontaneous community needs versus the need for some degree of permanence and structure.

The participation of the community, which requires a horizontal power structure, versus the collaboration with existing hierarchically organized administrative bodies.

An emphasis on local self-reliance and self-help versus on overall strategy for development aimed at equity, equal opportunity and social justice.

Categories and scales of co-ordination and integration

For the purpose of analysis, it is helpful to consider 'co-ordination' and 'integration' in various categories and on various scales: education, social groups, sectors and services, organizational and administrative structures, financial arrangements, content of programmes, planning, building, levels of government and rules and regulations.

Frequently, linking educational facilities with the community means the co-ordination of different types or stages of education, for example various programmes for the school-age and adult population, formal and non-formal education. In its simplest form, this may result in the use of the building after school hours by adult-education classes. In its more complex forms, schoolchildren may receive education in other places than the school, for instance in museums, offices, factories, farms; or adults may sit beside schoolchildren in the same class to learn and study for degrees and examinations which they may need for their personal or occupational advancement.

'Integrated' schools can serve the social integration of various groups, usually within one building. These

social groups may be divided by sex, age, class, race, culture, religion, language or settlement pattern. The scale of social integration ranges from schools in which the integration of boys and girls through co-education is a major achievement (Colombia) to those where difficulties have been overcome in integrating different age groups, social classes and races (United States).

The integration and co-ordination of different sectors and services, such as education, health, welfare, culture, recreation, public administration, commerce, trade, industry, housing, is one of the most complicated problems. It may be viewed on the one hand on a quantitative scale which measures the number of services which have been combined, and on the other hand on a qualitative scale which sees their links in terms of planning, content of programmes, building, financial arrangements and organizational and administrative structure.

For national-scale programmes (e.g. the estab-

lishing of links between school and production), a certain co-ordination between central, intermediate and local levels of government has been a necessary precondition for implementation [16, 17]. In some cases, this has been of little avail [18].

The major justification for establishing these different scales is that none of them needs to coincide with another. When we talk about a co-ordinated project, for instance, the co-ordinated planning process and physical integration of various services does not necessarily imply an administrative or organizational co-ordination. Although integrated facilities may require a co-ordination of capital funds, they may function under separate maintenance agreements.

Making a distinction between these various categories and scales of co-ordination is by no means an academic exercise. It has indeed very practical implications for building and planning. If we compare various projects, we see that each of them has its own individual profile (Fig. 4).

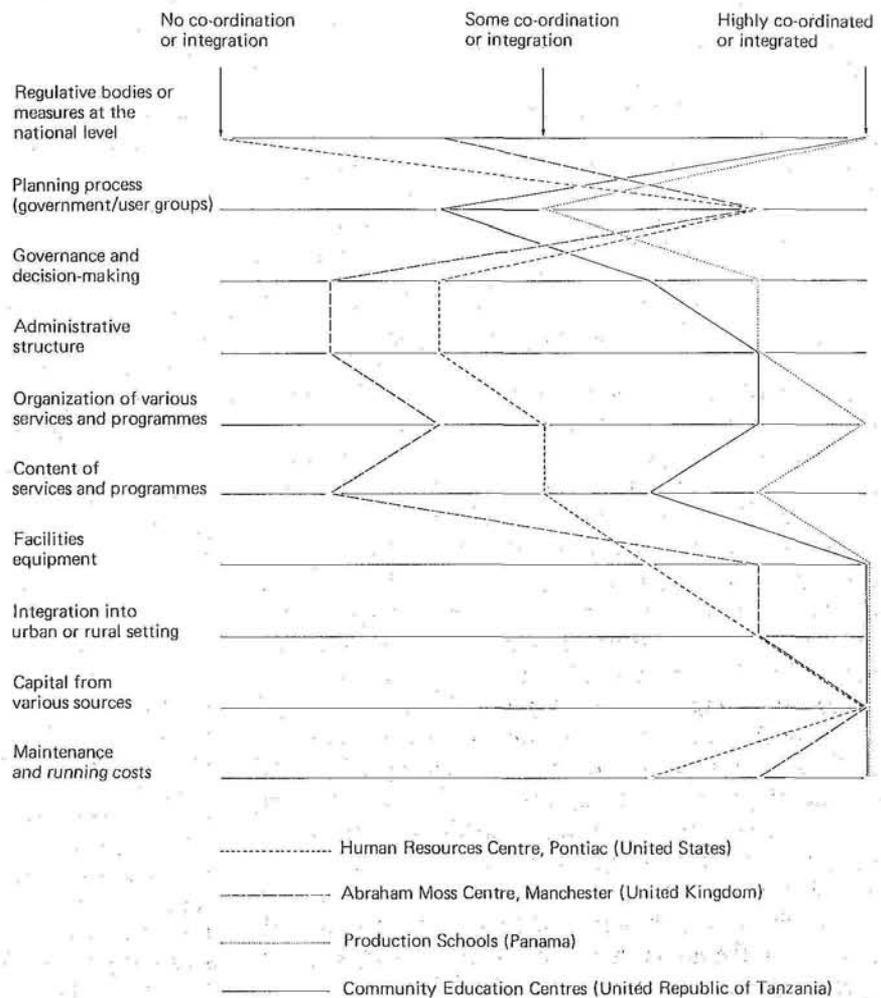


FIG. 4. Scales of co-ordination and integration of different sectors and services.

In the course of this study, it has become apparent that few efforts have been made up to now to distinguish between these categories and scales. In early comprehensive programmes for the co-ordination of schools, social services and community facilities, the undifferentiated mix of various goals and scales of co-ordination could be characterized by 'the more co-ordination the better'; the physical integration of various social groups (it was assumed) would naturally enhance their social integration; and the physical integration of various services would lead to a better co-ordination between various administrative measures rules and regulations, content and programmes, and thus finally to an increase in their effectiveness. These global and undifferentiated hopes were largely responsible for the large community school centres built during the 1960s (Australia, France, Federal Republic of Germany, Sweden, the United Kingdom and the United States).

Integration and co-ordination, it was assumed, would inevitably lead to increased centralization. Architectural or physical integration would be instrumental in solving social problems:

New forms of schools and colleges, new questions of size and scale, new efforts to provide for increased accessibility, must all be explored architecturally. Along with these architectural questions, new patterns of instruction and new relationships between the school and its communities must evolve as well. Laws and government regulations which interfere with the schools fulfilling their new role must be amended or eliminated, permitting more flexibility in attempting to solve these new problems [19].

However, educational, administrative and legal changes turned out to be much harder to implement than architectural changes and, in addition, to be more essential. Social problems needed social solutions and no technical superstructure could eliminate poverty, racial segregation and class differences. On the contrary, the new larger centres for 1,000 to 3,000 students, combined with community facilities, created new organizational problems of unprecedented size, and not only physical but also psychological barriers, instead of acting as powerful poles of attraction.

Nevertheless, the same underlying assumptions and conclusions continue to exist, side by side with new developments stressing more moderate approaches and the necessity for social, political, administrative or legal changes in the light of social, political, administrative and legal problems.

On the whole, however, a trend can be observed away from the global hopes and large centres to more specific goals and decentralized facilities.

Co-ordination as a means of restoring a balanced pattern of growth

The central issue in the development of closer ties between school and community seems to lie in the restoration of a balanced growth pattern. Architects during the 1960s had already got the message. But for them integration was identical with a move towards more concentration and centralization, in accordance with previous experiences of technological advancement. Today it has been recognized that in order to restore formerly integrated and connected functions of life which the advancement of the division of labour and technological progress has disconnected and isolated, more adequately complex solutions are required. Instead of linear criteria for success leading to further and further specialization, multidimensional scales are being developed.

With the advent of the world oil crisis, the awareness of declining natural resources and limited markets for products as well as for educated human resources, advancement is no longer equated with economic growth.

A global search for alternative means for development has begun. 'Small is Beautiful' [8] as a principle has been advocated by farsighted economists for decades [20, 21, 22, 23] but now it finds an audience far beyond the professional circles of international experts. The Chinese model of 'intermediate technology' [24] now begins to become an acceptable complement or 'second leg' to the development of the modern sector in developing countries. 'Quality of life' as a measure of progress requires a far more complex set of indices than gross national product. Furthermore, these measures are liable to be different in developing countries and in industrialized countries. But the global partnership demanded in 1969 by the Secretary-General of the United Nations, U Thant, in describing the goals for the Second Development Decade seems as far away as ever:

I do not wish to seem overdramatic, but I can only conclude from the information that is available to me as Secretary-General that the Members of the United Nations have perhaps ten years left in which to subordinate their ancient quarrels and launch a global partnership to curb the arms race, to improve the human environment, to defuse the population explosion and to supply the required momentum to development efforts. If such a global partnership is not forged within the next decade, then I very much fear that the problems I have mentioned will have reached such staggering proportions that will be beyond our capacity to control [25].

We are only one year away from the end of the Second Development Decade and the problems described by U. Thant continue to grow. The search for solutions in the realm of education includes the exploration of means of establishing closer links between school and community. Within an overall strategy for develop-

ment—as we will try to show in the following chapters—these links may provide: (a) an entry point for restoring a balanced pattern of growth and of community development; (b) a symbol of local pride and self-reliance; (c) a practical means of intersectoral co-ordination and co-operation.

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Policy, planning and decision-making processes

Determining the critical variables

In traditional schools, the margin for innovation in terms of programming and layout used to be—and in most cases, still is—relatively narrow. Once decision-makers begin to think in terms of co-ordinating educational facilities with other uses, however, they open a 'black box' of unknown size, full of new opportunities and problems. No matter what the point of departure, whether it is a new town (offering possibilities for including the total array of community services), an existing urban area or rural village (with its own community resources and deficits), the questions of 'how' to determine needs and 'who' determines them are the first critical decisions which must be taken in order to arrive at a workable brief or programme.

In order to distinguish different types of planning and decision-making processes for linking school and community facilities, four variables emerge as the most important: (a) traditional patterns for providing education; (b) type of setting or situation; (c) type of initiator; and (d) type of process for establishing needs.

Obviously, traditional patterns for providing education, or decision-making and planning, play a decisive role in the co-ordination of services. What may be an advanced concept or strategy in one country may be regarded as outdated or backward in another. Planning processes, in some countries, are invariably carried out at governmental level and so have different modes for realizing a project than processes which are proposed by the school, by experts or by the community itself. The decision concerning which strategy for the co-ordination of various services should be used can only be made for each particular situation by people within the system of cultural norms, social and behavioural patterns, and political power distribution. Concepts and strategies, however, may not only vary from one country to another, but also within one nation or region, or even within the same locality.

A first approach to school-community links reveals a startling variety of settings: from rural villages at

one end of the continuum to urban or metropolitan neighbourhoods at the other. There are some communities where everybody has known everybody else for generations, where common values and economic, social and religious bonds shape the consciousness of each individual and the group as a whole. These are contrasted with urban communities which may have little connection with their immediate physical environment and in which people belong to a distant club, to associations held together by shared language, social status, church affiliation, leisure-type activities or common geographical roots.

Between these two extremes is an infinite number of intermediate situations. Most rural communities, in fact, are not single undifferentiated units with few internal divisions of interest and most urban communities have quite a number of local interests and inter-relationships; and precisely those factors may create the necessity for closer school/community relationships. There are, however, a number of typical situations and settings for co-ordinated schemes which seem to be particularly favourable for the implementation of the concept.

In industrialized countries these include urban poverty areas, new urban developments and areas of rapid demographic change. In developing countries the concept can be found most often in rural poverty areas, urban squatter settlements and emergency cases.

In addition to the continuum of local community settings from rural to urban, another type of continuum exists. It extends from local to regional to national communities and in the widest sense—paralleled by growing school catchment areas from pre-school to university level—includes the international community. The distinction between these two types of settings is important in this context, as the creation of a national consciousness (e.g. in Africa) or an international consciousness (e.g. in Europe) during the 1950s, 1960s and early 1970s tended to obscure the problems at the local and regional community level. Furthermore, the discovery of the 'com-

munity school' is closely connected with the rediscovery of localism and regionalism.

According to the type of initiator, powers and strategies for implementation vary: governmental officials or local authorities are usually well equipped to initiate innovative programmes but they may be the least likely to do so as this is not part of established routines; users, e.g. teachers, students or parents, have the least amount of formal political power but may be the most interested in change; experts can best be described as the in-between group which has the advantage of possessing the most complete information and overview but is also caught between governmental limitations and user demands, which seldom coincide.

Although all three groups must be involved to some degree in every planning and decision-making process, it is important to see where the impetus for co-ordinating services originates and which group is most actively involved in the determination of needs and the subsequent co-ordination of different programmes. In developing countries, international organizations and charismatic leaders provide two additional initiating agents.

The type of process for establishing needs often determines the exact size and shape of the facility or programme. What appears to be a purely technical question usually turns out to be politically relevant. Whether the process takes place in relative seclusion and the public (a) is merely informed through the media or an open forum about the project, (b) is interviewed by the expert who draws up the design or (c) participates through 'charette' processes (see page 31), citizens' councils or community corporations may determine the amount of opposition, confrontation or co-operation between the various groups at a later stage. The type of initiator and planning process as well as the readiness for accepting and testing innovative proposals differ from one country and from one locality to another. Co-operation ventures between various social services are supported with varying enthusiasm. Historical patterns and governmental structures, in this respect, seem to play a far more important role than recent pedagogic, economic or social theories. Countries with a traditional pattern of decentralization and volunteer work, in general, are better equipped for providing co-ordinated educational and community services than those with more centralized decision-making structures.

Industrialized countries : increased complexity and planning with the user

Traditional patterns for providing education

Historically, more integrated ways of providing education can be found in most nations. In Europe, in days gone by, education outside the church (which prepared mostly an élite for governing and leading) was community based in the widest sense. 'Learning by doing', helping parents and grandparents, listening to the life stories of community members and playing traditional games¹ provided the young with all the necessary practical and theoretical knowledge which they could depend on for living. In addition to the church, special training began to develop first in guilds and professional associations directed by local artisans and craftsmen, similar to vocational training systems today. Only with the advent of compulsory education was it necessary to reconsider the function of education and to build special educational facilities in large numbers in addition to existing community facilities.

Even in their very simplest forms, schools in Europe began to be built on the traditional pattern of the 'church school' as relatively specialized facilities, only occasionally housing a public use. Assembly halls for public gatherings (*Bürgerhäuser*) in pre-war Germany were, for instance, more often connected with the town hall, a pub and the local general store, than with the school, like the *agora* type multipurpose halls in the Netherlands or the community and commercial centres in Denmark. In Greece and Ireland, the link between church and school provided the last bastion for the survival of a national identity through centuries of occupation by foreign powers. With few exceptions, until the First World War, it might be said, education was mainly for a growing wealthy and powerful bourgeois class rather than the masses.

A different pattern emerges in the United Kingdom, where the school became more of a community centre, particularly in the villages. The most typical and well-known example, however, is the close integration

1. O. K. Moore in his 'Some Principles for the Design of Clarifying Educational Environments', in David Goslin (ed.), *Handbook of Socialization Theory and Research* (Chicago, Rand-McNally, 1969) calls these games 'folk models' and he points out that the four basic types of games, puzzles, games of chance, games of strategy and aesthetic entities can be found in every culture and represent abstract symbols of man's most serious recurrent problems. Despite their complex structure, they are learned with pleasure by ordinary people, thus forming a heuristic structure of basic theories for dealing with complex life situations.

of school and community in the early frontier settlements in the United States, and many current attempts to reinvent the practical use of schools for diverse community needs relate to this model.

Community-school movements in both the United Kingdom and the United States were abandoned with increasing specialization and growing urbanization. However, already around 1900 and again in the 1930s some early significant movements began to reinstitute the idea.

In retrospect, both the United Kingdom and the United States were slow to build upon these experiences [1, 2, 3]. Apart from the disruption caused by the Second World War, education generally entered a period of vast and rapid change. The increase of the school population, the science-oriented content of the curricula and new methods of instruction preoccupied educational authorities.

In the last decade, this situation has changed dramatically. A new emphasis on education as an instrument for social equality and a dramatic increase in school population led to the building of larger educational units, providing well-equipped educational, cultural and recreational opportunities which made it more or less mandatory to include all age and user groups. The United Kingdom, the United States and Australia are today providing some unusual combinations of public services and schools. The ease with which innovative programmes have been allowed to surface in these countries is due in part to a more decentralized decision-making structure for the provision of education. In the United States, for instance, local school boards are largely autonomous institutions. Countries with a traditional pattern of centralized decision-making, e.g. France, or those which place emphasis on the legal and constitutional aspects of administration,¹ e.g. the Federal Republic of Germany and the Netherlands, tend to be more concerned with the principles of co-ordination and the question of the concept's applicability on a wider scale. As a result, these countries provide some comprehensive examples which serve as testing grounds for future plans (e.g. centres in Grenoble and Istre in France [4], Hamburg Steilshoop and Mümmelmannsberg in the Federal Republic of Germany [5], t'Karregat in Eindhoven, the Netherlands [6]) or co-ordination is restricted to the most compatible uses, and then implemented on a wider scale (e.g. the thirteen West Berlin middle school centres which house educational and recreational uses and have been built according to a standardized plan [7]).

Typical settings and situations

Urban poverty areas

The most ambitious intersectoral planning programmes in Europe as well as the United States have been attempted in urban environments, particularly in urban poverty, lower-class and ghetto areas, in order to bring about social change, to upgrade the urban environment and solve some of its complex problems. These policies were in part a result of the social unrest and student revolts of the 1960s, which aimed at a more equal distribution of opportunities. Midwinter points out that the English community schools in Educational Priority Areas (EPA):

are motivated less by academic and 'pure' educational factors than by reasons of social expediency and social justice. When fear of urban upheaval joins with promptings of moral belief, it is, one hopes, a formidable conjunction [8].

Forms of urban decay or deprivation, as well as urban renewal in the housing estates, had proved themselves so resistant to simple treatment that the various agencies concerned felt compelled to co-ordinate their planning. Examples, such as the Human Resources Centre in Pontiac, the Dunbar Junior Highschool and Community Centre in Baltimore [9] and the SAND project in Hartford, Connecticut [10], characterize the struggle to deal with urban problems, crime, ill health and racial segregation in the United States, while the Abraham Moss Centre [11], situated in a dilapidated part of Manchester, is the British prototype for this strategy during the 1960s. In the Federal Republic of Germany, many of the new school centres built during the last decade are located in housing districts which would be classified as lower to lower-middle class areas [12].

Since the fading of the original hope that the contact and finally the integration of different social classes could be achieved by the physical integration

1. An excellent discussion of the origins of differences in governmental decision-making can be found in A. Faludi and S. Hammet, *Comparative Study of Local Planning in Leiden and Oxford*, p. 12-13, Delft, Technische Hogeschool 1976 (Research Note 6). They state: 'strategic rules and plans certainly exist in British planning and do play a role in tactical decision making. Development control decisions are for instance made having regard to the statutory development plan. But the latter does not have the same binding force as its Dutch equivalent... as in continental planning legislation generally... decision making should conform... to the hierarchical model of normative order: particular decisions should be made by deducing them from principles as laid down in rules and plans previously defined.'

of formerly separated schools and social services within one building, more differentiated and decentralized schemes have come into existence. Based on a re-evaluation of existing structures and the introduction of a new educational services network, a Greek proposal aims at upgrading existing structures of great historic value on the island of Syros [13], a proposal for Lowell, Massachusetts [14] transforms the remnants of a nineteenth-century textile factory town into an urban educational park and a proposal for Crewe (United Kingdom) [15] links existing urban resources with a renovated secondary school in a decaying urban core.

New settlements—further typical setting for integrated services

Apart from economic reasons which apply where areas can be used by various user groups, the school plays a major role in bringing together new inhabitants and in creating a sense of community and a focal point for social as well as economic development. In France [16], the German Democratic Republic [17], Sweden [18], the United Kingdom [19] and the United States [20], to mention but a few, we find examples of this situation which presents new opportunities for co-ordination and collaboration among school, recreation, production, health and other social services. Today it seems difficult to plan a school as an isolated unit for a new area and not take some account of its joint obligation with other services to co-ordinate approaches for the incoming population.

Areas of rapid demographic change

This could in fact be placed in the category of 'emergency cases' if they face a situation similar to the one encountered in the United States between 1960 and 1970 or in the Federal Republic of Germany from 1970 on. While a student peak first led to large-scale building programmes coupled with a fundamental re-organization of the educational system, declining student enrolments are now creating the diametrically opposed problems of surplus rather than lack of educational spaces [21]. Both movements have been characterized by a new 'openness' of the school system to include other user groups and uses for vastly different purposes.

While the first move towards 'opening' the school in many cases seems to have been dictated by social reasons and the economic necessity to justify the enormous public investments that went into creating new school spaces, the second phase now appears to be dictated largely by the economic necessity to use costly surplus spaces in order to justify personnel and running costs. In the United States art clubs, senior

citizens' groups, various associations and recreation programmes organized by private, semi-private and public groups have begun to occupy the empty school spaces permanently through buying spaces or, for a certain amount of time, through leasing arrangements [21].

Rapid demographic changes, however, may be due to other reasons than birth rates. They can be found where fluctuating employment opportunities cause people to migrate from one region to another and in the social mobility of established and new communities. In the case of established communities, schools frequently lose school-age populations before younger families replace the older ones and the recycling effect begins to be felt. In new, rapidly growing communities, school-age children usually represent a substantially larger percentage of the total population, and this reflects the relatively homogeneous younger age groups who move into new communities. However, in a few years, after migration is completed, a dramatic decline sets in and causes a surplus capacity of school space, which is a burden to the tax payer.

Sweden, in anticipation of this phenomenon, has physically integrated neighbourhood school spaces within new housing developments not only to provide a closer relationship between young children and their home and neighbours and to stimulate school-community interaction in workshops and meeting rooms, but also in order to facilitate the adjustment of spatial demands to strongly fluctuating student enrolments.

The fact that co-ordinated services are less likely to be found in largely middle- or upper-class neighbourhoods or stable residential areas may indicate that in most of these cases an adequately complex network of services and facilities exists and, although these services might be improved, the initial effort needed to bring about co-ordinated services will only be made where the situation is sufficiently intolerable or sufficiently new to cause a fundamental rethinking of traditional service patterns.

Type of initiator

Our findings suggest that three different types of initiators (government, expert and user) influence not only planning and design but also the later functioning of co-ordinated facilities, whereby in industrialized countries government-based schemes occur as the most frequent but least innovative,¹ expert-based

1. By 'innovative' we mean departing from established practice in terms of process, programme, combination of services. The term is used here to indicate that the respective characteristic marks a new stage in co-ordination for that particular area.

schemes tend to be the most innovative but least effective¹ and user-based schemes are the least frequent but often most effective.

Although all three groups have been involved in most instances, from the amount of lip-service paid to participation it could be assumed that user-initiated processes are most frequently encountered. A closer look at reality, however, shows that first governmental agencies and second experts are the prime movers.

Government-initiated and directed processes

These must be seen at three basic levels of governmental decision-making which affect co-ordination: central or national, intermediate, and local.

Depending on the decision-making structure, which we defined in the light of historical traditions along a continuum from centralized to decentralized, each of these levels can be distinguished in respect of specific tasks and mechanisms to support (or prevent) co-ordination.

Generally, few co-ordinated programmes exist that have not been at least endorsed and usually also supported at the central level.

From the establishment of special bodies and funds devoted to co-ordination, it may be concluded that central governments are increasingly aware of the advantages of co-ordinating services. However, the problems of supporting co-ordination at the national level have become apparent. In France, for instance, a special intersectoral committee was set up to co-ordinate social services programmes at the national level and to create the necessary links with local authorities. After four years of work, it was dissolved as there did not exist a local administrative framework for the implementation of agreements reached at the national level [22].

In the United Kingdom, the development group which has been set up in the Department of Education and Science at the central level is not designed to co-ordinate national programmes but to act as a consultant to local and regional authorities which approach it with innovative projects (including co-ordinated services) and need advice and additional funds for planning [15].

Australia and Sweden both have decentralized national decision-making powers and provide block grants to intermediate and local governments which can be used more effectively for co-ordination than funds earmarked for specific sectors or projects [23, 24]. France has recently moved in a similar direction [25].

A special central office for supporting innovative ideas in community-school planning has been established in the United States by the Department of

Health, Education and Welfare (HEW). The department, through its Office of Community Education, provides modest funding or 'glue costs' for administration, planning, establishing a programme and involving various segments of the community [26].

With a sizeable information system under way, the office will soon be better equipped to determine whether a programme is truly innovative and participatory, which are two of the characteristics scoring high among the criteria governing grant awards [27].

In the Netherlands, several independent groups as well as the Ministry of Cultural Affairs, Recreation and Social Welfare sponsor research preparation guidelines [28] and provide funding for integrated school community centres.

Although it is difficult to compare the respective national solutions in terms of their effectiveness, three developments seem significant: (a) the increasing number of central governmental actions which are directly aimed at supporting co-ordinated social services rather than sectoral programmes; (b) a clear trend towards delegating responsibilities to lower levels of decision making; and (c) a reduction of central governmental functions to those of clearing-house and consulting services.

The intermediate level of decision-making (region, county, metropolitan area), although often the weakest of the three (between powerful central and active local levels,) is increasingly gaining importance. As a mediator between the removed central decision-maker and competing local interests, the intermediate level offers a possibility of bringing political action nearer to the people and serving traditional geographic and cultural subgroups which are trying to re-establish their identity in the face of destructive national policies.² Co-ordination at intermediate levels is prevalent in the Federal Republic of Germany, where *Länder* still guard their educational and cultural autonomy against federal interests. But it also exists in the United States and the Netherlands, where intermediate levels prepare and adapt national guidelines to local situations and act as intermediate co-ordinators for local demands directed to the central level.

Local levels of decision-making are by far the most directly relevant for co-ordinated educational and

1. The term 'effective' in this context refers to the attainment of the goals which the co-ordination of services set out to achieve and largely relies on feedback based on observation and the views expressed by the users of various schemes.
2. Several precise descriptions of movements to reestablish 'regionalism' in France, the Federal Republic of Germany, Italy, Norway and Switzerland can be found in Lars Gustafsson (ed.), *Thema: Regionalismus Tintenfisch 10*. Berlin, Verlag Klaus Wagenbach, 1976.

community projects. This is the level where single projects originate and national or regional directives are transformed into programmes and processes. This is where change becomes visible and tangible and affects the people for whom it is meant. If we evaluate programmes, innovation and effectiveness (where possible) will be measured according to local standards and through the eyes of local people.

The question of adequate complexity can be dealt with mainly in terms of local needs and resources. The next question: 'Who determines "adequacy" for co-ordinated programmes at the local level?', brings us back to our three main types of initiators and to their interaction and respective impact.

Planning processes for co-ordinated services initiated by local governmental agencies, local authorities or municipal departments have one clear advantage: there is a higher chance for the realization of the project than in expert-based or community-based processes. This explains why they are the most frequently encountered. That they are usually the least innovative (compared to expert-based or user-based processes) derived from the fact that bureaucracies are traditionally not set up to take risks but rather to minimize risks. Combinations of education, further education and recreation, which are highly compatible uses, can therefore be found in most government-based programmes in contrast to combinations of education, welfare agencies, housing services, shops and production facilities for example, which are less frequent and usually originate in either expert-based or user-based processes. The same applies to planning processes and procedures which are usually restricted to the information of the public or public forums and do not allow sufficient time or interaction to be termed 'a dialogue'.

The expert-based process

This is the most common method for determining the need for social services in innovative programmes. Usually an interdisciplinary group of experts (planners, sociologists, architects, accountants, management or organizational consultants, educators) is hired in order to develop a proposal. Thorough planning practice in these cases requires the gathering of data concerning demographic structure, cultural and political patterns, economic base, social and technical infrastructure, physical features, and other factors which may be of particular importance.

Although the above data may all be available in different agencies or information systems, they rarely exist in a form which is relevant to the main concern of the study and is readily comparable. As this is a

necessary part of their work, experts are often the first ones to assemble various items of information in a form which demonstrates the need for and advantages of co-ordinating services.

The strengths and weaknesses of the expert-based determination of needs and the establishment of programmes have been evident in many case studies. As a third party between different agencies and user groups, the expert is able to see the full range of options and problems more clearly than either governmental agencies or users groups. His proposals may be implemented or rejected; usually he is employed to present the full range of options without having to bear the consequences. Often the expert does not live in the community. This allows an amount of freedom which neither governmental initiators nor users have. The former are bound by rules, regulations and limited funds; the second are restricted by their lack of knowledge and the constant awareness that they will have to live with the results for years to come.

The expert needs to establish a good working relationship with both his employer (usually the government) and the user, as his reputation is bound to suffer if his solution fails to function in terms of user needs.

The greatest obstacle is the establishment of trust between the various parties. One of the first tasks, therefore, is to alleviate the fears of the participants. Smaller agencies may be afraid of being gobbled up by large school administrations. Public officials may worry about the problems of combining two or more agencies with different geographical boundaries. Administrators may have misgivings over the performance of integrated school and social services. Agencies may have reservations about joint financing and administration. Community leaders may feel that a reshuffled administration threatens the school's responsiveness to its community. Parents may be concerned that community activities will distract children from their school work and teachers may be anxious that a larger facility in which the school is only one element may dilute their effectiveness or reduce their status.

If the process is to be open and participatory, the expert must often assume the role of mediator and arbitrator. On the one hand, he may support the interests of user groups in opposition to governmental interests, and on the other, represent governmental decisions and interests to user groups in public meetings. This requires managerial qualities and talents which few educators, architects, sociologists or planners learn as students. But no matter how capable the expert is, the constant act of balancing may weaken

his position in both directions.¹ Planners, therefore, may feel that they need to clarify their position in terms of loyalty and either become advocates of the user or serve the governmental side. In view of the fact that only the governmental side has the financial means to support an expert on a continuous basis, the practice of supporting 'advocate planners' as representatives of the citizens out of public funds has been introduced in some countries.

The importance of the expert's (specifically the architect's) role in co-ordination differs considerably from one country to another. Smith found that:

behind almost every Scandinavian example of a school being used as a community center stands an architect. This may be explained in part because the architectural profession is much more active and competitive internationally than any of the social services, including education. An innovation in one country is soon known to all. This was also true in Holland, Austria, Poland, and Switzerland, *though not so in England. There, the centers were encouraged for social reasons more than economic, educational, or aesthetic ones* [29].

The user-based process

This breaks most radically with traditional planning routines. The value of user participation in the planning and decision-making process has been recognized as an important issue in all industrially developed countries; the exact extent and method, however, remain less clear.

Planning processes for co-ordinated educational and community facilities touch many areas about which people are most sensitive: the education and future of their children, their own possibilities of further education and recreation and often more specific problems (e.g. urban decay, housing, lack of social services) which differ from one community to another. The direct relevance of issues involved, for the community as a whole and for each individual personally, gives a special status to participatory processes in this area of planning (in contrast to, for example, hospital planning or industrial planning, which are often more specialized and removed).

In a brochure prepared by the South Arsenal Neighbourhood Development (SAND) project, for instance, the involvement of the public is the vehicle for an attack of all problems in a comprehensive manner, but education plays a primary role in corrective actions and the clarification of options:

Learning will produce 'pay-offs' in terms of social and economic improvement. Learning and the Everywhere School will form the physical and emotional spine of the new South Arsenal Community [30].

Planning processes which might be termed 'user-controlled' occur relatively seldom, and where they exist they are sometimes a result of severe conflicts between governmental planning and the aspirations and needs of a community.

Most of them exist in Australia and the United States. Both Dunbar [9] and the SAND project [30] represent examples of resolving this conflict and thus actually strengthening community development and pride. 'Conflict' in itself, therefore, should not necessarily be seen as a negative factor in the relationship between governmental agency and citizen groups, but rather as an opportunity for developing and strengthening that relationship.

In most cases, governmental support for new types of planning processes has been needed and extended in order to establish a base for the development of a programme geared to the specific needs of the community. Without financial support for the planning process and the readiness to co-operate where necessary, most processes would fail. The SAND project, for instance, took nearly eight years to demonstrate the feasibility of the educational and organizational programme and would not exist any more without public funds [31].

In view of the extremely positive and innovative results of the few user-controlled processes, it may seem appropriate to pose the question of whether public funds should be set aside, generally, to support community input to public building projects.

In Sweden an alternative and more remote form of user control exists in the form of separate elections for a management board which directs the provision of housing and community services in residential areas [32].

In contrast to traditional schools, co-ordinated facilities are seldom a result of comprehensive governmental policies or decrees. Although they need govern-

1. Urban Design Associates in their attempt to decentralize planning procedures in Ann Arbor found it difficult to link the decision-making process at the neighbourhood level with the central administrative level. Local committees established in order to decentralize decision-making would make one decision, only to discover later that it could not be accepted at the central level. Consultants, in describing their problems as openly as possible in public meetings, provided too many choices, which led to confusion. Middle-level management, and those responsible for the implementation of specific programmes, were not sufficiently involved. (Urban Design Associates, 'A Summary of Recommendations: Master Plan for Education', prepared for Ann Arbor Public Schools, Pittsburgh, 1973.)

mental support and endorsement to exist, they usually evolve out of a specific local situation and tend to create unique organizational and physical solutions rather than widely applicable models.

Basically, the establishment of community schools has been supported at two governmental levels: the local level usually provides the initiative and the first step towards co-ordinated facilities—most often in single projects—while national governments increasingly provide supportive policies in terms of funding consulting services and information distribution. Whether the final responsibility for the building itself rests with county or metropolitan authorities [33] with a separately elected and financed school administration [34] or with a governmental department within the urban administration [35], the most comprehensive community school examples have generally been financially supported by central governmental agencies; they have involved experts and users and they have profoundly affected their local environment. In her national context paper on integrated facilities in France, Bergouignan concludes:

in all cases they involve changes at the local level. They are at the root of economic, social and urban problems. These local changes are symptomatic of the overall social changes now occurring in society [36].

The difficulties arising in this process have been considerable. From changes in legislation for the purpose of combining funds to severe problems of communication and trust between different governmental levels, the path to realizing complex centres has often proved to be a thorny one. The number of spontaneous attempts to co-operate which have been aborted because of inflexible rules, red tape and traditional behavioural norms, or just sheer thoughtlessness, must be legion. Such lost opportunities can never be regained. Isolated swimming pools, community centres and schools suffering from under-use are a continuing loss not only in terms of cash outlay for maintenance and running costs but also in terms of social opportunity costs.

Types of processes for establishing needs

The historic and cultural background, the type of setting and type of initiator largely determine the type of process for co-ordinated schemes. Obviously, there is no one model which fits all, but in each case a new pattern emerges. Out of the large variety of processes studied, however, a range of methods and several basic principles emerge. In contrast to traditional pro-

cesses, the main difference is that they must involve all parties, including the final user.

Along a 'ladder of participatory processes' [37] from the most government-controlled to the most citizen-controlled, the following strategies for involving citizens in the planning of community schools may be identified.

Interdepartmental committees and advisory groups representing the various partners' interests seem to present the most commonly acceptable method for establishing needs and priorities. Their work should be supplemented by experts and the public as far as is possible and feasible.

Open-ended and *ad hoc* committee structures are of particular relevance where creative solutions are sought.

Informing the public is the first and most frequently used method of involving citizens. Certainly useful as a point of departure for further dialogue, this method used as a single measure will not guarantee user input.

A next step is the provision of public hearings or public forums in which users are not only informed but also asked to state their opinions. Their major disadvantage is that relatively little genuine interaction among participants can be expected and most of the decisions are made by the main actors: public officials, elected representatives, etc. In order to avoid conflict, these meetings are usually held too late for the user to have any real input and therefore lead to frustration, antagonism and opposition, which in turn may cause time-consuming delay. In conjunction with other planning methods and at an early stage in the planning process, however, public forums may be useful.

'Charette' processes are one way to evaluate rapidly the needs and aspirations of a community. The term 'charette' refers to a public and open discussion which involves specialists (usually paid), public officials and citizens (usually unpaid) for several days or weeks of discussion prior to the programming for a community school. Experiences with charette processes¹ have shown that some of the disadvantages of this method are that it may be relatively costly and that long-term commitment and co-operation of the participants are in some cases difficult to achieve in a relatively short time span.

Planning games have been used in other instances and provide a more structured way to elicit user re-

1. For a more detailed description and evaluation see Harrison [9] and Environmental Design Group [20].

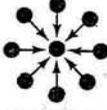
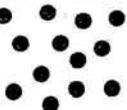
Game 1: developing an inventory

Inventory of spaces	How the space is used	How the space is serviced for those uses

Game 2: basic activities

1. Self identity	
2. Self expression	
3. Self place	
4. Skill development	
5. Colloquia	

Game 3: basic human relationships

	One to zero
	One to one
	One to object
	Many to object
	One to many
	Many to one
	Many to many
	One among many ones

Game 4: time

Activity	Child	Adult	Elderly	Continuous non-peak	Morning	Noon	Afternoon	Twilight	Evening	Night	Summer	Fall	Winter	Spring	Week-day	Week-end

Game 5: size

Activity	More than						Less than						More than											
	25	50	75	100	250	500	25	20	15	10	5	3	25	20	15	10	5	3	25	50	75	100	250	500

Game 5: enclosure—indoor/outdoor

Activity	Most open															Most closed																																																																																																																																																																																																																																																																																																														
																																																																																																																																																																																																																																																																																																																														

sponse and participation in the educational facilities planning process.¹

In stimulating an abstract model of a complex reality, and by providing an environment in which the fear of serious consequences is somewhat removed, many issues become clearer and can be handled more easily. Obviously games open up a way for manipulation of particular interest groups if not carefully checked by the users [20]. However, their structure allows a more meaningful input of lay persons and citizens alike in the relatively condensed time frame of a free, 'non-threatening' decision-making environment (Figs. 5-6).

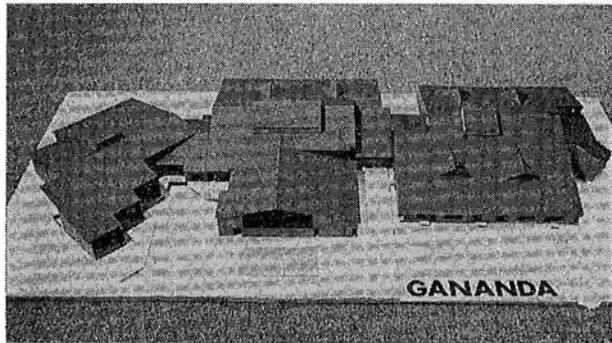


FIG. 6. The final shape of the building which reflects the input of local farmers—a series of interlocking barns with internal public pedestrian link. Source: Urban Design Associates, Pittsburgh, Pa, 1974.

Citizens councils, representing residents' groups and task forces, are usually involved in the decision-making process over a longer period of time and co-operate more closely with the official governmental bodies, e.g. board of education, city planning office, etc. They mostly concern themselves with particular aspects of special importance to the function of the school as a community centre and often become 'temporary specialists' in their field of action. Continuity and time are the two biggest problems for such groups. Power conflicts with established governmental structures may be even more serious.

Community corporations are probably the most advanced form of user control. With regular elections and a legal structure permitting them to administer their own funds, a small-scale democracy within a democracy (or a 'city within a city') is set up to relate the decision-making process, the plan and its implementation more closely to the people. Their general spread, however, could mean a new fragmentation of power and services if not used as a means to balance inequality between different districts and to support the gradual decentralization of decision-making power.

For the complex task of co-ordinating services and for the involvement of users on a continuing basis, community corporations provide a most effective tool (Fig. 7).

Most of these processes are not mutually exclusive. Thus a combination of different strategies has been found in most case studies. Often they demonstrate the development from a government-controlled process to the deliberate planning of final user control in co-operation with governmental agencies.

In all of the cases studied, the determination of needs and the decision-making process marks a clear departure from established practice. They have few common characteristics. Depending on the nature of the problem and political priorities, new processes and strategies for co-ordination must be invented, but some general principles can be identified.

Time is the most essential element for the development of a complex brief which responds to the 'real' needs of the community. It usually extends the limits set for standard programmes and should be over-estimated rather than underestimated to allow for enough flexibility and delay in order to keep essential options open.

An open-ended planning process which allows a gradual growth of the concept of co-ordination is clearly preferable to an early determination of a programme or rigid adherence to traditionally established procedures. The boundaries of the action area are seldom clearly defined. It is therefore important to seek out a strategy which retains the freedom to negotiate as long as possible. This, however, presupposes a trust that 'the passage of time' will itself operate to improve the basis of the decisions.

An element of marketing seems to enter the picture where local authorities, experts or users try to find new partners and allies for co-operative ventures.

1. The full description of games used in planning processes for one educational and community centre can be found in: David Lewis, 'A Community Determines What Its Centre Is' in Declan and Margrit Kennedy (eds.), *The Inner City, Architects Yearbook XIV*, London, Paul Elek, and New York, Wiley, 1974. Lewis points out that the games had an important bearing on programming and design and 'illustrated at once the enormous range of uses of quite simple spaces . . . and the considerable economies of usage and personnel that can be achieved by deinstitutionalizing a whole series of uses which traditionally have been the purview of separate institutions (library, school health centre, etc.). By separating out only these few activities which are completely specialized, and treating all the others in multi-usage clusters according to activities, sizes, and peaks, one arrives not only at new concepts of space but also at new concepts of administration, staffing, and capital and operational funding'.

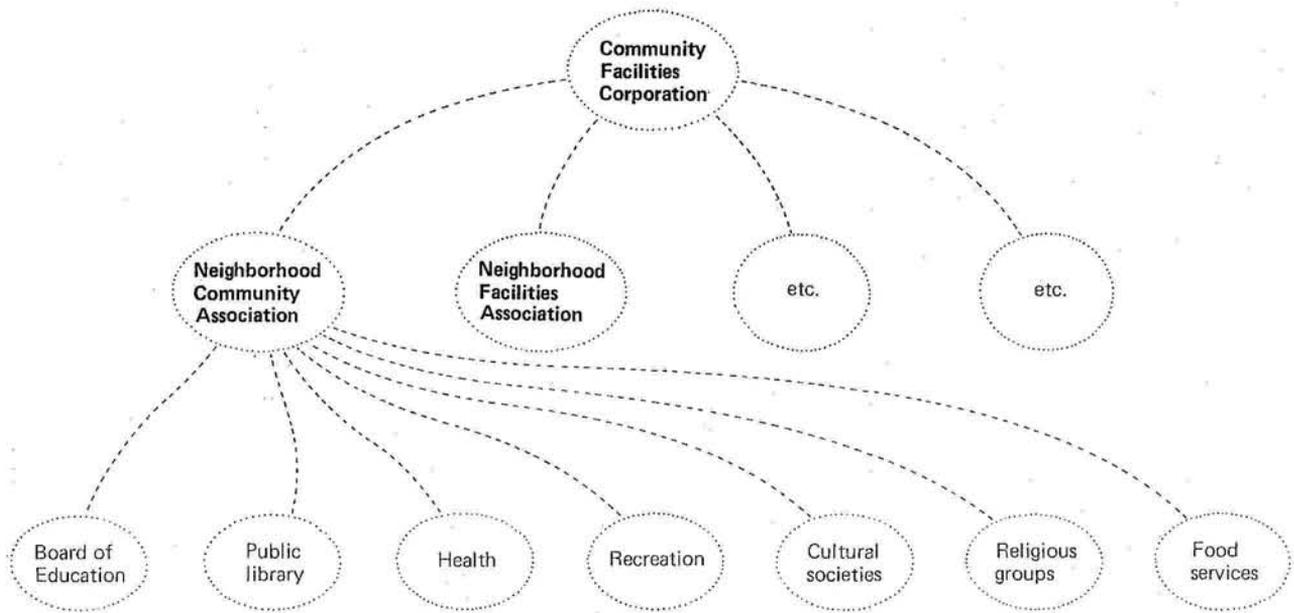


FIG. 7. Structure of the Gananda Community Facilities Corporation. *Source:* Urban Design Associates, Pittsburgh, Pa., 1974.

Additional costs can arise in complex and lengthy planning procedures; they must be foreseen and included in the project costs.

Non-involvement of the public may result in non-use of the facility, particularly where planning time is scarce and other priorities (e.g. educational reforms) prevail.

An early involvement of the public is desirable to diminish difficulties and tensions at later stages (Fig. 8).

Developing countries: the return to more holistic models of school/community integration

Traditional patterns for providing education

Formal and compulsory education in developing countries has, in most instances, been introduced by the respective colonial powers and thus carries some of the same traits as in industrialized countries. In many instances:

communities do not expect schools to get directly involved in development work. This is not the type of contribution to their progress which they expect. Perhaps because of a long tradition of sometimes more than 50 years, the school is seen and understood as an agency specialised in teaching. The community expects the school to further the intellectual development of as many of its children as possible. The community is satisfied with the school to the extent that it gets its children through the different examinations opening channels of upward mobility. The community then expects from its successful children contributions towards its development, contributions in cash, in kind, and in political patronage [38].

Criticisms of the school cover two points: its alienating effects in the field of traditional local or tribal culture and its ineffectiveness in terms of linking education and work opportunities. Three of the answers to these problems are linked to the school/community issue: more holistic models of education; strengthening concepts for self-help and self-reliance; and linking education and work. All three have a historic dimension which is of interest in respect of current and future models.

More holistic models of school-community integration can be found in the history of most nations. In view of the current emphasis on a return to traditional patterns of education in Africa, Ki-Zerbo points out that before the advent of colonization African education:

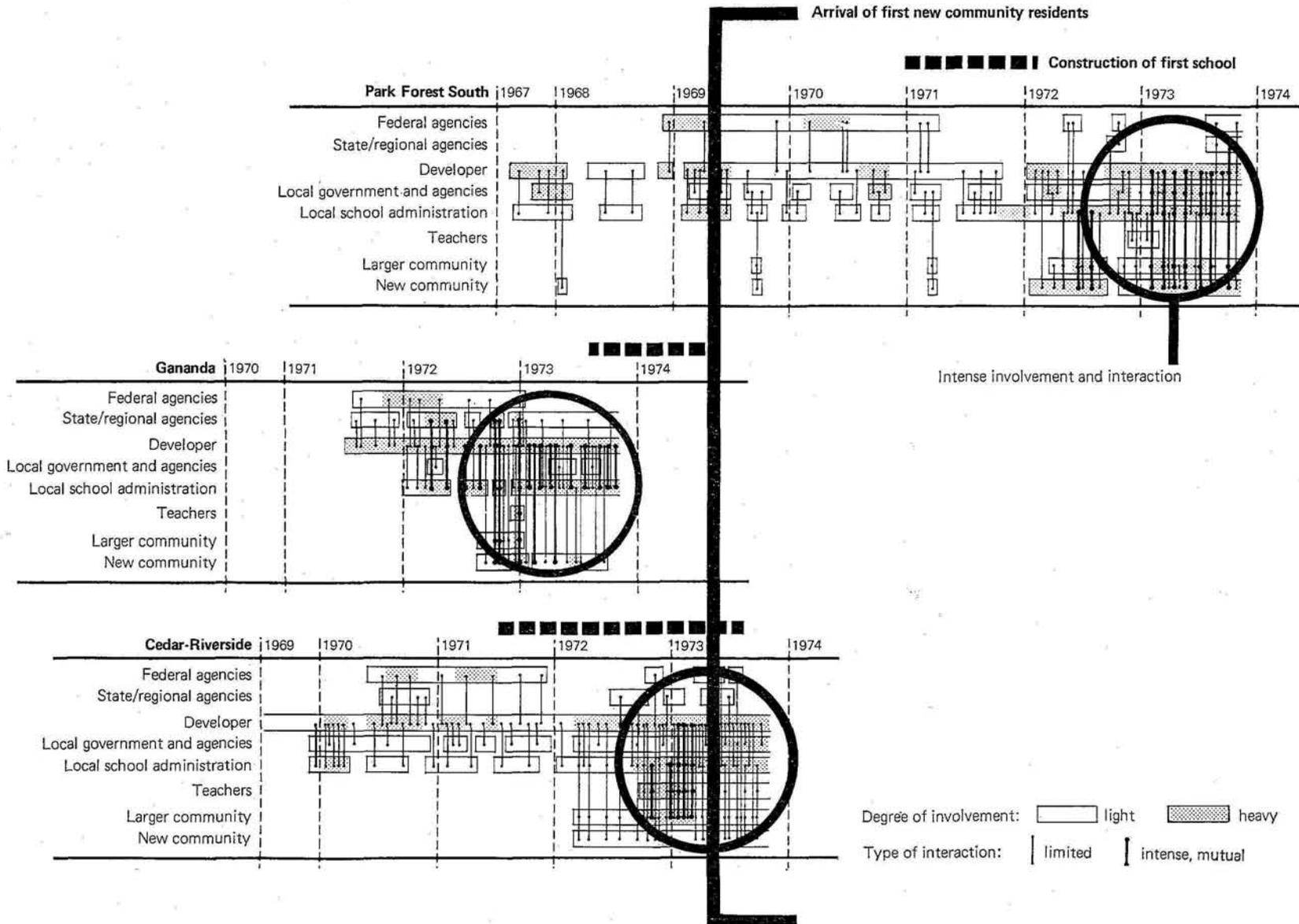


FIG. 8. Participation in educational planning in three new communities. The comparison of the three participatory processes shows that only in one case—Gananda—has intense involvement and interaction taken place before the first residents arrived. This has considerably diminished difficulties and tensions between people who lived in the area (mostly farmers) and the new residents. In Gananda, the process has contributed to the planning and design of the new neighbourhood centre and the establishment of a community facilities corporation. *Source:* Environmental Design Group, Inc., *The Imperative of Planning Together, Educational Planning in New Communities*, p. 93, New York, Educational Facilities Laboratories (Working Paper No. 5).

was concrete and pragmatic: it was acquired through active life . . . it was a global education: it put together the manual and the intellectual, the body and the spirit, and it functioned because it linked to the group's activities, including its leisure and its games. It was a progressive education, moving forward by stages. . .

This education naturally reflected the limits of its historical age. In particular, the absence of writing obstructed the capacity for abstraction, generalization and capitalization of knowledge. Hence a certain conservatism. But its strong oral tradition gave it more sap and savour, and more truth also. Hence its profound humanism and its efficacy in development, deriving from the fact that this society had almost, in its own way, realized the Unesco ideal, i.e. the educative society [39].

This model gradually disintegrated with the advancement of colonial powers and European missionaries who introduced an education which was 'utilitarian and exploitative'.

Today an emphasis on the integration of cultural and practical links between school and community can be found in educational reforms in Africa, Latin America and Asia. New methods are being explored to exploit vastly underused human, natural and man-made resources for education, to link education and work as well as all available social services and to broaden the base for education through co-operative self-help efforts.

Practical efforts based on self-help and self-reliance often only need the declared readiness of the government to be set in motion, as the Harambee movement in Kenya has shown and as many other highly involved African, Latin American and Asian communities prove.

In areas where industrialization and concurrent specialization of labour have not set in, mutual aid is the natural way to achieve anything that goes beyond the individual person's capacity, whether it concerns the building of a house, a road or a well or the establishment of a school, a hospital or an assembly hall.

In some areas the government is likely to find itself in a dilemma when it come to the question of the take-over of schools.

On the one hand, community-built schools very much reflect the ideas and the life-styles of the people who built them: they are built of mud or of cement according to whether the community is rich or poor, and places a high or low value on schooling. The people are very conscious that it is *their* school, and take an interest in the progress of their children—a very important factor in increasing the effectiveness of education. But as soon as the government takes the school over, interest wanes: the school buildings are probably of blocks, and no longer reflect the

life-style of the village. Education then becomes a government problem, not one which concerns the villagers. . .

One solution would appear to be to assess each area and each school on its own merits: to avoid blanket, all-embracing policies. Yet, even then, the government would have to tread very carefully, for it would most certainly be accused of favouritism in some areas, and of discrimination in others. In these circumstances the Kenyan solution, whereby the government provides the teachers and the running costs, leaving each community responsible for the structure and capital costs, would seem to be the best one, and worthy of consideration by Nigerian and other governments [40].

The Kenyan solution, however, besides creating an enormous capital value and widespread enthusiasm, also seems to have situations of conflict between local groups [41]. Here, as in other cases, programmes relying largely on the principle of self-help created so much enthusiasm that the government had to discontinue supporting them for a while in order to find the necessary additional funds and resources necessary to supply the teachers and materials needed, or to consolidate the programme.

The by now classical case of self-help and its problems is the United Republic of Tanzania, where the Arusha declaration in 1967 called for a number of policy changes in the field of education [42]. The first aspect to be tackled was self-reliance activities aiming at a change of attitude as well as at contributing to the costs of education.

All schools must contribute to their own upkeep; they must be economic communities as well as social and educational communities. Each school should have, as an integral part of it, a farm or workshop which provides the food eaten by the community, and makes some contribution to the total national income.

This is not a suggestion that a school farm or workshop should be attached to every school for training purposes. It is a suggestion that every school should also be a farm [42, p. 8].

The history of self-help, therefore, is not a straightforward history of success, and the few evaluation studies available usually point to similar problems: (a) lack of knowledge and skills on the part of the local people; (b) lack of understanding, technical and managerial support, and adequate supervision on the part of the bureaucracy; and (c) lack of motivation and attitudinal problems on either side.

Similarly, links between education and production are by no means as undisputed as may appear from the number of cases in which they have been implemented. There are several problems which have existed, since the inception of the concept which dates back to

the nineteenth century. Too often in the history of colonialism, as Sinclair [43] points out, the concept of combining education and practical work has been seen as a means to confine the rural population in a situation of easy exploitation, and as a barrier to advancement.

writers of the educational history of the Gold Coast generally do not explain the educated African's aversion to manual work. The important point is that he associated farm work in particular (and many other forms of manual work generally) with slavery [44].

Since villagers traditionally had a not very labour-intensive pattern of subsistence farming which met their basic needs, they saw no need for agricultural instruction from foreigners, and the idea of cultivating the soil for additional gains had the taint of slavery.

A British policy statement, aimed at introducing manual labour in rural schools in India around 1900, closely resembles some of the rhetoric used to advocate practical links between school and work today:

curricula of rural schools should be adapted to local needs, 'not to impart definite agricultural teaching, but to give the children a preliminary training which will make them intelligent cultivators, will train them to be observers, thinkers and experimenters in however humble a manner, and will protect them in their business dealings' [43, p. 55].

Except for the humble manner and the rather mechanical interpretation of agriculture as an additional subject to provide a simpler course than that taught in an urban school, which seemed acceptable at that time, comparable statements can be found in many publications on the same subject today:

The learning needs of out-of-school rural youth should be studied in the context of the particular environment or milieu of the group. The resultant programmes should be diversified according to the environment and should aim at making action authentic in relation to the needs and values of the groups to be served [45].

Parallels can also be found for the rejection and failure which the idea encountered in its implementation phase. The British plan to reform India's country schools in the first decade of the twentieth century failed because the rural curricula did not qualify school-leavers for government service, and frequently village people, following the introduction of the curricula, sent petition after petition to higher governmental levels to change it to the ordinary course.

Sinclair [43, p. 55] refers to the *Quinquennial Review 1917-22* in which the Education Department of the Central Government noted that:

It is often assumed that the education given in a village school is despised because it is not practical enough. In many cases, however, the parent's objection is just the opposite. He has no desire to have his son taught agriculture, partly because he thinks he knows far more about it than the teacher, but still more because his ambition is that his boy should become a teacher or clerk.

Almost identical statements can be found in studies that have been conducted in 1973 in the United Republic of Tanzania where

parents rejected the concentration on vocational i.e. farming skills, based on the rationale that they could teach these things better than the teacher in the school [46].

The similarity between two entirely different times and places shows that a basic contradiction exists between a selection process for higher education based on standard examinations, on the one hand, and the general aims of a community-oriented education (which does not directly contribute to academic achievement), on the other.¹ This conflict can be seen as one of the major impediments to the spread of the community-school concept linking education and production, which persists in spite of a continuing rhetoric relating to a de-emphasis of formal education and standard examination procedures.

A third barrier to the realization of closer links between school and production can be found in the traditional education of teachers, who are usually not able or trained

to connect their teaching with the objects... familiar to the children in country schools... and as a class are not interested in the growing of flowers, vegetables or crops, and have little or no knowledge of how to use the school garden for lessons in nature-study... Hygiene was studied as a set of textbook rules to be memorized [43, p. 57].

The situation described in 1922 in India finds its parallel in reports from the United Republic of Tanzania fifty years later, where teacher-pupil relationships are characterized as follows: 'the teacher stands with a stick instead of a hoe' [47].

However, not only the sheer lack of training and motivation of the teachers, but also the usually hierarchical and bureaucratic pyramid in which the educational system is organized, differentiated by seniority,

1. The Nigerian case where students at Mayflower caused a strike against the introduction of comprehensive high-school requirements has remained a single example of collective adherence to community school principles based in no small part on the existence of a strong and charismatic foundation headmaster.

qualifications, salary scales and evaluation procedures, provide barriers that few are able to overcome.

This may explain in part the predominance of cases initiated by charismatic headmasters throughout history and the high mortality rate of those projects which thrived as long as the founder was on the spot, and faded thereafter [43, p. 75]. Where overdependence on one personality can be avoided and a close working relationship including community people and local leaders can be established, the chances of longer term impact would seem to increase.

On the whole, it seems that the pace is now quickening and the productive capacity of schools in Africa, Asia and Latin America continues to grow stronger.

Starting with Tanzania and Guinea in the 1960's, there was something of a gap before the concept became acceptable. Zambia is only one of the most recent, with her President's announcement on 20th July 1975 that with immediate effect all education institutions would become production units. Strong interest has been shown also by Somalia, Sudan and some of the military governments with radical aspirations [48].

The same holds true for Latin America. Here, the Panamanian model provides the most radical change from the concept of formal schooling in offering the central production school in the country sufficient resources to become an economically and organizationally autonomous unit within three years from its inception. For other governments, however, the link between education, production and employment in local co-operatives becomes a political issue which may not be acceptable.

In socialist countries, the link between education and production has always been based more on the ideological aspects of eliminating the difference between intellectual and manual work rather than economic reasons of financing education, producing skilled labour or new employment opportunities. A distinct move towards the integration of work and education in practical and theoretical studies followed the Russian Revolution in 1917 [49]. According to Volpicelli [50], in the 1930s, with the advancement of industry and the need for qualified and specialized labour, the concept was given up in favour of a more traditional curriculum. Today, schools are planned as relatively specialized facilities within the overall framework of services in the micro and macro *rayon* (district). Links between education and production are provided through organizational rather than physical co-ordination, e.g. in alternating places of learning between school, farm and factory.

In contrast to most capitalist countries, where

manual labour is still associated with an inferior position, the Cuban secondary school, the Escuela Lenin near Havana, which accepts only the best students from the primary grades, is linking the highest standards of education and production. In extensive electronic production facilities and fruit plantations, it produces goods of a value equivalent to U.S.\$1.5 million per year. Although this is certainly only a small part of the total cost of the school's 4,000 students, it nevertheless presents a considerable saving against vocational school costs in many other countries.

Typical settings

In the context of a developing society, the most important question is: what is the community for which such schools are to be provided and what are its needs? Obviously, it is that section of society which is socially underprivileged, financially unsound, educationally disadvantaged and those who have not yet received their due share of right for meaningful living [51].

These sectors of society are generally to be found in rural areas, urban squatter settlements and natural or political emergency areas.

Rural settlements in developing countries, typically losing their most active population to urban areas and facing notoriously high underemployment in conjunction with socio-economic decline, provide the major category of settings for school/community integration.

Attention is increasingly focused on the peasant communities of lesser developed countries, for they both highlight the pressure and yet may have answers that lie within their own understanding of community. We are well aware that in many areas peasant farmers urgently need new dams, roads, health centres, schools. When these are not forthcoming from government they look towards doing something themselves. They may not *reflect* on the situation, but they undoubtedly *know* that with no reference to money men have found ways of co-operating together to plough new land, build houses, support the ill-fortuned. So men today may work together to dig a new cattle dip, construct a new classroom, teacher's house or health centre. Such thinking can be readily understood in most cultures of the world—and it contains the nub of a potentially valuable method of improving human living standards.

So here is our idyll of men working together to mutual advantage, the essence of 'community'. It is an appealing thought that the small scale communities of Africa, Asia and South America have, in retaining traditions of cohesiveness and co-operation, the answer to their own developmental problems [41, p. 162].

In terms of external and internal aid, rural communities provide a primary case for agencies or departments to co-ordinate their actions. The argument often appears particularly compelling when resources are limited, and when a single building or small complex is being designed for multiple community use. In rural areas the school frequently provides the only public facility for larger meetings and thus the natural centre around which other services may locate.

The various ways in which co-ordination has been achieved centre around the concepts of self-help in the construction, maintenance and support of the school, and the integration of school and production aimed at increasing employment opportunities for school-leavers, at upgrading the financial support for education, or at providing technical know-how or food supply to the families on surrounding individual or collective farms. Bergmann and Bude, however, point to another way of measuring school/community interaction:

Relations between school and community might be assessed first and foremost by the scholarization rate of the school age population. It is not only the decision on schooling, but as well the level of support and cooperation that indicates the relations between the two institutions. If, for example, school is not regarded as a meaningful institution for the preparation of children for the adult's world, its representatives, the teachers, will hardly find children to teach and face difficulties in establishing the needed contacts with the community members [38, p. 128].

In their large-scale sample survey in a central African country, they found that in two-thirds of the schools traditional authorities—the chief, the council and sometimes the leaders of secret societies—had made a ruling to the effect that all children had to be sent to school. The community's involvement in the building and maintenance of the school was, however, largely determined by its access to vital services (roads, water, social and health services, administrative units, etc.) and its level of development.¹

Urban squatter settlements, although in some of their major developmental deficiencies similar to the urban poverty areas in industrialized countries (lack of basic services, high unemployment rates, vandalism, etc.), are characterized by two distinct differences: the capacity for self-help and motivation towards upward mobility.

The number of case studies linking school and community services in urban squatter settlements is very limited. This type of setting is probably the least typical. Yet, in view of the constantly growing number of people who will find themselves in peri-urban and

urban situations, more attention will have to be directed towards these areas of deprivation.

At Cartagena (Colombia) [52], buildings and facilities play a less important role than the organization and co-ordination of co-operative self-help efforts and the role of the teachers or community leaders in this process. In Kawangware (Kenya) [53], a network rather than integrated facilities solution has been sought for upgrading, supporting and co-ordinating existing services with the help of the people.

'Emergency cases' represent a third type of situation which frequently leads to a co-ordination of educational and other social services (Fig. 9). Thus the *escuela piloto rural* (rural pilot school) scheme in Honduras, introduced after a hurricane in 1974, made a first comprehensive survey of the country's school system and subsequent re-evaluation of educational plans necessary. The joint effort of building a dam to avoid disastrous flood in Jombang, Indonesia, resulted in a co-ordination of communal action which was later followed by an institutionalization of co-operative patterns including education [54]. The rebuilding of over 300 schools after the earthquake in 1970 in the rural areas of Peru would have been impossible without the combination of prefabricated components and local (mostly unskilled) labour and materials, which necessitated a new way of communicating the construction process to the population in three-dimensional drawings, explaining each step of the sequence [55].

A new stage of closer ties between *barrio* high school and community was reached in the Philippines following an epidemic among draught animals aggravated by tractor owners taking unfair advantage of the situation and doubling their rental rates. (Each village organized a team of teachers and students to

1. They differentiate between: (a) isolated rural communities (they are inaccessible to vehicles and require one or several days of walking or long water transport); (b) remote rural communities (they are inaccessible to vehicles but are less than a day's walk away from motorable roads or places with basic service facilities); (c) marginal rural communities (they are either on poor roads which can be used only part of the year, or not far from main roads along footpaths; they have poorly developed cash crop farming, and marketing implies transport to a co-operative elsewhere); (d) poorly served rural communities (they are along roads with a firmly established cash crop agriculture but far away from vital services); (e) well-served rural communities (they all lie on motorable roads and have rather good access to administrative units, institutions for health care, or co-operative stores, etc.); and (f) urban and semi-urban areas (these are administrative centres in their immediate surroundings; they are on tarred roads or motorable ones throughout the year; many of them have large markets or are in their immediate neighbourhood so that food crop farming becomes a cash crop activity) [38].

attend a course dealing with the treatment of the disease and within three weeks, the epidemic was under control) [56].

During the recent conflict which destroyed many homes, schools and other community facilities in Cyprus, the newly created refugee camps centred around large tents which served as schools, hospitals, meeting and production rooms. They became the nucleus for new developments. Today more permanent structures are built upon the multi-use experiences gained during the difficult periods of relocation and adjustment [57].

Type of initiators

International organizations and community leaders (usually foundation headmasters) play an important role in the identification of origins for school-community links in developing countries.

International organizations

In many of the specialised agencies of the United Nations, there has been an almost simultaneous recognition of the way wider development goals are being skewed from the top, and a desire to formulate a lower level policy for education, agriculture, health and industry has been very evident. Indeed, there has been sufficient of a common approach in the emerging policy documents of ILO, Unesco and WHO that it would be possible readily to substitute the word 'education' for 'health' in WHO's most recent policy statement on the promotion of national health services. The ingredients and priorities are the same [57].

Similarly international conferences organized on a regional basis in Latin America, Africa and Asia have pointed to the need for co-ordinated action.

At their 1971 Singapore meeting, the ministers of education and those responsible for economic planning in Asia concentrated their attention on two main themes: quality and relevance in education and resources. Many countries reported complementary activities in adult and youth education.

In their recommendations, the Ministers urged the promotion of national policies directed towards making education available to the whole community and the integration of adult education into the educational system as a whole on an equal footing with school education. They also recommended that education at all levels be available to all sections of the population in rural areas and that it be planned as an essential element of rural development programmes [58].

Recommendations, however, have been followed by actions and a Regional Experts Meeting held in 1974

to follow up the recommendations made in 1971 reported on a wide variety of measures directed towards making education available to the whole community. They included special education provision for rural areas; programmes for the reduction of illiteracy drop-outs and repetition; increased attention to the education of girls and women; the provision of education for underprivileged groups and ethnic minorities; and the more general introduction of free, universal education [58].

A large number of publications, workshops and research studies carried out by the regional offices of Unesco in Africa, Central America and Asia have explored and emphasized the importance of pooling all resources for education and integrating the efforts of all governmental levels and sectors [59, 60, 61, 62].

Direct support through funds from various international organizations has also been instrumental in the establishment of co-ordinated programmes.

In several mission reports it has been pointed out that although the responsibility for economic and social development falls to the national government, there are clearly cases where national efforts alone cannot achieve much and international organizations, bilateral aid and other forms of aid can make an effective contribution [63, 64].



FIG. 9. Co-ordination in emergency. *Source:* International Union of Architects, Working Group, 'Educational Spaces', *Integration of Educational and Community Facilities*, (report of the third seminar, Athens, October 1976, p. 13-14).

The acceptance of international aid, whether in terms of policy, funds or expertise, is not, however, without problems for the recipients. Apart from the fact that outside donors are usually even further removed from local community needs and perceptions than national governments, their determination of priorities on which the provision of funds depends stands as a clear contradiction to the demand for community-based decision-making processes which in some cases tend to be more 'progressive' and in others more conservative. Thus the emerging consensus at the international level towards a 'community angle in education' does not always coincide with national and local attitudes. Existing unreformed education systems, as well as the classic type of primary school, 'which develop clerical skills rather than familiarity with the environment' are still popular in the villages [65].

Often today's presentation of community education as a panacea for educational ills sounds like some old colonial debates being replayed. In reality, however, the context of the discussion is now quite different. When, therefore, Unesco in a background paper to the 1976 Conference of African Ministers of Education felt that 'participants will probably wish to consider means of bringing education more closely in touch with life and giving it greater relevance', it was not just voicing a vain hope, but knew that there would be few countries that could not report the establishment already of ongoing plans for substantial experiments in community education [48].

Governmental agencies in developing countries are usually the most powerful and relatively rich at governmental level. In contrast, the local level, mainly in rural areas, is characterized by increasing poverty and dependence. In between the two, one or several less powerful decision-making levels usually exist.

The difficulties of vertical co-ordination between these three levels and horizontal co-ordination between various sectors and institutions have given rise to a large number of special efforts, programmes and agencies for co-ordination.

In addition to policy declarations, special centres for research and innovation and separate agencies for the support and supervision of projects of co-ordination have been established. *Ad hoc* committees for co-ordination seem to be one of the most common methods of co-ordination at all levels of government. Permanent committees, as for instance the Junta de Co-ordinacion Permanente in Peru, exist in fewer cases. In exceptional cases, e.g. Panama [66, 67, 68] and the United Republic of Tanzania [42, 69] national development plans can be found which use the school as a focal point for development.

There seems to be a trend in centralized as well as decentralized systems either to reduce the number of intermediate levels of government (depending on the size of the country and different regions) or to circumvent them in dealings between national and local levels because of the cumbersome and time-consuming procedures involved. As co-ordination is largely dependent on political goals, difficulties arise in connection with long-term efforts of co-ordination where unstable political situations prevail.

On the other hand, it can be said that some of the most comprehensive programmes of co-ordination have come into existence as a result of fundamental political changes (United Republic of Tanzania, Panama, Peru). The influence at the local level of political change at the national level depends on the degree of autonomy and independence granted to local decision-makers. One of the most essential characteristics of community-oriented education is the switch of resources from the top to the bottom echelons. New education, health care and employment policies imply not merely more facilities and personnel, but also different organizational structures and types of personnel.

King points out that decentralization of power is a necessary precondition for community involvement and that it is difficult

to avoid the conclusion that *to be effective in their main aims community schools ultimately involve community politics*. And it is probably also fair to say that there are many governments that would want the one without the other [48].

Experts,¹ usually from a middle-class background, often from a different cultural or ethnic setting, have a particularly difficult role as initiators of co-ordinated projects in developing countries. Whether architect and planner, educator, or social scientist, the expert seldom has the time, funds or trust of the people to deal effectively with all the problems involved.

The first of numerous difficulties is to gain a profound knowledge of the local situation; this is a necessary aid in preparing the right alternative for development. The second difficulty is to establish the trust, support and motivation needed to carry the plan through. And the third and most crucial task is to set up a structure which will survive the expert's departure. This process not only requires the in-depth understanding of an alien culture, but also an attitude which recognizes the social and educational effects of self-

1. By expert is meant a person who is a professional in a specific field and may be either a national of the country concerned, or not.

help and self-reliance as more valuable in terms of local and national development than speed and efficiency in terms of executing the project at hand.

Nimpuno cites one study which shows

how in at least one important case (rural water supply) the way the government staff and foreign aid donors have organized themselves leads them actively to discourage the peasants from offering self-help labour (arguing that self-help is unreliable and unpredictable and that it is simpler and quicker to hire labourers) [70].

Some of the latest developments in providing expert and technical aid for rural areas which cannot support continuous professional services tend towards the creation of technical support centres on a regional basis. These act as resource centres and can be called upon in critical situations or in case of emergency. The building team, similar to a regional health unit, will offer regular 'check-ups' through mobile construction teams of experts, and possibilities of providing preventive care through training courses for local craftsmen or co-operatives [71].

Community leaders are the most usual prime movers in co-ordinated projects. It is important to realize that local groups in developing countries are seldom the initiators of co-ordinated schemes if there is not an element of either charismatic or trained leadership involved. Most often a local leader or the foundation headmaster (who is determined to create a new type of school and community centre) becomes the agent of change who solves major developmental problems in the community.

Isolated projects and programmes, led by talented individuals, have existed all the way through history and probably will continue to exist in the future, often under the most difficult circumstances. Asra Hawariat in Addis Ababa, Ethiopia [72], the school and community centre in Qued Akreuch in Morocco [73] and the Yombang Project in Indonesia [54] are currently some of the most successful examples.

This 'push from below' results in the most active, flexible and comprehensive schemes of co-ordination but it is also characterized by a high mortality rate. Projects seldom survive the departure of the charismatic leader to other localities or higher levels of government. However, in most instances, large-scale individual projects of co-ordination not only serve their immediate local community but also (and this is seldom recognized) provide an excellent testing ground for new ideas.

Through experience built on day-to-day encounters with local problems and the gradual development of a concept which fits one situation, new ideas and struc-

tures will surface which can be of wider applicability and invaluable for the discussion of new plans at the national level and regional level. Thus, Litowa in the United Republic of Tanzania and its unique programme of curriculum development, planning involvement and commitment took place and served as a model before official guidelines were established for new developments. In many cases, however, governments are not too happy about these rather radical departures from established practice.

The existence of charismatic or natural leaders, however, cannot be depended upon for the implementation of larger-scale programmes of co-ordination. The training, retraining or ongoing training of teachers, administrators and community leaders, who are able to carry the additional burden of becoming prime movers, agents of change or animators of co-ordination processes is of the most crucial importance.

The question of which local agents will provide the best possible source for initiating change and making the community less dependent and increasingly autonomous must be posed and answered anew in each case. In general, however, new attitudes and behaviour patterns need to be developed parallel to new structures and content.

Types of processes

Depending on the setting and the initiator, the processes which lead to co-ordination either emanate from the centre and filter through different levels of governmental decision-making at State, regional, district and local level or they begin at the local level and gradually work their way up so as to obtain more support and find increased applicability to other situations.

Obviously the problems encountered in both these processes are very different. No process, however, can exist without the support of the users.

In some cases, more perhaps than the formal school system, the fragile network of educational processes outside the classroom may suffer if forced into the straight-jacket of a centrally prescribed plan. The planning methods applied to non-formal education will have to be such as to preserve its spontaneity, unconventionality, flexibility and adaptation to multi-coloured local circumstances [74].

As in industrialized countries, methods of involving the public range from the most government-controlled to the most user-controlled: information campaigns, public meetings, the establishment of committees and subcommittees and, lastly, autonomous corporations or co-operatives.

In contrast to the traditional pattern, new processes are characterized by decentralization, an increase of models of decision-making from the bottom up and a gradual growth and process rather than project attitude towards development.

Gradual growth rather than rapid quantitative expansion can be expected in the course of co-ordination. Different steps in a bottom-upwards model of co-ordination usually involve: (a) a district-wide inventory of existing programmes and resources in co-operation with local community members; (b) the assessment of needs as a participatory activity carried out in every district (Fig. 10); (c) studies and discussions of delivery mechanisms and resources available for a specific programme—content, coverage, location; (d) identification of development projects; (e) draft plan including various alternatives; (f) step-by-step implementation in co-ordination with local, regional and national levels (Fig. 11). Proposals and procedures following this outline can be found in Africa, Asia and Latin America [45, 53, 62].

One important example is the process of educational planning in Peru which, based on an analysis of experts and users, attempts a real transfer of power to the local and intermediate levels:

On the basis of the educational plan and the situational diagnoses, the team submits an operational plan to the Zonal Planning Office in which it describes the work of the nucleus during the year, indicating the problems encountered and possible solutions to those problems. These reports from each of the NECs within each of the 35 zones constitute the substance of the Regional Biennial Plans which, in turn, provide a clear picture of the educational reality, positive and negative, throughout the country so that national planning can take full account of actual needs at every level.

Educational map, situational diagnosis and operational plan combine to form a dynamic process which can be summed up in two formulae: 'evaluation plus modification' 'reflection plus action'. Through this process the NEC undergoes a constant, salutary self-examination and, where necessary, a continuing re-orientation, with the masses at last beginning to make a genuine contribution and to take concrete decisions. The notion that education is a hermetic science, inaccessible to any but academics and is being steadily eroded [75].

The process of involving the community can only occur gradually in order to lead from arrested development and dependency to progressive independence and continuous development, while the role of the prime mover should move in reverse from continuous involvement and direct action in the community to indirect support and gradual withdrawal out of a largely autonomous

group.¹ The school and community centre becomes an intermediate step in a continuous growth process rather than an end in itself with a concurrent arrest of interest and involvement once the building is completed.

Planning for adequate complexity

The constantly increasing size and differentiation of governmental tasks in all countries have produced a degree of centralization whose dehumanizing effects and mistakes begin clearly to outweigh the advantages.

The return to links between school and community, although it led in the 1960s to larger complexes, must today be seen as an integral part of a countermovement towards smaller and more autonomous subunits. The problems are therefore not so much technical as political and social. In this sense, the planning process for co-ordinated facilities can provide a first move towards the establishment of subunits which guarantee every citizen a reasonable share of influence, first in his own realm and secondly in his wider environment. It creates a possibility of reducing over-complexity at the top which leads to chaos and major mistakes, of reducing serious power deficits at the bottom of the hierarchy, and of balancing both in an intermediate situation of adequate complexity.

Lessons to be learned from history

The analysis of historic trends in the use and the abandonment of the concept, however, clearly shows the difficulties involved in maintaining it against the necessities of technological advancement.

Thus the co-ordination of school and community services (mostly in industrialized countries) has been abandoned throughout history whenever the community grew enough to warrant specialization and to demand increased division of labour, or in the competitive struggle for scientific superiority.

The co-ordination of school and community for the purpose of constructing and maintaining schools (mostly in developing countries) has been discontinued wherever governments began to set up central administrations charged with the task of building or maintaining facilities and setting norms and standards and where subsequently self-help became an administrative burden.

1. An excellent analysis of this point can be found in: Colombia, Ministerio de Educación Nacional, Programa de Concentraciones de Desarrollo Rural. *Trabajo Experimental Taguales: Un Ensayo de Participación Comunitaria e Integración de Servicios*, Bogotá, December 1975.



FIG. 10. Planning games for Kawagware, Kenya. The technique was devised to assist the public and professionals in the direct participation in the formulation of a brief. The different elements of a community centre were translated into simple graphic pictogrammes and could be moved around freely by those involved in the dialogue. *Source:* Bruce Creager, 'A Multi-Service Community Centre in Kenya: the Needs and Problems of Communities in Transition from Rural to Urbanized Settlements', *Buildings for School and Community Use: Five Case Studies*, p. 77-96, Paris, Unesco, 1977 (Educational Studies and Documents, No. 26).

- | | | | | | |
|--|---|--|---|--|------------------------------------|
| | Entry point along pedestrian street | | Community organizations Leaders | | Lending and reading library |
| | Social welfare worker's station and orientation | | Community projects | | Shade tree and children's play |
| | Reception and information | | Arena | | Crafts workshops with sales |
| | Consultation booth | | Coffee banda | | Market activities |
| | Self-service information | | Evaluation and back-up Staff work space | | Control zone at market |
| | Staff meeting room Lounge and reference library | | Social hall | | Public toilets |
| | Fiscal officer | | Community meeting | | Pedestrian crossing and road bumps |
| | MSSC director | | Classroom | | Vehicular traffic |

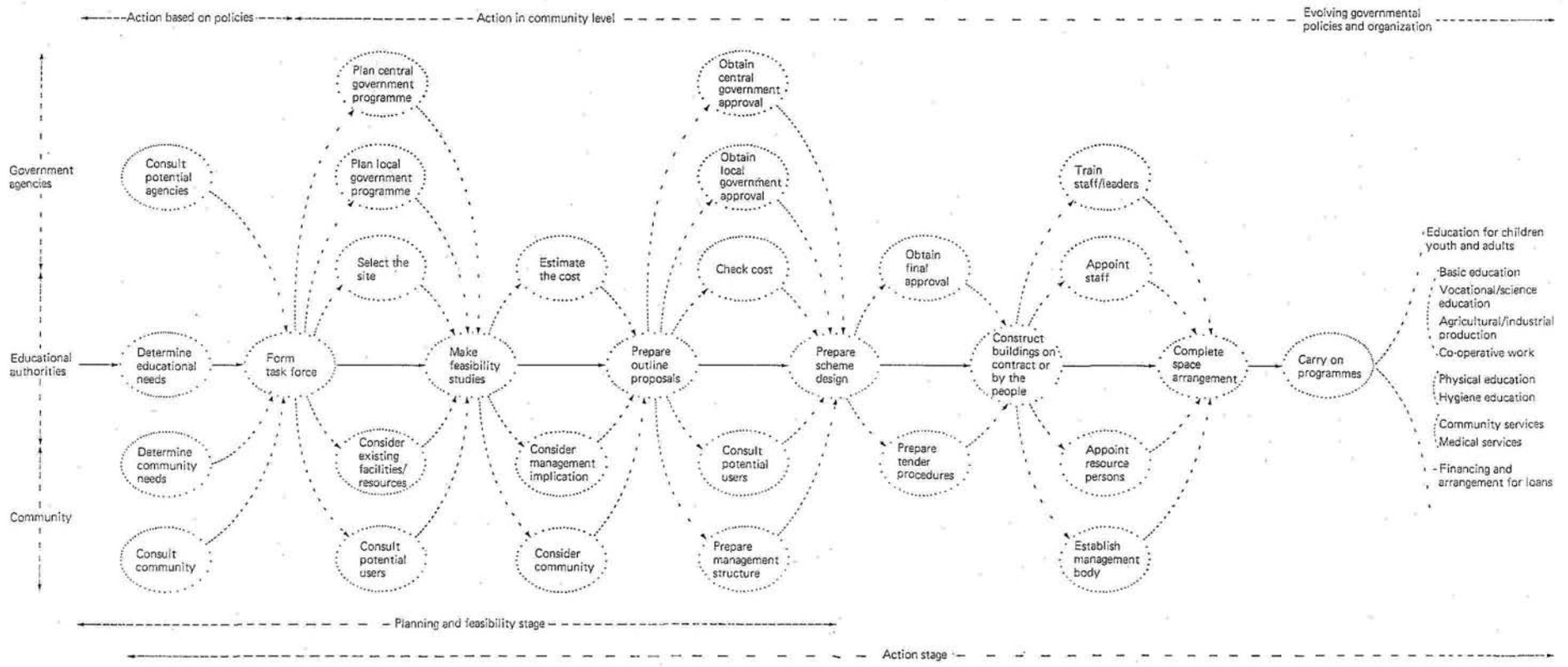


FIG. 11. Planning process involving all parties. *Source:* N. Noguchi, 'Joint School and Community Planning', *Educational Building Digest No. 10*, Bangkok, 1977.

Finally, the close link between education and production (mostly in socialist countries) as a primary link between school and community has been abandoned as soon as a diversified industrialized base necessitated and allowed a higher level of general basic education.

The underlying reason for the abandonment of the concept in favour of the traditional sectoral types and strategies for providing services points to the conflict between the community school concept's trend towards integration, complexity and autonomy which runs counter to the dominant paradigm for technological advancement and economic growth, which is based on the division of labour, increasing specialization, fragmentation and marginalization. Galtung points to the fact that simple systems of health, education and production which are aimed at increasing self-sufficiency, the potential for self-help and local autonomy cannot succeed (in the long run) where the only measures of progress are economic growth rates and increased productive output. Only schemes which fit the dominant 'alphastructure' by requiring large amounts of capital and providing employment for scientists and bureaucrats will find continuous support [76].

However, the recent limiting of natural resources (mainly energy) may mean a development towards smaller and more autonomous units, for ideological as well as economic reasons.

Agreeing with the content of *The Limits to Growth* [77] and as borne out by the recent worldwide oil crisis, Schumacher points out that:

one of the most fateful errors of our age is the belief that the problem of production has been solved. This illusion, I suggested, is mainly due to our inability to recognize that the modern industrial system with all its intellectual sophistication, consumes the very basis on which it has been erected. To use the language of the economist, it lives on irreplaceable capital which it cheerfully treats as income. . . . And what can we do now, while we are still in the position of never having had it so good? To say the least. . . we must thoroughly understand the problem and begin to see the possibility of evolving a new life-style, with new methods of production and new patterns of consumption: a life-style designed for permanence. To give only three preliminary examples: in agriculture and horticulture, we can interest ourselves in the perfection of production methods which are biologically sound, build up soil fertility, and produce health, beauty and permanence. Productivity will then look after itself. In industry, we can interest ourselves in the evolution of small-scale technology, relatively non-violent technology, 'technology with a human face', so that people have a chance to enjoy themselves while they are working, instead of working solely

for their pay packet and hoping, usually forlornly, for enjoyment solely during their leisure time. In industry, again. . . we can interest ourselves in new forms of partnership between management and men, even forms of common ownership [78].

In this context, the possibility exists that community schools may not be abandoned as readily as in the past.

Community schools as a means of alleviating deprivation

In addition to ideological and practical reasons for co-ordination, the analysis of different settings begins to confirm a suspicion which has been voiced by some of the critics of the community school concept: that it may in fact be used as a sedative for social conflict:

to buy local energy and initiative to make marginal impact. . . whilst significant issues of unemployment, poor housing. . . etc., are ignored [79].

Whether in urban poverty areas in industrialized countries, in areas of radical population changes, or in rural poverty areas in developing countries, the major settings seem to be characterized by circumstances of severe deprivation which necessitate a rethinking and reinvention of more comprehensive models for development.¹

The interpretation of the use or misuse of the concept largely depends on the outlook of the observer as a proponent of radical or incremental change.

A position which adequately reflects the stance taken in this study has been formulated by Midwinter.

It is sometimes argued that the socially disadvantaged have only two alternatives; either to escape, often with the aid to educational qualifications, from their environment or, presumably by revolutionary means, to destroy the system and start from scratch. Neither alternative appeals. The former fails because it can only affect a minority and leaves untouched the huge residue. As for the latter, the record of political revolution over the last century or so is not to prepossessing in terms of breaking through the downward spiral of deprivation; revolution seems to replace one series of hardships and disadvantages by another. A third alternative to the grim dilemma of exile or demolition lies in community development, with community education playing a leading part [8, p. 9-23].

1. Even new settlements in industrialized countries may be termed, at least during their initial stages of development, areas of severe deprivation. There is, however, a qualitative difference between this and the other types of settings which excludes them from this argument.

The mixture of idealistic and practical reasons together with its history of exploitation and manipulation make it difficult to defend the concept along any one line. In addition to their role in alleviating the worst consequences of unbalanced economic growth and helping the less privileged to realize higher aspirations, community schools are seen as contributing to the growth of multi-culturalism in modern society and, by improving other services, community schools also improve the effectiveness of educational services. The concept, therefore, needs to be pursued in the awareness that it is mainly a means which can be used for community manipulation in the worst sense as well as community development in the best sense, but it certainly cannot be an end in itself.

Getting started

The type of initiator and process chosen to determine needs and resources largely influences the final outcome and functioning of the school as a new focal point for development. Where planning processes are open and responsive to particular community needs initiated or controlled by local leaders or users, they tend to reinforce democratic and innovative solutions. Where they are technocratic and hierarchical, often government-based or expert-based, solutions tend to be more conservative and rigid.

Far more importance should be attached therefore to 'the silent language of planning', which affects the substance of the policy or plan through the *manner* in which decisions are made as much as through the decisions themselves.

Traditional patterns of decision-making need to be taken into account in planning processes along a continuum from the most government-controlled to the most citizen-controlled. The decision as to what forms 'participation' may take can therefore only be made within the cultural and social context in which planning takes place. In order to relate services more closely to the needs of the users, the latter should be given a chance to express their needs and to participate in the decision-making process. It is probably true that only the person who has helped prepare for change will be able to accept it.

Participation, like any other activity or skill, is a matter of knowledge and practice. Both can be learned, however.

Community development . . . with its grass-roots democratic supervision, would be sadly at a loss if the participants had not been educated for their essential role. It is the necessary task of the Community School to service the community with socially articulate citizens who, initially, can organise themselves competently enough to press for

an improved environment and afterward to manage it efficiently. The Community School provides an apprenticeship for citizenry, and one uses the terms advisedly, for, as with a vocational apprenticeship, one envisages an ongoing practical element as well as a theoretical component in the model [8, p. 15].

Only where community members exercise some degree of genuine and continuing control is it possible to maintain or rebuild a sense of community which everywhere (but particularly in areas of deprivation) seems in danger of being lost. Without the support of central governments, however, the number of projects will be limited indeed. The most important problem seems to lie in the development of incentives and the elimination of barriers to co-operation. Beginning with a positive attitude towards individual initiative, this may lead increasingly to financial and legal support schemes for co-ordinated and multi-use facilities. There is a tendency to overcome the functional fragmentation of governmental bureaucracies through formal or informal interagency co-ordination. Efforts range all the way from co-ordinated national development plans and councils designed to co-ordinate highest policy levels to special research units and inter-agency committees which come together on an *ad hoc* basis. The co-ordination of financial support schemes and also the evaluation and dissemination of information often rests with central agencies. Many problems can be avoided or minimized in the planning process of certain principles are followed:

- Designation of all participants and their respective roles at national, regional and local levels.
- Initiation of community dialogue and input (involving new or established methods, e.g. public forums, games, charettes).
- Revision of policy guidelines and rules for providing services.
- Identification of community needs and priorities.
- Clarification of possibilities for implementation and mobilization of existing resources (human, natural, man-made).
- Setting up a structure for continuous user involvement and control (committees, co-operatives, community corporations).

In tackling basic problems, community schools at the same time encounter their greatest hopes, challenges and successes as well as their greatest sources of failure and defeat, because the problems are generally too complex to be solved by the link between community and school alone. The integration of community and school facilities has been advocated as a panacea for every social ill. It certainly cannot live up to this expectation.

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The potential and feasibility of combining activities, programmes and services

The joint and conflicting objectives of educational reform and reorientation

For many decades, educational activities and programmes have remained relatively static. Today the relevance of formal education is being questioned. Nobody advocates the abandonment of the major elements of the traditional curriculum, but the emphasis has shifted. The content and methods of instruction are gradually being adjusted to reflect more closely the social, economic and cultural needs of the particular country and locality, and various ecological situations.

The content of new activities and programmes and the combination of social services are influenced by the reorientation of education in the new perspectives of continuing, recurrent and lifelong education which includes all age groups. The recognition that only in close co-operation with other social services and sectors can development objectives be pursued successfully has led to various situations of integration and co-operation.

Depending on the differing goals pursued, the analysis of activities, programmes and services in industrialized countries can be related more closely to the facilities aspects. Here the frequency and feasibility of alliances clearly depends on age-group needs, compatibility of uses and accessibility; the co-ordination of services can be typified according to their spatial demands. Similarly, the categorization of community resources outside the school which may be used for education poses few problems.

The central questions relating to the co-ordination of services in developing countries concern the role of the school in solving fundamental community problems. The lack of infrastructure, basic services and employment opportunities is related more to questions of survival than to the relevance and optimization of spatial resources.

Urban areas in industrialized countries: partners sharing spatial and locational advantages

The integration of various programmes and services in school and community centres originates, as we have seen in the last chapter, from various sources: educators and parents pleading for more relevance in education, social scientists and politicians striving for increased social equity, and architects and planners hoping to rejuvenate existing urban areas or provide a focal point for new developments.

The question of which types of activities, programmes and services can be physically integrated or organizationally co-ordinated with educational facilities depends on the needs and resources which exist in any given community. While basic needs (educational, cultural, recreational, health, social services, public and commercial facilities) are almost identical, special needs depend on the community characteristics.

The provision of facilities for basic services, however, dominates the scene in terms of links between educational and community facilities. They in turn depend, as will be shown in what follows, largely on the size of the community or the size of the urban area in which they need to be provided.

Based on studies in the United Kingdom [1] and the Federal Republic of Germany [2], Table 1 shows the levels of population at which principal categories of public and private sector facilities become feasible. They provide an example of the range of possible partners for integration or co-ordination with educational facilities which remains more or less the same in all industrialized countries.

Criteria for new alliances

Co-ordination between educational and community facilities seems to depend largely on three factors: age group, compatibility and accessibility.

TABLE 1. Components of an educational and community facilities network

Educational information service	Cultural religious facilities	Recreational facilities	Social services	Health facilities	Private facilities	Public facilities	Commercial facilities	Industrial facilities
<i>Primary-school catchment area (population 4,000 to 5,000)</i>								
Primary school Nursery school Information corner Mobile library	Community centre Church	Play area Play grounds Local park Pool Community workshop Sauna	Clinic Doctor's office Dental surgery	Crèche Meeting room Family centre	Houses Gardens Swimming pools Collections Hobby rooms Voluntary play groups Youth clubs	Post office Housing office	Bank Branch office Shops Café Restaurant	
<i>Secondary school catchment area (population 15,000 to 18,000)</i>								
Secondary school Branch library Vocational school Adult education programme	Church Arts centre	Sports centre Public park Youth club	Counselling services Day-care centres Old peoples home Family-planning office	Health centre Ambulatory services	Assembly hall	Clubs, associations and societies Community action groups	Shops Market Restaurant Hotel Bank	Industrial estate Crafts workshop
<i>College level catchment area (population 60,000 to 80,000)</i>								
Technical and art colleges	Museums Small theatre	Swimming pool Bowling alley Golf course	Reconvalescent and nursing homes Halfway house Probation office	Hospital	Town hall (employment welfare, registrar) Police service	Private schools	Cinema Dance hall Department stores Night club Newspaper	Specialized industry
<i>University level catchment (population 300,000 to 500,000)</i>								
University Radio, television station Reference library Retraining and rehabilitation centre Polytechnic	Theatre Concert hall	Regional park Zoo Botanical gardens Sports stadium	Santorium	Specialized hospitals	Law courts County administration Main station Airport	Private college	Hotel and conference centre Specialized shops Professional offices	Heavy industry
<i>Increasing compatibility and tendencies for physical integration</i>								
<i>Decreasing compatibility and tendencies for organizational co-ordination</i>								

The age group needs for which educational facilities are provided has a great influence on the possibilities for co-ordination. In the first place, at primary school level, due to the stage of development and the requirements of nearness and accessibility of the school to the home, opportunities for sharing and co-ordination are fairly limited but exist in regard to recreational and private facilities. Few examples and little published material exist concerning co-ordinated schemes and alliances with primary schools. One of the earlier United Kingdom publications states the problems of developing the community role of primary schools in the following way:

Obviously its scaled-down, unspecialised facilities do not lend themselves so readily to adult use as do those of secondary schools. But a lot can still be achieved. Some education authorities . . . have tried making space available to parents as a meeting place, with the object of improving parent-teacher relations and fostering interest in the school. At Victoria School, Islington, for example, part of the playcentre accommodation was designed for use also as a parents' room. . . . There are, too, a few examples in rural areas of primary schools at which it is hoped to provide a village hall, perhaps with library facilities, for in many small communities there is an urgent need for accommodation for local organisations and occasional public meetings. Without pretending that such projects offer anything very revolutionary by way of design or scope of public involvement, they are nevertheless a useful and economical means of aspiring to what Henry Morris described as 'the organisation of communities around their educational and cultural institutions' [3].

Secondly, at secondary-school level the importance of private facilities (see Fig. 4) as a partner for co-ordination decreases, and the potential of co-ordination with the whole unlimited range of community facilities, including commercial and industrial uses, increases. The largest number of co-ordinated or integrated facilities can therefore be found at this level.

Compatibility determines mainly the physical integration of different uses within the school.

Thus different combinations of educational, cultural and recreational programmes dominate the scene, while health and social services, private facilities and associations and administrative, commercial and industrial uses are encountered in lesser degrees. This is not surprising, since spatial, locational and organizational demands are different from the statutory obligations of education.

Exceptions to this rule exist where compatible uses collide because of scheduling or spatial demands. Thus past experience shows that further education

programmes (e.g. for housewives) often need spaces at precisely the same time that school classes are in session. If there is no possibility of integrating these user groups in the formal educational programme (as happens in some parts of France and the United States), additional spaces have to be provided (as in the Federal Republic of Germany).

Pre-school groups also pose different and additional spatial demands. Their integration with and proximity to primary or secondary schools, however, not only allow mothers more freedom to work or to continue their education; they also provide a possibility of increasing the potential of the school as a social centre and meeting ground for all age groups and often provide a practical opportunity for older students to learn child care. In the Dunbar High School and Community Centre in Baltimore, for instance, there are two crèches: one for the community and one for the children of the students whose involvement in the child-care programme is a recognized part of their regular course work.

Accessibility within the primary catchment area mainly determines the organizational co-ordination with other uses outside the school. This includes distances of facilities as well as forms of transportation. Typically, co-ordination and integration centre around facilities provided for intermediate catchment areas (mostly population levels between 15,000 and 18,000 but also between 60,000 and 80,000). With larger-scale facilities and increasing specialization and distances which are possible at population levels between 300,000 and 500,000 (Table 1) fewer links with educational facilities come into existence.

Conflicts arise where integrated facilities coexist for different catchment areas, and the identification of the community with the facility is endangered through 'strangers invading the territory'. One example of the importance of clear demarcation lines and priorities in this respect is provided by the case study of Istre [4]. All three factors—age-group needs, compatibility and accessibility—contribute to a higher frequency and feasibility of alliances between educational and community facilities at the intermediate population level of 15,000 and 18,000 at which secondary schools become feasible, and access for the community as well as size and degree of specialization remain manageable.

Community uses within the school

With a certain amount of organizational and administrative skill and resources (e.g. additional advertising and scheduling), numerous activities and services become possible without additional spatial demands

and investments. In terms of facility requirements, the secondary school already represents a community centre in embryo form. Based on an analysis of possible community uses within the school, Table 2 relates major types of school activities to their respective accommodation and to possible community uses.

Whether for pottery or dancing groups, geology or gemstone clubs, horticultural or musical societies, conservation, one-parent families, or women's groups—the opening up of classroom areas, a cafeteria, a library, workshops or a theatre stage may be the key to survival for a fragile network of voluntary groups and associations.

If more permanent partners for shared use are sought through interinstitutional spatial integration, a whole new series of options and usually additional spatial requirements arise. Table 3 indicates where possibilities for sharing and improvement exist between educational and community services and lists additional demands. Experience has shown that without additional office spaces, storage rooms and separate entrance provisions, coexistence becomes difficult.

The most common result of new alliances—which none of the partners alone would have been able to build—are swimming pools and theatres. But seemingly extravagant facilities may become feasible too, such as nylon ski slopes or special climbing towers [3].

Although the school as a community centre in embryo form provides many facilities which could be used by other groups, difficulties begin where: partners grow and want to shape their own space (e.g. youth clubs or counselling offices, radio and television stations); school spaces may have an institutional 'flavour' (minimum standards of comfort, finishes, colours and materials); new user groups (e.g. the elderly or the handicapped) need special provisions (ramps and lifts instead of stairs, hand-rails, larger toilets, etc.); and spontaneous uses are hampered by inflexible rules and regulations, janitorial working hours and so on.

This means that in spite of new and elaborate buildings which have made the integration of out-of-school populations possible—often mandatory for reasons of economic justification—there will still be an increased demand for additional and more specialized spaces.

This is particularly true where the school and out-of-school personnel differ in terms of institutional allegiance (e.g. school authority and municipal government), professional background (e.g. professional and para-professional teachers) and basic goals (e.g. examination-oriented and interest-oriented).

In these cases workshops, classrooms, even central staff clubs sometimes have been divided up or provided separately, thereby reducing or eliminating some of the potential for closer contact as well as social and economic benefits.

In addition to the two types of community uses which either do not require any facility changes or call for only relatively modest additions, there are a large number of potential partners who need separate facilities but seek partnership and physical integration within the school less for reasons of sharing than because of locational advantages (the scarcity of central sites) and improved accessibility for their user groups, i.e. health clinics and day-care centres; youth, welfare and legal services; professional and administrative offices; shops and private agencies such as banks, insurance companies, real-estate agents and other business organizations; privately run cafés and restaurants.

The integration of services within existing school spaces is becoming a reality in most industrialized countries where a recent sharp decline in student enrolments has caused a surplus of facilities. This type of integration is impossible to systematize as it depends entirely on the spaces available, their location, and the potential partners. In some cases, however, previous experience with large-scale integrated school and community centres seems to enhance the possibility of a wide range of uses. Local authorities, in fact, sometimes regret the previous expense of the new purpose-built integrated facilities in view of the very much cheaper and equally effective way to house community services in remodelled school spaces [5].

The potentially most effective use of such surplus space seems to be made by user groups which up to now have had little chance of realizing their spatial needs: voluntary groups, the elderly, the handicapped, pre-school play groups, and similar partners; those which have been classified as 'possible partners without additional space demands'.

In all instances, the integration of community uses within the school depends on a 'casual, almost unconscious acceptance of the school as an amenity which belongs to the public at large and exists for their use' [3, p. 11].

Educational uses of community resources outside the school

In industrialized countries, the co-ordination of community resources outside the school for educational purposes has been limited. In the more centralized administrative systems (France, Federal Republic of

Building community schools

TABLE 2. Possible community uses within the school

Major types of school activity	Accommodation	Community activities
Theory instruction	Classroom Lecture hall	PTA meetings, adult education programmes, community action groups, senior citizens meetings, preventative health services, family-planning units, academic and non-academic workshops
Demonstration	Laboratories (biology, chemistry, physics)	Special adult-education programmes, individual research and tutoring
Information	Library Documentation centre Media rooms	Reading, information exchange, film and music appreciation
Craft work	Workshops (mechanics, arts and crafts), studios, (drawing, music)	Automechanics and repair courses, printing, arts-and-crafts programmes, pottery classes, musical and theatre performances
Expression	Theatre, music rooms Media production centres	Film and theatre groups activities and shows, lectures, political meetings, choirs, orchestras, community radio and television programmes
Social gathering	Cafeteria, bar, buffet, play ground Assembly hall	Social contact celebrations, festivals, exhibitions, meals for the elderly, play groups for all ages, larger performances
Sports and games	Sports fields, gymnasium, halls, courts	Sports clubs, group and individual training possibilities, dancing classes
Administration, maintenance	Offices, staff rooms, store rooms, equipment, etc.	Meetings, discussions, information, storage of products and equipment
Supportive	Transportation, parking (car, bicycle) janitorial apartment and booth	Access to services

TABLE 3. Possibilities for sharing and additional facilities requirements in school and community centres

	Possibilities for improvement and sharing (which otherwise would not exist)	Community service	Additional facilities requirements
Classrooms Lecture hall Laboratories	Additional classrooms Larger size hall Better and additional equipment	Adult and ongoing education Programmes, university classes Individual and group research tutoring	Office space Storage
Library	Larger size library and storage	Public library reading and information services	Separate entrance ground-floor situation
Workshops Studios	Better equipment Larger size studios additional equipment	Repair and craft courses Art programmes	Storage Storage
Theatre Media production	Larger size and better equipment Better equipment	Theatre groups and performances Community radio, television channel, film clubs	Storage, separate entrance Offices, storage, separate entrance
Cafeteria, bar	Larger size and choice, partitioning off gadgets	Meals, gatherings, meeting point, celebrations	Reception desk, community rooms
Play ground	Better size and equipment	Outside meeting point for children and adults	Covered area for rainy climates
Assembly hall Sports facilities	Better furnishing and finishes Larger size, additional facilities, e.g. swimming pools better equipment	Art galleries, lectures, assemblies Exhibitions, festivals, celebrations	Offices and storage for sports clubs
Administration Supportive	Larger size Parking, janitorial services	Information Access	Additional public transportation Bus stop

Germany, Greece), it hardly exists at all. In countries with a tradition of providing education on a more decentralized basis, however, some interesting experiments have been conducted since the late 1960s. Usually restricted to older age groups (senior secondary grades) and larger urban areas, the exploitation of man-made, natural and human resources seems to have increased slowly but steadily.

Man-made resources basically include all the 'components of a community facilities network' which have been listed in Table 1. Their systematic exploitation for the purpose of education was first explored in Philadelphia in the late 1960s during a period of extreme shortage of educational facilities. The 'Parkway System' [6], 'schools without walls' [7], or 'community high schools' [8], have since spread to all major cities in the United States, less for economic reasons than for their potential as a true educational alternative for highly gifted and 'difficult' students, as well as for all those discontented with traditional methods of schooling. In their description of the Philadelphia Parkway System, Finkelstein and Strick point out that:

The diversity of the city is reflected in our student body as well as in our curriculum. We draw our students from no special group, but select them at random from volunteers representing virtually every segment of the city's population—interestingly, we have attracted many applications from the suburbs as well. Not only have many of these students never been exposed to the city's resources, but in many cases they have had little or no exposure to each other. The very heterogeneity of our student body is one of the most unique things about the Parkway Programme, where it has become almost axiomatic that the ability to learn to work with different kinds of people is as basic a survival skill for urban life as the ability to read or write or work with figures [6, p. 75].

While the school itself can be reduced to an administrative core and some basic functions (guidance, co-ordination, library, meeting rooms), the community itself becomes the classroom and thereby vastly increases educational options.

The materials and facilities which the community has opened to our students are unique, and could not possibly be duplicated on any school budget: a city library containing over a million volumes; art and science museums with world-renowned resources; laboratories containing the best modern equipment. . . . The quality of instruction students are receiving in these institutions is encouragingly high. Because of the numbers of organizations and individuals participating in our Programme, class size is seldom above fifteen and is often as low as two or three, allowing

a degree of individualization in instruction which would be impossible in the overcrowded traditional schools [6, p. 75].

Similarly the 'Community Resource Guide' for Ann Arbor's 'Community High School' comprises several hundred courses in the arts, foreign languages, home economics, mathematics, science and social studies. Thus public, commercial and industrial establishments become individualized vocational training centres and sometimes even offer modest financial support for their trainees. Markets and harbours serve as training grounds for social studies. Other institutes of higher learning (colleges, academies and universities) provide special courses and academic training.

In terms of providing a widely applicable alternative model for education, however, the critical question will be the degree to which it can be implemented without depleting community resources. Up to now, however, there has been no danger of this anywhere. All experiments have been applied on a relatively small scale.

In addition to man-made resources which cover services and institutions, a second and largely under-utilized category can be found in available industrial waste products. The huge residue of 'scrap' offers not only fascinating but highly economic opportunities for new educational activities and programmes. Play grounds assembled in self-help communities can be found in many countries. Australia offers another example of the potential use of the concept through the 'Fitzroy Fun Factory' [9], a toy design and resource group set up to satisfy the innovative urges of a wide range of people and using industrial waste materials. As an additional service to the community, the 'Reverse Garbage Truck' set up by the Fitzroy Fun Factory redistributes collected waste materials to kindergartens and schools.

Natural resources represent yet another under-utilized category of new activities and programmes as well as providing a recreational balance to purely intellectual work and cognitive learning. A growing awareness of environmental problems has recently led to planning studies [10] and curriculum changes [9] which are aimed at enhancing opportunities for environmental education on school sites, and in parks and wilderness areas.

Most school-planning regulations do not specify any requirements in respect of the school site's environmental qualities. As a result, most schools are situated in a sterile and unimaginative site which is ecologically a desert and aesthetically ugly.

Schools have often been built on flat, treeless fields in the belief that such sites are easier and cheaper to develop.

Trees that do exist are seen as something to cut, and water is to drain off. Trees and ponds are regarded as liabilities and not as assets. . . .

Urban man, while gaining technical insight, has lost the basic personal feel of the land that he once had, simply through lack of actual contact with it, and yet this personal attachment is necessary, indeed essential if we are going to manage our environment to advance human welfare. . . .

It is important that we inculcate in our youth a greater interest, awareness, understanding, and respect for our environment. *In this regard, we should continue to teach indoors that what can best be learned there, and teach in the out-of-doors that which can be best learned in that environment. . . .*

To change from minimum site usage to maximum there must be an accompanying change of attitude on the part of the school administration. Simply put, they must accept as a new policy that *the school site does not need us, we need it* [10, p. 1-6].

Outdoor classrooms, given suitable grounds, can provide direct extensions of interior classrooms for new programmes and teaching methods related to earth sciences, physical and botanical sciences, conservation and natural resources.

Ideological and practical arguments can be supported by economic reasoning. An extensive survey and comparison between residential areas around school sites without parks and school/park combinations shows that the entire capital outlay for the park can be recuperated within a decade through increased property taxes based on increased property values.¹ Although this phenomenon is particularly applicable to countries where schools are financed through local property taxes, the principle certainly holds good in other places.

Examples for the systematic co-ordination of human resources from the community with the educational system are another rare exception in industrialized countries. They offer an advantage for both community members who otherwise may feel superfluous and students who need individual attention. In addition, a new learning opportunity may be offered. But few educational systems have been open and active in this direction. The 'token' mother and father who participate in leisure-type programmes are the exception to the general rule.

The few examples which exist, however, seem to be successful enough to warrant further attempts in this direction. Para-professional help is used in a number of places to support teaching staff (Federal Republic of Germany, Sweden and the United Kingdom). A single co-ordinator equipped with a room, telephone and modest funds for communication to connect learning needs and resource persons may double or

triple the educational choices not only for the school but for the whole community, as the Australian examples of 'Learning Exchanges' at East Malvern, Hobart, and at West End, Greensborough show [9]. Ann Arbor's 'Grandpersons' programme, which includes grandparents and other citizens in the schools' course offerings and provides skill training in individual and small group courses, is a highly economical and educationally interesting model [8].

Linking education and work

Some of the disenchantment with irrelevant curricula has led to closer ties between education and work. Some of the most advanced models of this kind exist in socialist countries (German Democratic Republic, Yugoslavia). Elsewhere, a growing trend toward practical work experience as an integral part of the curricula can be found (Federal Republic of Germany and the United Kingdom).

Elaborate workshop facilities built in close co-operation with the industrial requirements of the particular area in which school centres are being built characterize the reformed Secondary II school centres in the Federal Republic of Germany.

Although the programmes are closely tailored to fit real life experiences covering the various aspects of producing and marketing a product, the latter is usually not sold and contributes neither to the financial upkeep of students nor to the institutions. Here, as in the United Kingdom and elsewhere, the school is practically blocked by trade unions, rules, regulations and pressures from other forms of commercial or business interests. Students 'contact with "working life" tends, therefore, to be restricted to a very small range of bridging and "gateway" courses for final-year students, with occasional factory and supermarket visits' [11].

An alternative avenue is being explored in an advanced 'production school' model in Denmark. The Tvind School is built on the recognition that a broader base for education is needed in a period when the emphasis on cognitive learning is producing an increasing number of unemployable academics. Senior secondary students, in addition to their regular course work, are engaged in a large number of practical activities; they build their own school and farm

1. It is probably no accident that this study was conducted in the same city (Ann Arbor) in which the previously cited group was active—Karl W. Grube, 'The Economic Influences of Elementary School Sites on Residential Property Tax Revenue in Selected Urban Neighbourhoods', unpublished dissertation, University of Michigan, 1973.

premises, produce their own food in the school's fields, and are constructing the largest existing windmill as an experimental source of energy. Their printing workshop supports community groups with posters and leaflets and produces special teaching materials for the school itself and other schools in the country.

Buses which have been dumped are being repaired and used for study group trips to foreign countries in order to learn first hand about other cultures, political systems and methods of production [12].

The place of formal education

Within community schools in industrialized countries, the major elements of the traditional curriculum, such as the development of literacy and numeracy, are still of great importance. In fact, the form of much of the curriculum is close to that of other schools in the sense of 'having students do a good deal of reading, writing and arithmetic, produce useful and aesthetically pleasing things and study their physical and social environment'.

The question that then arises is: How do these activities relate to the quest for 'relevance' and the activities and programmes related to a community-oriented curriculum and the community use of schools? It has been pointed out that too much 'relevance' may in fact deny access to the larger culture and that it may be class-constraining rather than otherwise.

It can incidentally be argued that the decisions that really affect the future of our European city cores are being taken in the boardrooms of international corporations and councils of the EEC Schools seriously concerned about their role in social change might think in terms of preparing their students to enter in these deliberations. A school project that concentrates on physically tidying up a few square city blocks is not going to effect significant social change.

The point is almost never made that there is in fact, reality to be found in schools. People—teachers and students—live in them, act out their ambitions and hopes and fears. Teachers too, despite what is said about them, do have some knowledge of what the world is about. They do not belong to a strange monastic order cut off from the realities of life. Students likewise bring their realities with them [13].

In terms of facilities, the remaining core of educational activities implies that the school to some degree needs to keep its 'own territory', particularly at the primary level.

In most cases, educational needs will be reflected by the provision of distinctive areas for different age

groups. At the same time, possible interchanges between areas are seen as an important factor where different age groups are situated near to each other or housed under the same roof. House or home bases and core groups create relatively small social and educational units within larger centres, while in smaller existing schools specialized facilities may be sought outside the school.

A number of trends can be observed showing that formal education is moving away from traditional patterns, to become more community-oriented: (a) the convergence of senior-grade curricula and further or adult-education programmes opens up new opportunities for sharing staff, space and equipment; (b) less emphasis on unified educational procedures is giving teachers more freedom to select materials according to the needs of a particular situation; (c) instead of ready-made curricula to be followed, the initiative and responsibility of students in determining their own educational goals strengthens community bonds; (d) it is becoming increasingly clear that the development of educational goals is a task not only for educators and experts but for the whole of society; and (e) the notion of education as a finite episode, a 'once-for-all' experience for the majority of people, is losing ground as the changing requirements of employment and the increasing demand for non-vocational education make themselves felt. The school and the further-education college are becoming places to which adults return for day or evening refresher courses.

Rural areas in developing countries : from community curriculum to development

The introduction of new activities and programmes and the co-ordination of services in rural areas in developing countries may be seen in times of a continuum of goals ranging from making education more relevant for the largest number of people at one end of the scale to transforming the school, co-ordinated with other basic services, into a vehicle for socio-economic development at the other end of the scale.

Both extremes are obviously interrelated. Thus the solution to the lack of facilities may be seen in the involvement of the community in building a new school, at the same time creating an educational process which is relevant to the attainment of other goals and projects in general, and building projects in particular. As an additional result, the increase in self-confidence may spawn other co-operative efforts

which substantially contribute to the socio-economic development of the area.

The relevance of educational activities and programmes in developing countries, therefore, must be measured first and foremost in terms of whether or not they are able to draw a wider stratum of the population into the development effort. This excludes focusing exclusively on narrowly defined economic goals (e.g. seeing skill training as the only solution) as well as remaining oblivious to the failures of traditional formal education.

In most educational systems, the lower levels have to adjust their activities so that their graduates will meet the intake requirements of the higher levels. Thus in virtually all cases the system does not really benefit the masses who participate for only a few years, but only really benefits the minority who go on to further education [14].

This is particularly destructive in rural areas where the formal educational system, as implemented is worse than useless; it leaves the great mass of people less rather than more capable of improving their situation. In fact, it can be seen as one of the prime movers of the exodus from rural areas.

Most developing countries in recent years have therefore begun to change educational activities, programmes and services in three gradually more development-oriented ways: in the first place, a community-based curriculum provides children with a sound knowledge of their locality and its ecological potential and inculcates positive norms and values considered central to the community in question. Secondly, the school identifies and exploits opportunities to link education with work in the community. Thirdly, as a service to the community, the school must find solutions to the problems besetting the community.

The community-based curriculum

In order to impart a sound knowledge of the community's physical setting, social, political and cultural structure, and economic and productive activities, basic materials and special projects need to be generated.

Local projects, materials and teaching aids can be developed in fairly simple ways.

In China, students are reported to be involved in simple community surveys and discussions from an early age. This may be an effective tool for getting children to realize the potential and problems of their region.

In Honduras, practical projects in the school either serve the community (e.g. village beautification, planting trees, cleaning and building roads) or individual and co-operative family enterprises (piggeries, beehives, horticultural projects).

A concept being employed in Indonesia relates educational and training efforts to the whole ecological potential of a subregion. This 'eco-system' approach is similar to that of integrated regional development in that all human, natural and technological potentials are drawn upon in formulating educational and training programmes. And those programmes, in turn, help to shape the development plan for the eco-system.

In a more organized way, one could imagine curriculum centres at intermediate levels (county, region) producing materials for different settings and progressive stages in a general educational framework.

Participants in a seminar held in Tagaytay (Philippines) in 1974 agreed that:

priority attention should be given to low-cost indigenous teaching aids, ranging from wall charts to simple, locally produced tools, or folk media such as puppet shows. Of basic importance is the need to cultivate the art of improvisation, with the means and materials available in the rural setting [15].

The use of local resources for education is imperative not only in order to increase the relevance of the educational process, but also because in developing countries the demand for education is increasing at such a rate that governments find it extremely difficult to cope with the construction of new facilities and the recruitment of a sufficient number of teachers.

Alternative resources properly made use of may avoid a widening of the gap between book learning and local reality and enhance the adaptation of education to local life-styles, and also provide possibilities for involving larger number of people.

The inculcation of positive norms and values is more difficult to realize because it involves a serious attempt to work against the dominant paradigms of technology which penetrate to even the remotest village through films, radio, industrially produced gadgets and visits to urban centres. In all major regions (Africa, Asia, Latin America), special attempts are made to stress the importance of rural values, rural life and development. In Africa, this is found in 'national self-help and self-reliance programmes'; in Latin America it is called *conscienciación*. In each case, it involves correct value orientation, an emphasis on co-operative spirit, civics, and often a share of national solidarity.

The shift towards part-time and recurrent education can be seen as another means of enhancing the community orientation of the educational process. In addition to diminishing the lack of facilities, part-time education opens new educational opportunities for adults and drop-outs and provides a chance for children to become less dissociated from their community. It may be useful to soften the impact of compulsion (especially among older students who lack academic motivation) and the effort should partly concentrate on subjects with small self-contained modules, mainly in situations where only sporadic attendance is likely.

Whether it is organized as a 'sandwich system' with alternating periods of full-time study and full-time work) or on a continuous basis (three hours instead of six hours of schooling), children and adults can continue to be involved in domestic or productive activities which may guarantee their financial independence and a better integration of theoretical concepts and practical work.

Linking education and production

In view of increasing unemployment among school-leavers, which puts a premium on individual and collective initiatives directed towards self-help and self-employment, links between education and production can be seen as one major path towards solving major problems in rural areas. The implementation of the concept, however, hinges on several preconditions. One problem to be considered is the examination orientation of the traditional school system.

Sinclair points out that the emphasis on examinations in the part has severed links between education and work and community curricula (India, Kenya and Nigeria) [16].

Kinahan on the other hand shows how both may coexist, based on his experience in Asra Hawariat School in Ethiopia where pupils are just as examination-oriented as those in other schools; they see their 'only hope of spectacular material advancement in the passing of examinations'. But the fact that examination consciousness and success in examinations is coupled with community development and practical work puts it into perspective and allows both attitudes to co-exist in a creative way [17].

In a similar vein an Asian seminar which looked into the role that certificates could play in widening the appeal of out-of-school programmes found that certificates may in fact serve to give the participant a sense of accomplishment and satisfaction, as evidence of stability and enterprise in finding employment or obtaining credit, and finally link the formal and non-

formal school system, particularly in the case of school equivalency programmes [15].

Less for ideological than for practical reasons, the separation of learning and working seems increasingly unnatural as one moves from the urban to the rural setting.

In rural areas, education and production not only need to coexist more closely as an interdependent system, but production may also contribute substantially to the school's upkeep and the student's self-reliance. Thus many schools in developing countries run small productive enterprises on a self-paying basis on the principle of 'earn while you learn' (Fig. 12).

This principle was promoted on the Indian subcontinent by Gandhi, who wanted to see what he called 'literary' education taught in the villages in conjunction with scientific study and the practice of rural crafts. Craft work, typically spinning and weaving, some woodworking and metalworking, and agricultural work on school farms was to cover the recurrent costs of schooling and thereby free funds for the rapid spread of primary education.

Gandhi regarded financial self-sufficiency in the village schools as the 'acid test' of basic education, because 'the child after finishing a seven years' course should be discharged as an earning unit. . . . 'You impart education and simultaneously cut at the root of unemployment [16, p. 64].



FIG. 12. Earn while you learn. Morong Elementary School, Rizal (Philippines): production of handicraft goods which are marketed. (Photo: H. Noguchi)

The idea was abandoned in later years (1963-64) in favour of an orthodox curriculum supplemented by work experience and social-service projects.

Today work education through the 'green revolution' programmes of the Philippines, work experience linking education with production for university students in Bangladesh, programmes designed to make experience of rural development an integral part of general university education in Indonesia and Nepal, the introduction of pre-vocational courses in formal education in Sri Lanka and 'vocationalization' of general education in India well illustrate the wide variety of approaches to the introduction of work into education adopted by Asian countries [18].

In Africa, agricultural and non-agricultural contract jobs help to contribute to the costs of schooling and special educational projects. In their study of a central African country, Bergmann and Bude found that traditional work patterns and the degree of development determine links between school and productive work.¹

However, the use of modern agricultural methods, which is a second goal for linking school and agricultural contract jobs,² seems to be influenced not only by certain features of the school farm but mainly by the income derived from the sale of the harvest, patterns of land tenure and land use, and the range of economic activities apart from agriculture [19]. It is important therefore to integrate work experiences within the curriculum, to discuss the variety of methods used, subsequent differences in yields, and the results of co-operative and individual work patterns. The school will thus become a source of information for the community and parents will more easily accept that their children, instead of working at home, work for the school.

There is a marked trend in Africa establishing links between education and work through multi-purpose skill centres. In contrast to earlier models (planned and implemented in the 1960s), these are not aimed at primary school leavers who are trying to enter formal sector employment but at the hard core unemployed, mostly illiterate, both young and old [11, p. 12]. Based on the recognition that skill acquisition does not necessarily demand a common literacy base, skill centres are meant to embody eventually a whole package of rural crafts. Thus Ethiopia, Kenya, Lesotho, Malawi, Rwanda, Sierra Leone, Sudan and the United Republic of Tanzania have embarked on large-scale programme which are expected to contribute to local and national development.

Linking education and production through co-opting village craftsmen has been a standard practice

in some parts of the world; in others, it is a recent innovation. One example exists in Honduras where the *proyecto extra escolar* (out-of-school project) not only deals with the normal educational problems of children with more than three years of formal schooling but also provides an apprenticeship locality in the local carpenter's, shoemaker's or storekeeper's shop. 'Courses' range from five to fifteen days, sometimes longer, depending on the relationship and skills needed. Goals set between the craftsmen and the students rather than a predetermined curriculum, set the pace of learning [20]. This programme embraces all educational levels:

Sudan is likely to opt for a local pattern for primary school skills as a result of its present Reform Commission. Similarly, other countries, like Ethiopia, through planning a partial reliance on local craftsmen as teachers, will reflect the increasing localisation of practical activities. The difference between new and older patterns of vocationalisation is perhaps easiest discerned in Ceylon,³ where the earlier package of prevocational subjects (the inevitable woodwork, metal work, masonry, automotive, etc.) have been joined by no less than 80 further courses of prevocational studies, the explanation being that almost all suitable cottage industries in the island have been co-opted into the syllabus, and have become possible electives. In this manoeuvre, the traditional barriers between school skill and community skill are aimed to be broken down [11, p. 17]

A further step in Africa can be seen in the use of schools to expand and to build upon the existing village technology—not just to spread basic craft practice among school youth, but also to encourage innovations in intermediate technology among learners.

Activities to improve production techniques and marketing in traditional occupations provide a link between schooling and community development as well as traditional life. A critical issue is whether enough skilled and knowledgeable people can be activated to extend their efforts for the benefit of the community.

1. With improved access to vital services the number of contract jobs increases up to a certain point, then drops again and becomes very small in the urbanized communities. Schools in the isolated, remote and marginal communities are executing contract jobs which are related to transport problems. Those in remote areas concentrate on clearing farms, whereas harvesting jobs occur most frequently in the easily accessible villages. (Bergmann and Bude, op. cit., p. 137.)
2. Besides access to vital services and the size of the school, the most important factor in favour of contract jobs for schools is a tradition of group work in agriculture (*njangi* work).
3. Now Sri Lanka.

Production schools aim at acquiring enough land or production facilities to become largely financially and organizationally autonomous units. In general, students spend part of their day in the school and part in the productive sector.

As the Cuban *escuela secundaria basica en el campo* shows, production schools do not necessarily have to be linked to a local community. If they are promoted for reasons of 'community development', however, the tendency is to integrate production programmes within more comprehensive community school centres.

Whether they are isolated cases in the country concerned (Morocco, Ethiopia, Indonesia) or imbedded in a national plan (Mexico, Panama, the United Republic of Tanzania), in general school, production and community centres tend to be comparatively rich enterprises. In the school and community centre in Mascota, North Mexico, for instance, the rural industries workshop area is organized as a co-operative for food processing with community participation. Multiple purpose workshops teach students the essentials of machinery operation and maintenance for lumber and other wood products. A community sawmill, operated co-operatively, is adjacent to the centre's technical area and serves as a basic teaching facility, handling wood products which come from communal forests. The centre takes an active part in promoting local development. It has already encouraged the establishment of two new firms in Mascota: a food processing and packing plant and a toy factory. The centre's graduates enjoy first choice in filling available jobs, on the basis of their technical apprenticeship in the workshops.

In Panama, where about 50 per cent of the rural schools have been reformed, the 'production school',¹

Escuela de Producción, runs educational and productive activities: the first rests on a curriculum adapted to the local reality (economic, social, ethnic, cultural, etc.) using the production activity as interest 'area' or 'centre'. The production activity naturally depends on the nature of the land on which the community thrives. This activity is continually reinforced by the learning process which accompanies it [21, p. 6].

Within three years of its inception, the Panamanian production school is financially largely autonomous except that teachers are supplied and supported through the central government. It is run by the community, for which it becomes the centre and focal point for development.

Both Panama and Mexico, as well as the United Republic of Tanzania, provide good examples of the

relationship between education and work which ensures that skills learned must lead to further employment and open up new job opportunities, preferably in the rural community itself and its surrounding hamlets. School and production centres must be planned for adaptation to local, regional and national needs and support individual initiatives, co-operative thinking and self-reliant attitudes in order to avoid a new drift of skilled and semi-skilled labour towards urban centres, with all the accompanying social disintegration.

Finding solutions to community problems

The problem of low density and/or disparities in access, number and diversity of social and productive functions characterizes the widening gap between richer and poorer areas in developing countries.

A better organization and *distribution* of resources and access to *services and facilities* is a necessary precondition for the creation of social equity and the improvement of the quality of rural life.

Different studies show that disparities in the provision of schooling, particularly in terms of physical access, correlate well with disparities in the availability of education and other social services, per capita income levels, and historical development factors (topography and socio-economic differentials) [22].

The significance of these findings suggests that regional disparities must be taken into account in any policy framework if any attempt to equalize facilities and insure equality of opportunity for individual and communal development is to be made.

Educational planners in the past have been little concerned with matters of primary school location and distribution. If goals of equity and efficiency are to be pursued with any vigour at all, planners must recognize the inter-relationships between the location and distribution of school facilities and pupil equity of access and opportunity for retention [22, p. 235].

A population scattered throughout small hamlets and villages does not allow large enough concentrations to form regular markets, to provide incentives for higher agricultural productivity, or to support a full primary school. Based on various studies [23, 24], Table 4 shows within wide margins (which reflect the uncertainty and variation in rural situations) the

1. This term is no longer used officially; all the *escuelas de producción* have formally become EBG centres (*centros de Educación Básica General*). In this text, however, we will use this expression as applying to institutions offering the unique characteristics described by Louríé, op. cit.

Building community schools

TABLE 4. Components of a basic services network in rural areas

Educational facilities	Social, cultural recreational facilities	Health facilities	Public facilities	Private facilities	Commercial facilities	Technical infrastructure	Production facilities
<i>Primary school catchment area (village population 2,000 to 5,000)</i>							
Primary school Vocational education facilities	Community centre Religious facilities Local crèche	Maternity health clinic Local dispensary	Police post Government office Storage facilities Government supply storage	Private homes and fields	Co-operative supply outlet Periodic market facilities	Farm market roads Irrigation canals and ditches Potable water pump wells and storage tanks Rural electrification All weather access road Local transportation stop Public dump	Primary processing, grading, weighing and packing facilities Agricultural fishery forestry Crafts workshop
<i>Secondary school catchment area (market town population 5,000 to 10,000)</i>							
Secondary school Vocational training schools	Large community centre Cultural or religious facilities	Small hospital and diversified clinic	District and municipal government offices Development bank branch Rural development project operation office Police station Post, telegraph and telephone office Government supply warehouse Fire station		Permanent market structure District office of marketing board Co-operative supply outlet	All weather roads and arterial roads Paved streets Electricity piped water Sewerage systems Transportation depot	Warehouse and food processing facilities Equipment repair maintenance facilities
<i>Further education catchment area (intermediate city population 20,000 to 25,000)</i>							
Specialized trade schools Regional university	Public recreation facilities	Full service hospital	National provincial municipal governmental offices Financial institutions Regional development headquarters office Regional post, telegraph and telephone office Fire and public safety facility Government supply distribution centre		Permanent and temporary markets Warehousing and storage	Arterial highway Airfield Major transportation junction Electric generation station	Industrial estate Industrial raw material processing and food manufacture Regional agricultural experiment station Major repair and maintenance facilities Regional technology research centre

feasibility of basic services at primary, secondary and further education levels.

Accessibility to basic services in the rural context relates to vastly different patterns of spatial distribution as compared with urban areas.

A variety of approaches can be identified in overcoming the problems of dispersion. Along a scale from the socially least disruptive (in terms of moving people) to the socially most disruptive, present attempts include:

The provision of mobile teaching units (specialized laboratories for local primary schools in India, teaching teams which follow nomadic tribes in China).

The use of new technology (radio and television programmes in India, Indonesia, Iran, Mexico, Peru, Ivory Coast).

The provision of a hierarchy of services which allows the concentration of specialized services in a central location to which people can walk or travel, as for example in the nuclearization concept which forms the basis of most educational plans in Latin America (Figs. 13, 14).

The designation of development centres and resettlement of dispersed populations in a more or less coercive form (China, Panama, the United Republic of Tanzania).

This latter approach towards providing basic services reflects the sometimes more rational, in other cases more functionalistic, attitude which characterizes spatial organization in developed countries.

Historically ... the key to economic development in industrial societies was the relationship between urban centres and the countryside, and in the emergence of a spatial pattern in which conveniently located central places, especially market towns, stimulated the commercialization of agriculture and facilitated an efficient exchange of goods and services.¹

The situation in developing countries, however, based on cultural traditions and historic circumstances, is more diversified and demands more flexible strategies for development.

Where rural people can be convinced that resettlement is to their individual and collective advantage, the school may indeed be a primary cause for their willingness to move. The level of development and access to vital services is a prime factor in community involvement.

Bergmann and Bude have pointed out that:

The full primary schools are more often involved in community activities and display a wider range of them

than the junior primary schools, which is not surprising considering the difference in age of the pupils. Being a senior primary school, good access to vital services, and an increasing number of streams in a school, all contribute independently to the school's participation in community work and its demonstration effects. There are, however, an optimum number of streams and an optimum accessibility beyond which participation and spread effects drop. Thus, very large schools having very easy access to all services (i.e. in the most urbanized areas) fall below the performance of smaller schools in less well served communities. In urban areas, the school is not needed for community work to the same extent as in semi-urban and rural areas, partly because there are specialized administrative units around (health, agricultural extension, public works department), partly because the interest in agriculture is less pronounced and thus the school farm less highly valued, and partly because the parents, being closer to the job market, insist more on the subject matter which will be examined during the First School Leaving Certificate and the Government Common Entrance Examination for secondary schools [19, p. 136].

The co-ordination of services also depends on the size of the community. Rural settlements within the population range of 2,000 to 5,000 at which a primary school becomes feasible provide a good base for co-ordination. At this population level, the organizational and possibly physical integration of services and community resources for educational and community development seems to promise the most substantial benefits. Potential facilities and resources found in most villages which may be used for educational activities could be as follows:

Private homes and fields: home economics skill training, agricultural training (contract labour).

Crafts workshops: courses in carpentry, shoemaking, dressmaking.

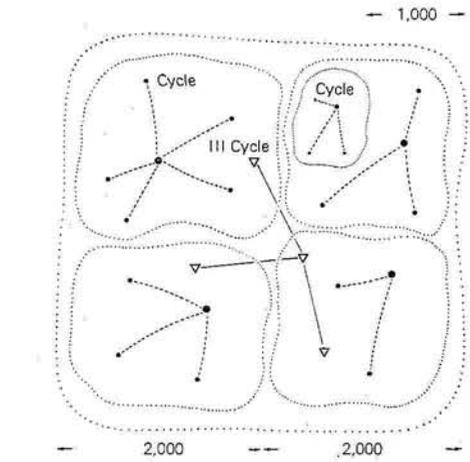
Local dispensary: introduction to health and medical care.

Government offices: apprenticeship in office work, public services.

Local crèche: child-care practices.

Private or communal ponds, land, forest: nature studies, names and functions of plants, animals.

1. The argument of E. A. J. Johnson, *The Organization of Space in Developing Countries*, p. 29, Cambridge, Harvard University Press, 1970, cited in Rwanda, Ministère de l'Éducation Nationale, 'Ateliers Scolaires au Rwanda, Contrat de Gré à Gré, Marché à Conclure', undated outline of contract between Ministry of Education and local community, p. 185, has been made by various authors like Walter Christaller and C. A. Doxiades as Gwen Bell points out on her editor's page in *Ekistics*, No. 257, April 1977.

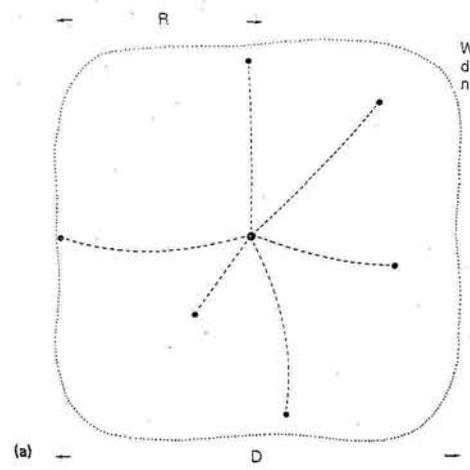


Average urban distances travelled

Age	6-8 years	9-11 years	12-14 years	16-17 years
Educational level	I cycle	II cycle	III cycle	IV cycle
Daily distance travelled	400 m	800 m	1,200 m	30 minutes by bus
Distance travelled twice per week *	600 m **	1,200 m	1,800 m	45 minutes

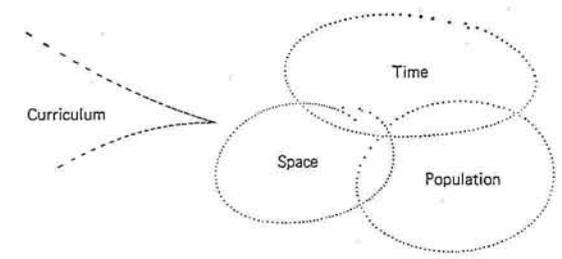
* Assuming a 25 hour curriculum (15 theoretical and 10 practical), which might imply 3 days of theoretical class and 2 of practical activities.

** The distance travelled is incremented by 50 per cent above the daily recommendation, as it is done only twice a week.



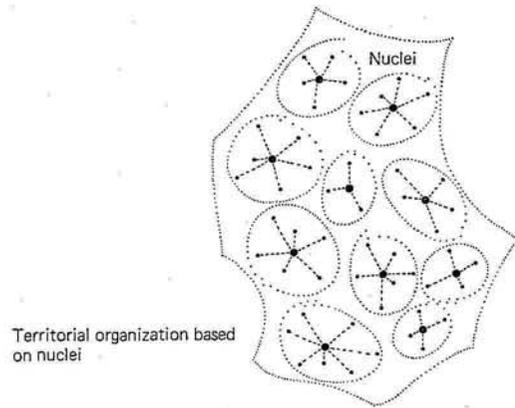
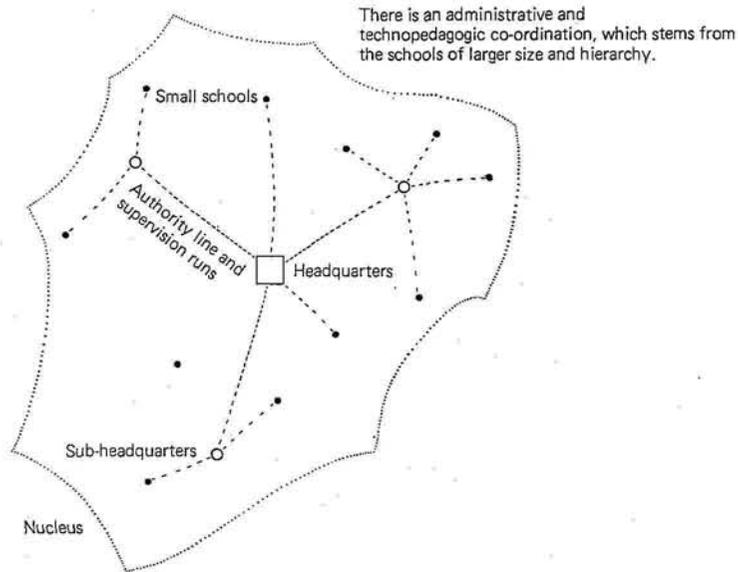
Nucleus dimensions

Cycle	R	Adjustment	D
I	600	500	1,000
II	1,200	1,000	2,000
III	1,800	2,000	4,000
IV	Variable	Variable	Variable

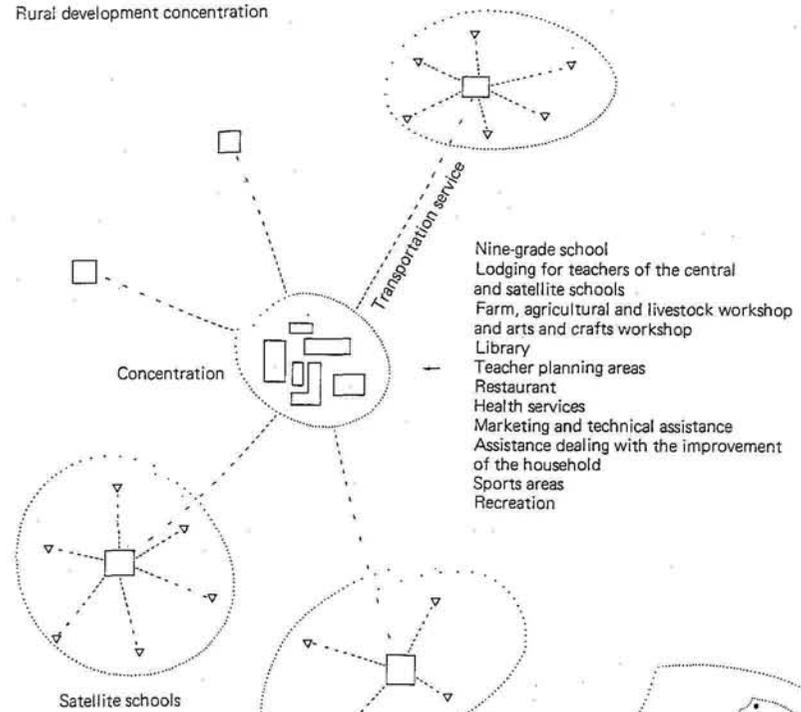


- Curriculum**
 - Education structure
 - Subjects by grade, type and level
- Time**
 - Number of shifts
 - Weekly hours, by subjects
 - Weekly schedule of accommodations, by subject
 - Working hours of the buildings
 - Working hours of the teaching staff
 - Weekly schedule of teaching staff
- Space**
 - Number of educational spaces
 - Type of educational spaces
 - Distances travelled from home to school
 - Distances travelled between schools
- Population**
 - Size of teaching staff
 - Specialization of teachers
 - Total enrolment
 - Number of groups by grade
 - Enrolment by group
 - Population to be served, according to goals
 - Unsuitably served population
- (b) Space/time/population**
 - Utilization indexes by type of space
 - Occupation indexes of spaces

FIG. 13. Rationalizing the location of educational spaces and variables to be handled in a nuclearized system.



(a)



(b)

Development concentrations tend to create poles

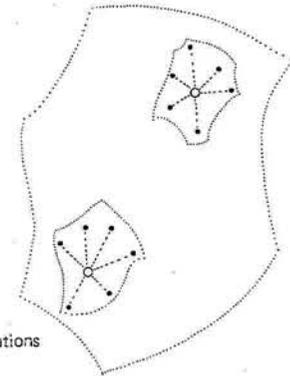


FIG. 14. (a) Nuclearization in Peru; (b) Nuclearization in Colombia. Source: CONESCAL *The Nuclearization of Educational Facilities: A Different Approach to Flexibility* (a report by Carlos Rodrigues, June 1974).

Building community schools

Shops and markets co-operative supply outlets: selling and buying practices, economic and productive analyses.

Communal infrastructural projects: road building skills, irrigation, well-drilling.

In many ways, the community-based curriculum described above may be implemented in any kind of school.¹

The establishment of a school and community centre,² however, which is actually situated at the centre of the community both geographically and spiritually, would seem to enhance the implementation of new activities, programmes and services in four additional ways. First, it would replace the traditional primary school and function as a school during certain periods of the day, offering not only a relevant (instead of an academic) curriculum but also education for all age groups and special needs (particularly women, but also orphans and the elderly). Second, it would function as a place where extension advice and courses would be given and community members would be trained in agriculture, health care, industrial skills and home economics (Table 5). Third, it would provide access to a dispensary, crafts workshops, market facilities and administrative offices in its proximity. Finally, it would become the meeting place

and focal point of community life, where people go to meet their friends, celebrate on national, local and private occasions, form clubs, read newspapers or books, listen to tapes and radio or look at television programmes. In other words, the community centre

should establish cultural values and provide an environment in which the division between the domains of education and leisure will disappear. It thus should have a balanced programme where the activities of each participating agency such as education, agriculture, health and local authority will strengthen that of the other [25].

1. Bergmann and Bude (op. cit.) report on the use of school premises by community groups that: 'The less public facilities exist in a place, the more do the members of a community rely on the use of the facilities available through the school. We therefore find beside more recreational activities, meetings of all kinds, like political party and council meetings as well as meetings of credit union members and church meetings.
'During out-of-school hours schools are used primarily for: church services, coaching for examinations, general meetings, party meetings, adult education, choir practice, football clubs and Red Cross.'
2. The term 'centre' does not necessarily imply a monolithic building but a co-ordinated plan or network which will be described in the next chapter.

TABLE 5. Facilities/community activities relationship

Facilities	Possible extensions	Community activities
Classrooms	Additional storage; larger classrooms; links to outside areas; multi-use furniture	Adult education (literacy programmes, home economics, sewing classes) Health training (family planning, nutrition, first aid, personal and communal hygiene) Spiritual enlightenment (right value orientation, self-help, co-operative spirit, civics and national solidarity) Training in co-operative organization and management for family and community development, committee structure and tasks, leadership Cultural education (appreciation and playing of instruments, folk art heritage)
Workshops	Additional storage; larger facilities; better equipment	Industrial skill training (farm tool making and maintenance, woodwork, metalwork, construction techniques, repair of radios and bicycles, maintenance of tractors)
Library	Additional clubrooms	Information centre, radio and television clubs, newspaper and book reading areas
Demonstration fields, ponds, livestock shelters construction sites		Agricultural skill training (animal husbandry, food crop, farming, fishery, forestry, irrigation) New construction techniques (production of bricks, trusses, foundations, simple sewerage, stoves)
Assembly and dining rooms	Larger kitchen facilities	Community and special committee meetings, theatre and music groups, festivals, films, larger meals
Sports fields		Sports programmes, competitions, large assembly, outside cinema, festivals, dances

The application and implementation of this concept can be found in all major regions. For instance, in Latin America the community school centres are at the heart of the nuclearization concept which forms the common denominator for resolving the paralysing isolation of rural communities:

In its original form, the system was limited in scope. The basic plan consisted of not much more than establishing links between existing schools within a more or less homogeneous district and selecting one particular school to serve both as a model and as a co-ordinating centre for the exchange of experiences and facilities. For the rest, teachers were merely to be encouraged to make contact with the local population by offering such advice and services as they were able [26].

Since its inception in 1931, when a Bolivian rural teacher implemented the first nucleus with the co-operation of several communities [27], the system has been extended, modified, and refined in many other places. The central school in most places has grown far beyond its function as a co-ordinating centre for the exchange of experiences and facilities into a community centre planned and usually built with community participation for many different purposes and often linked with a strong co-operative movement (Mexico, Panama, Peru).

When the first *Nucleos escolares campesinos* were set up in the especially underprivileged Puno district of the Peruvian Sierra, the central school of the nucleus was equipped to offer, in addition to its existing programme, a literacy programme with a strong practical orientation including such options as health, agriculture and animal husbandry. The workshops, fields and livestock shelters attached to each of the central schools were freely available, without any obligation on those who made use of them to participate in the literacy or adult education programmes, farm implements and tools were lent to whoever might need them in the community, everything was done to induce the people of the district to use the school as a social and cultural meeting-place. For the first time, a real attempt was being made to bring the school into the lives of the Indian population, to eradicate the idea that it was a bleak and remote institution unrelated to, and unconcerned with, everyday interests and needs. The Indians' response, their readiness to furnish land, to construct buildings, to harvest crops, sufficiently demonstrated that the nuclear system was largely successful [26, p. 28-9].

In general the transformation of the school into a community centre and focal point for development in rural areas seems to depend on three factors. First, it depends on the extent to which activities, programmes

and services deal with the immediate and most pressing needs, whether these are lack of water, roads, bridges, improved agricultural extension advice, or better marketing, supplementary credits, health or child-care facilities. The second factor is the extent to which local people from homes, farms, factories, shops, dispensaries, and so on, have been included in the plan and see the centre as belonging to them and serving their interests. Finally, it depends on the extent to which educational programmes have been integrated within a larger framework for development, including the improvement of infrastructural development, work opportunities, health care, education and administrative services (usually in that order [19 (p. 15), 28, 29, 30, 31].

Towards a more efficient use of all community resources

Evidently the types of activities, programmes and services which have been implemented and combined in urban areas in industrialized countries and rural areas in developing countries reflect the different goals pursued in each of these situations.

Differences between industrialized and developing countries

In industrialized countries, the potential for co-ordinated programmes seems vast but the implementation is hampered by a long tradition of increasing specialization. Rural areas in developing countries suffer from a lack of fundamental services which are difficult to provide in sufficient quantity.

Although the criteria of 'accessibility' and 'compatibility' apply to both situations in regard to co-ordination, they must be seen in the vastly different contexts of spatial distribution and the real or felt needs of the community. In industrialized countries these centre around leisure and recreation, and the incentive for co-ordination often comes out of the compatible interests of education and recreation, based on a surplus of facilities in the educational sector and a lack of facilities in the recreational sector. In contrast, the main impetus for co-ordination in developing countries often comes from a lack of basic services, technical and social infrastructure, better employment opportunities and production facilities.

While in industrialized countries there is a tendency to elongate the educational process, partly as a means

to cut down the productive age range in view of shrinking markets, in developing countries there is a tendency to cut the educational process to the absolutely basic educational rations that their rural communities require.

Age group needs must be taken into account in both cases as it would be absurd, for example, to expect children to understand and participate in community activities appropriate for adults.

However, in view of the more extensive use of part-time education in developing countries which leads older students to involvement at different levels of education, narrow rules relating various grades to distinct educational or community activities should be avoided. Here, in contrast to industrialized countries, illiteracy among adults is still a dominant problem. Literacy programmes may therefore be combined for the younger and older generations, while other community activities may well be specific to age groups.

In industrialized countries, similar concerns relating to the integration of school and out-of-school populations exist (although at the secondary rather than the primary level), but they may be ignored as long as affluence and sectoral decision-making patterns prevail. Important exceptions occur in France and the United States, where adults in some cases may join secondary school classes and work for the same degrees as ordinary students.

It has been pointed out that the educational terminology applied to developing countries is often misleading in its closeness to that used in industrialized countries:

Thus community education is frequently mentioned in both spheres as part of an emerging lifelong learning system, which obscures the obvious fact that... lifelong learning has a clear reference point when between 30 and 50 per cent of the age group continue voluntarily in some form of post-compulsory education in European countries, but it is difficult to make the term appropriate to the Third World without fundamentally changing its meaning [11, p. 7].

Similarly, the implications of linking education and production in developing countries are much more profound and seriously tied to questions of survival rather than merely 'relevance'.

Although links between education and work in both cases may be seen as a means of familiarizing young people with aspects of manual work, the contact with 'working life' for final-year students in industrialized countries tends to be restricted to a small range of 'bridging' courses with occasional factory and

supermarket visits; while for many children in developing countries who work several hours at home, work in school production units could mean 'working twice a day rather than once' [11, p. 51].

While in industrialized countries, lifelong education requires new architectural features in order to make the school more attractive and comfortable, and production facilities are often planned in specialized workshops for 'learners only', both adult education and work programmes in developing countries are in a large number of cases implemented without additional facility requirements or with only very modest ones.

In order to find out more about the innovative educational programmes for the community in various Asian countries, the Unesco Regional Office for Education in Asia mounted a mission in 1975 to three countries: Indonesia, the Philippines, and the Republic of Korea. Two conclusions were reached.

First, that education and the community as an activity will not necessarily rely on any form of building for its implementation. 80 per cent of Asian populations are engaged in agriculture and the place for learning is in the fields. Secondly, where buildings are needed the functional requirements can rarely be stated in advance. This means that our focus must be on ensuring the flexibility/adaptability of buildings provided for the formal education system so that they can be used by the community if needed [18].

While the community's use of school facilities and the integration of other social services within the school are of major concern in industrially advanced countries the educational use of communal resources is of equal if not greater importance in developing countries.

People in developing countries are closely dependent on communal action, and every endeavour which brings a new stage of development is communal and educational at the same time. Just as the necessity for a communal use of resources is pressing here, so a sense of what a community is and has to offer needs to be re-created in industrialized countries.

Points in common

Beyond these crucial differences, however, a few points in common can be found.

In both industrialized or developed countries, the most advanced programmes are really a type of political strategy aimed at developing awareness and the urge towards self-reliance among the people of a particular and usually underprivileged rural or urban

community [32]. (Models of this type can be found in Panama, the United Kingdom, the United Republic of Tanzania, and the United States).

There is a general tendency to admit and take into account that, even without the conscious use of community resources, a great deal of learning takes place outside the school. The tendency to confuse education with schooling, therefore, needs to be corrected to equate education with learning [33].

Community resources are used more and more consciously and deliberately to enhance the potential for providing learning opportunities. While the resource in itself is not significant, the use to which it is put indicates its importance.

In some countries (the United Kingdom, the United States), the term 'community education' includes both structured and unstructured educational activities as well as partnerships between education and other social agencies [34].

The separation between education and work is no longer acceptable—a tendency to integrate school and production activities is appearing on a global scale, although in differing degrees.

Accumulated objectives extending into the future

The accumulated objectives of the newly defined concepts for community education programmes and facilities are to satisfy the socio-economic requirements of each individual and the larger social entities; to develop local schools as learning centres for population groups of all ages; to organize learning situations in relation to real life; to improve and develop economic and living conditions; to initiate and generate co-operation between the national regional and local communities; to encourage utilization of local resources for education; and to help local communities to be self-sufficient.

In this view, 'education as social investment' and 'education as social consumption' coincide. In addition the distinctions between periods of learning and application, between education and production, and between formal and informal education disappear. In contrast to the traditional school system, education could take place everywhere, during the entire year and from morning to late evening. But this does not mean that the concepts of basic education are going to vanish.

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Buildings and other physical facilities

Facilities as an entry point and catalyst for co-ordination

Physical facilities, although certainly not the only or even the most important variable in co-ordination programmes, often serve as an entry point for co-ordination in translating goals and objectives of closer links between school and community into a tangible reality. Commitments have to be made and partnerships must be formed in order to decide what kind of building is needed. While people initially shape 'their' building according to their behaviour and relationships, later on they may be shaped to some extent by the building. With the advent of lifelong, part-time, more specialized and more individualized educational activities and programmes, and community uses of the school, spatial demands have changed drastically. Two opposite trends can be clearly identified: the integration of new uses within the school, found most often in industrialized countries, and the exploitation of educational and community resources outside the school, found most often in developing countries.

In the first case, spatial demands and building costs usually increase; in the second they either decrease or remain unchanged (depending on the number and intensity of external activities pursued). A third alternative which combines the two approaches and thereby balances spatial demands can be found in more recent developments. Today, in both industrialized and developing countries, proposals are usually built on the network principle which combines new physically integrated facilities and the re-use of existing facilities and community resources.

Although the provision of community facilities is not necessarily tied to the school, many schools can be so planned and organized that they can serve a wider public and, in attracting new user groups and partnerships, create a synergistic potential.

Whether they can act as a catalyst to release this potential and emerge as a 'new entity' which is more

than the sum of its parts depends on the whole array of factors from user participation to funding provisions, administrative structures and the attitudes of the personnel.

Urban areas in industrialized countries : from individual project plans to city-wide processes

The co-ordination of educational and community facilities in industrialized countries has in most cases been a means of improving and upgrading dilapidated urban areas both physically and socially and of creating a focal point for community life in existing and newly planned developments. The development of the idea over the past decade shows a clear trend from individual project plans to city-wide processes.

The underlying socio-economic and pedagogic reasons which led to the planning of large purpose-built centres in almost all industrialized countries during the 1960s and the early 1970s have been analysed in the first chapter.

One centre which stands out in size as well as in its overload of expectations is the plan for the Pittsburgh Greater Highschools which was conceived in the mid-sixties 'as a very large social instrument for redressing urban decline'. The plan was to replace twenty old neighbourhood schools by five high schools (5,000 to 6,000 students) with extensive community facilities, thereby creating new urban cores and eliminating several old ones (Figs. 15, 16).

A participant at the International Union of Architects Seminar on the social role of the school in 1970 described the plan as a prototype for a new era in school development, called the Education Park.

It responds to poverty and unemployment by affording new opportunities for young and old to learn and earn.

Building community schools

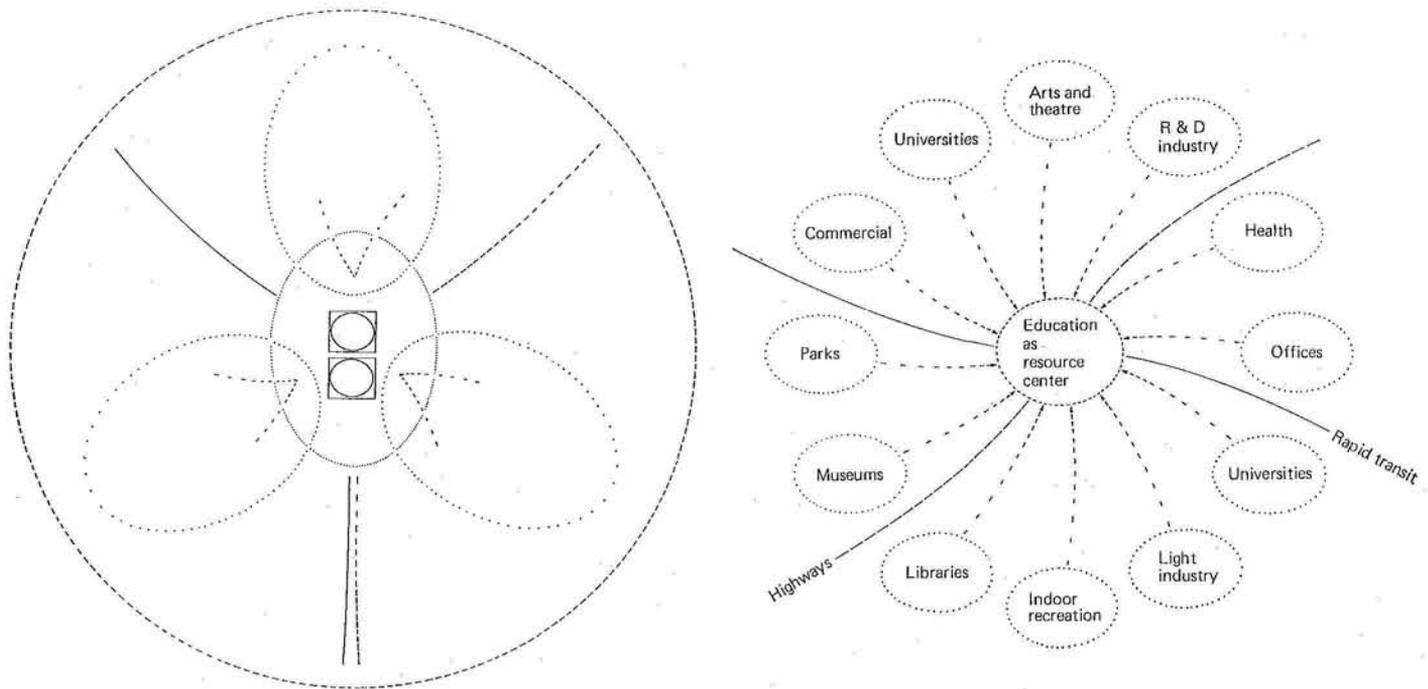


FIG. 15. The Pittsburgh Greater High Schools. One of the earliest and most comprehensive plans for integration of educational and community facilities. The theory of the Pittsburgh Greater High Schools was to focus several urban communities, normally separated by man-made or geographic barriers (railroads, highways, valleys, etc.), towards a new urban core, a major component of which is education. The plan included all urban sectors. *Source:* Urban Design Associates, Pittsburgh, Pa.

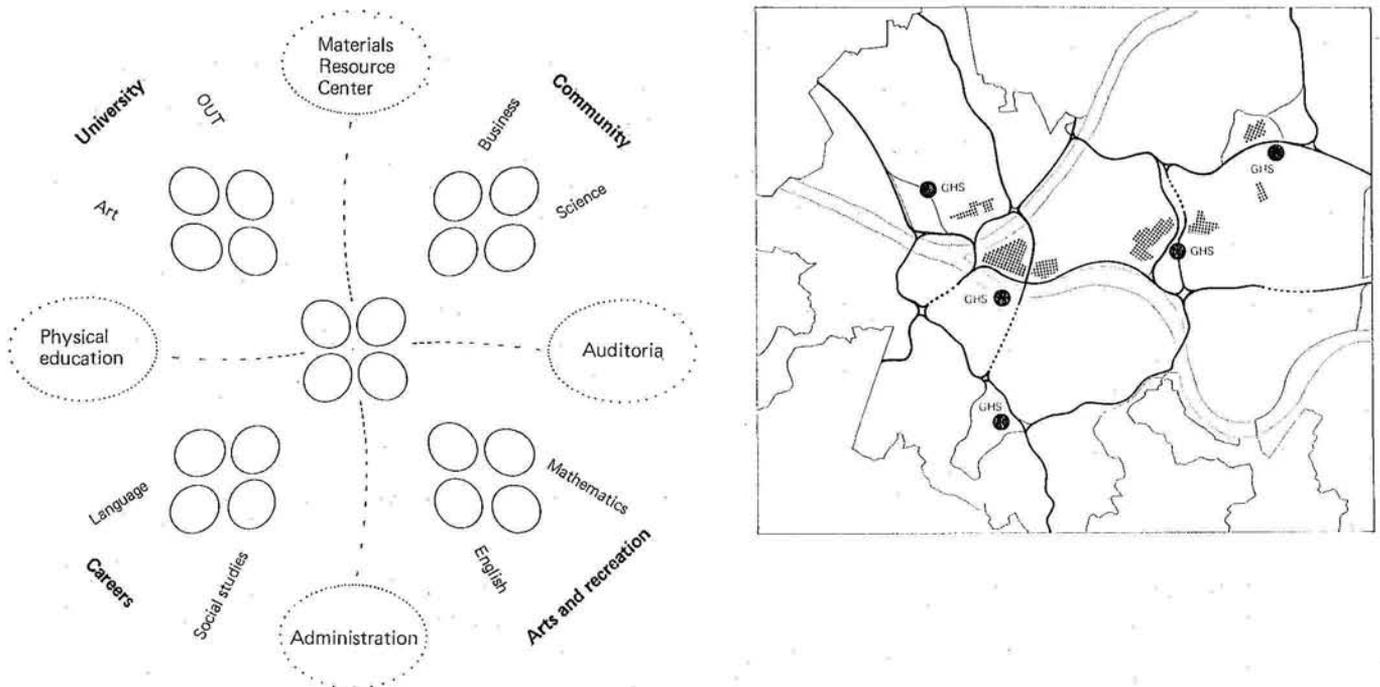


FIG. 16. The Pittsburgh Greater High Schools. The school was transformed into a human resources centre for education. The plan, however, failed on several grounds, among them the lack of an effective instrument for co-ordination and the lack of community involvement in the planning. *Source:* Urban Design Associates, Pittsburgh, Pa.

It stands as a dramatic symbol of beauty and educational richness to stem the flow of the whites from the city, and indeed to recall the favoured families to the cities for the intrinsic worth of a better and more realistic education than could be feasible in small exclusive communities at any price.

It displaces slum dwellings, and stimulates new and varied housing, public and private, by its very presence. . . .

It brings reality and meaning and a new self-respect to the alienated young, who find a relevant life for themselves in a new educational environment. . . .

Finally, it will provide a rational foundation for the joining of the now segregated elements of the community. Its bigness compels it to reach out to previously isolated racial, economic and religious pockets that had no real choice but the nearby neighbourhood school. The heretofore artificial and clumsy contrivances which desperately sought to mix the races will no longer be necessary [1].

The Pittsburgh Greater Highschools never got off the ground because the communities affected (but not involved) strongly opposed the plan [2]. They obviously preferred their 'isolated racial, economic and religious pockets' and the nearby neighbourhood schools. Subsequently implemented plans in Atlanta, Arlington, Baltimore and Pontiac, pursuing the same goals but somewhat smaller in size and involving the community, were more successful in terms of partially integrating various races and social classes (Arlington, Pontiac) or creating sufficient remedial measures to make a major step forward in the development of the black ghetto area (Atlanta, Baltimore).

The design of large comprehensive facilities was not an isolated phenomenon but typical of the new role of architects, who saw themselves as spearheads for the creation of a new social order.

Architects designing schools for the future will have to deal with the question of making bigger schools more humane *in an era of increasing centralization*. They will have to find new forms in which to increase the accessibility of education . . . *the school's social importance will increase accordingly*. As the number of hours and years devoted to education increases, the role of the school building will have to change just as the role of the school has changed. Within the school changes in attitudes, materials, educational techniques, age groups served, hours and seasons of use—all *call for new approaches of architecture and construction to solve societal needs*, both quantitatively and qualitatively. Neither underdeveloped nor developed nations can afford the price of mediocrity [3]¹.

In retrospect, these statements seem not only far too ambitious but also wrong in equating centralization with progress. The large centres which were subsequently built in Australia, the Federal Republic of

Germany, France, Sweden and the United Kingdom not only created major organizational problems, physical barriers and monumental monocultural ghettos which could not solve societal needs (either quantitatively or qualitatively); they also proved highly inflexible in the face of changing needs and fluctuating student enrolments. Most of the larger centres today have (or will have in the near future) great difficulty in putting their empty spaces to new uses mainly because of a concurrent reduction of personnel and funds for programmes and running costs.

The implications of co-ordination where size and scale are concerned

The co-ordination of physical facilities can be seen in two distinct phases. During the 1960s and early 1970s, the physical integration of services in new purpose-built centres led to an enormous increase in size; with the beginning of the 1970s, a rethinking of the possibilities and advantages of organizational co-ordination of existing and sometimes new facilities led to a comparative decrease in size or to modest alterations.

The magnitude of the rethinking can be demonstrated by comparing various plans from these periods: in the United States, within one decade, plans for comprehensive integrated facilities housing 5,000 students gave way to network systems including educational units for 150-200 students [4] (Fig. 17). This trend is illustrated by the examples which follow.

In the United Kingdom, the Abraham Moss Centre (Fig. 18) [5] planned between 1967 and 1971, houses a school with nearly 3,000 students and extensive community facilities, while the plan for the renewal of Crewe (Fig. 19) [6], first published in 1975, is based on the use of existing facilities and small educational units within a network system. Studies of community schools in the Federal Republic of Germany [7] and Swedish [8] and Australian [9] examples show that everywhere a distinct move towards smaller units occurred.

This trend towards decentralized solutions is not merely a response to changed economic and demographic situations, to shrinking public financial resources and to declining student enrolments. It is also a response to experiences which have been made with large purpose-built units.

1. Author's italics.

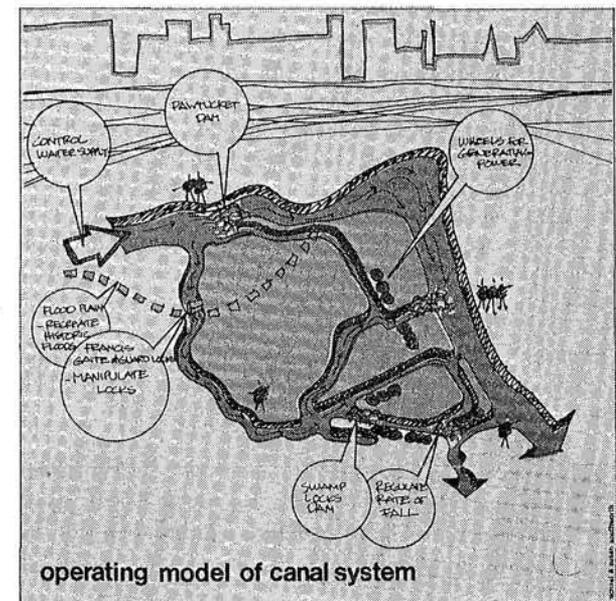
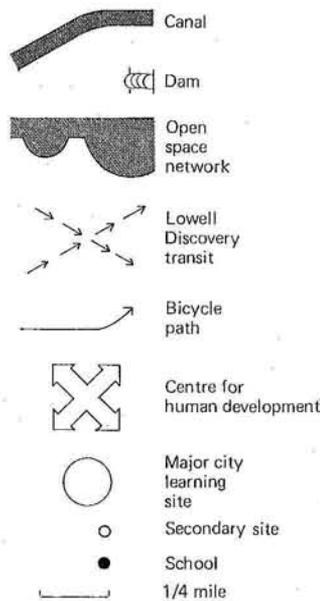
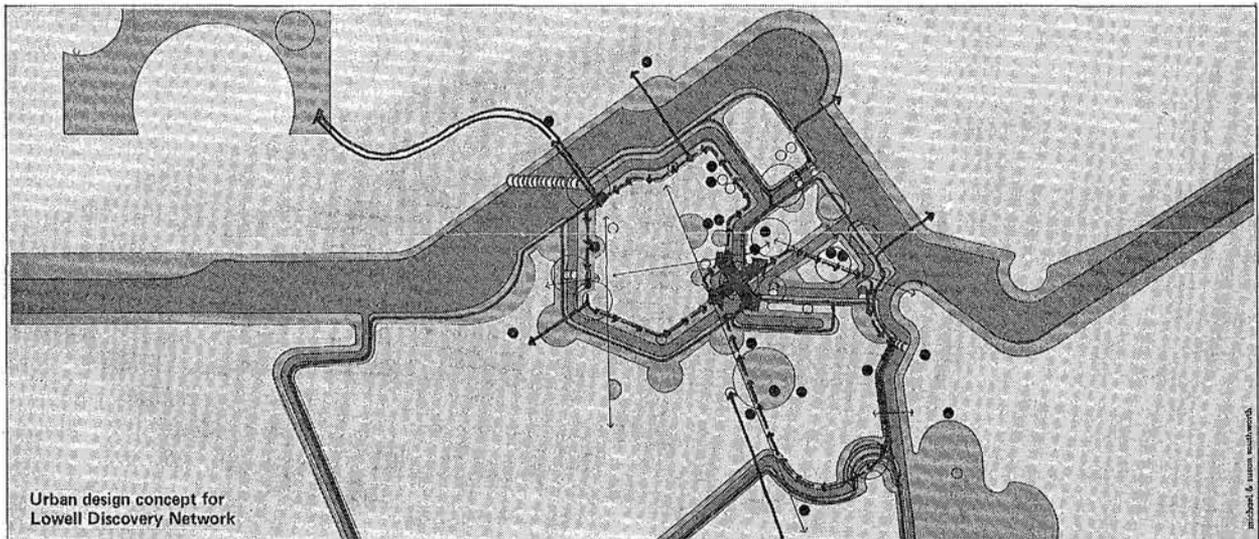
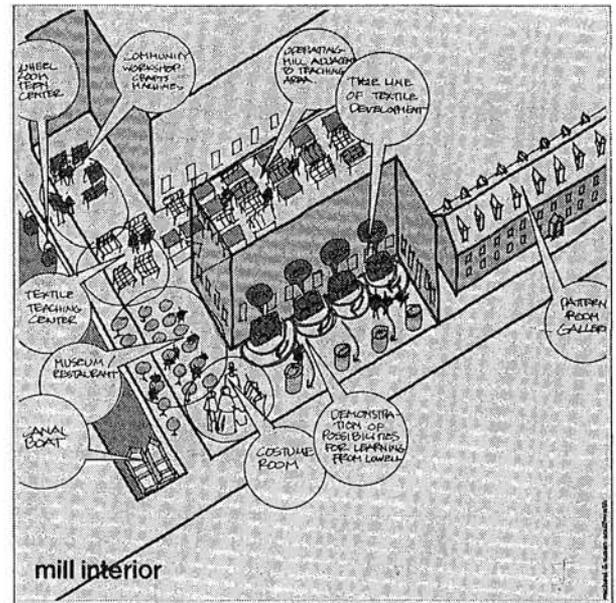
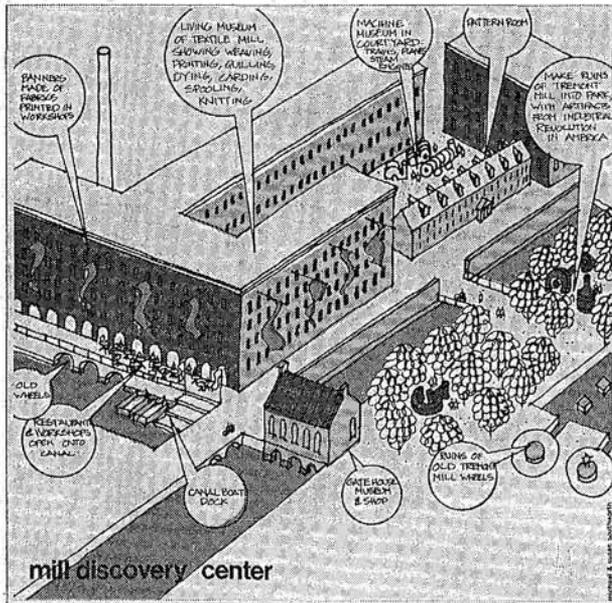


FIG. 17. Discovery centres. Lowell Discovery Network: an urban national park.

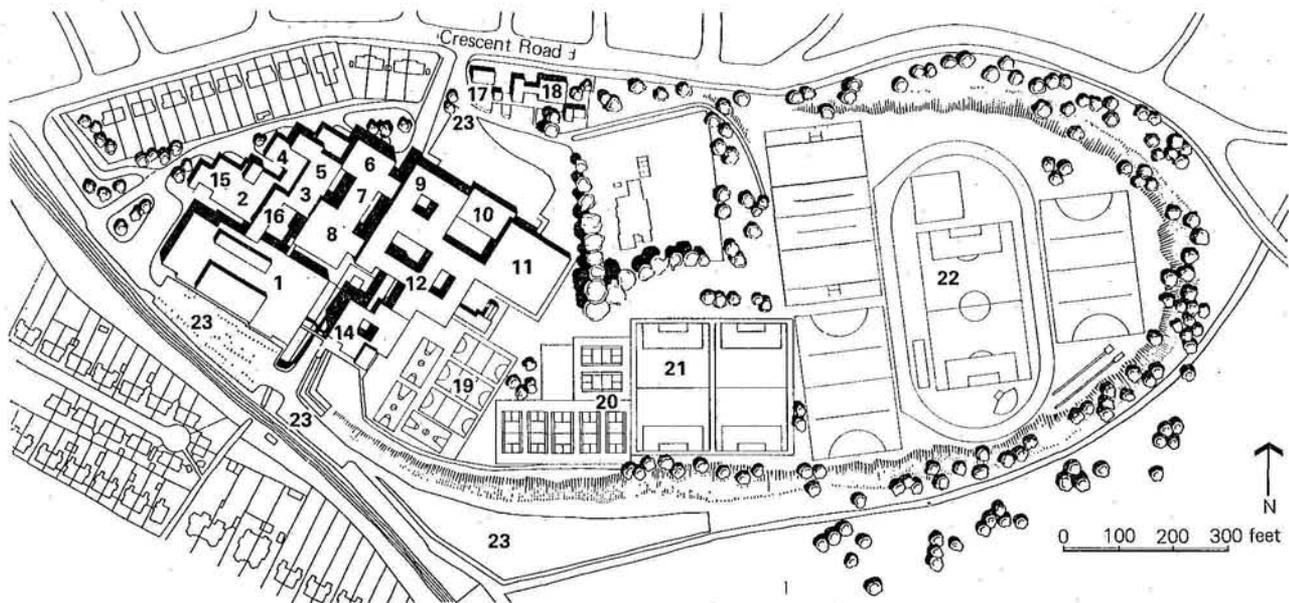


FIG. 18. The Abraham Moss Centre, Manchester (United Kingdom). 1. Indoor recreation centre. 2. Kitchen and restaurant. 3. Theatre. 4. Music. 5. Drama. 6. Adult education centre—office studies. 7. Humanities—administration. 8. Library. 9. Youth wing—arts and crafts. 10. Engineering. 11. Science and mathematics. 12. 13-15 Base. 13. Rural science. 14. Lower school base. 15. Elderly and handicapped persons' club. 16. Staff club. 17. Caretaker. 18. Residential unit. 19. Hard play area. 20. Tennis courts. 21. Hard porous play area. 22. Playing fields. 23. Car park. *Source*: United Kingdom, Department of Education and Science, Abraham Moss Centre, *Building Bulletin* (No. 49), London, HMSO 1973.

Bergouignan, in her national context paper relating to integrated facilities in France, concludes:

The assumption which has prompted the attempt to bring educational and socio-cultural facilities together is that the 'animation' potential inherent in each type of facility is increased and multiplied by grouping them until it becomes a powerful pole of attraction equivalent in some respects to the traditional town centres with their cafés, shopping districts and leisure facilities. What has been forgotten is that (public) educational and socio-educational facilities are not 'stimulating' in the same sense as a (private) store, cinema and café, and this is borne out by experience. Admittedly these public socio-cultural and educational facilities may be intensely frequented as is demonstrated by certain frequentation surveys but it is an illusion to imagine that the grouping of public communal facilities can replace a convergence of factors conducive to animated urban life. Moreover, as certain projects have shown, it would seem that instead of increasing animation the grouping of facilities produces contrary effects and creates nothing short of a cultural and socio-educational ghetto, segregated from the places where people live and work and from the whole urban fabric [10].

Smaller units seem to provide more flexibility in

adjusting to changing needs and demands; more accessibility for all age groups; fewer institutional and psychological barriers; possibilities for re-using existing buildings and reducing site development costs; more economic solutions in terms of running costs and maintenance (natural lighting and natural ventilation); fewer organizational problems for administrators, teachers, and students; better possibilities for adaptation to historical or existing scales of urban structures; and less cumbersome planning processes and participatory procedures.

In relating co-ordination and integration to the size and scale of facilities, the 'direction' in which this happens is of prime importance. In Figure 20, we have attempted to show the different types of organization of spaces for the integration of services in new comprehensive projects and for the co-ordination of services in existing urban areas. They can most frequently be found in industrialized countries, but also apply to some situations in developing countries, as we will show in the next section.

For the integration of services in new comprehensive projects, three basic design solutions can be found. The integration of services in large purpose-built

projects is an international phenomenon and something like an international architectural form of expression has evolved for integrated community school centres.

Central hub systems (Fig. 20) usually group various uses and services around a central 'hall', 'forum' or 'educational centre' which is open to connect different levels and storeys. The advantage of this design form lies in its easy supervision and orientation. Recognition of the whole school as an entity, however, is only possible in relatively small units. Larger centres usually depend on large artificially lit areas and air con-

ditioning, and problems arise if new parts are added or a phased implementation becomes necessary. If the central hall is open to surrounding circulation areas, it may cause acoustic problems in functioning as an assembly hall or a lecture theatre.

Architecturally, central hub systems often lead to rather rigid symmetrical solutions, which can be alleviated if a split-level design principle is introduced. Another disadvantage of this type of school is that it offers few possibilities for an urban integration which may be critical to the 'vibrations' between school and community, and to its 'outreach image'.

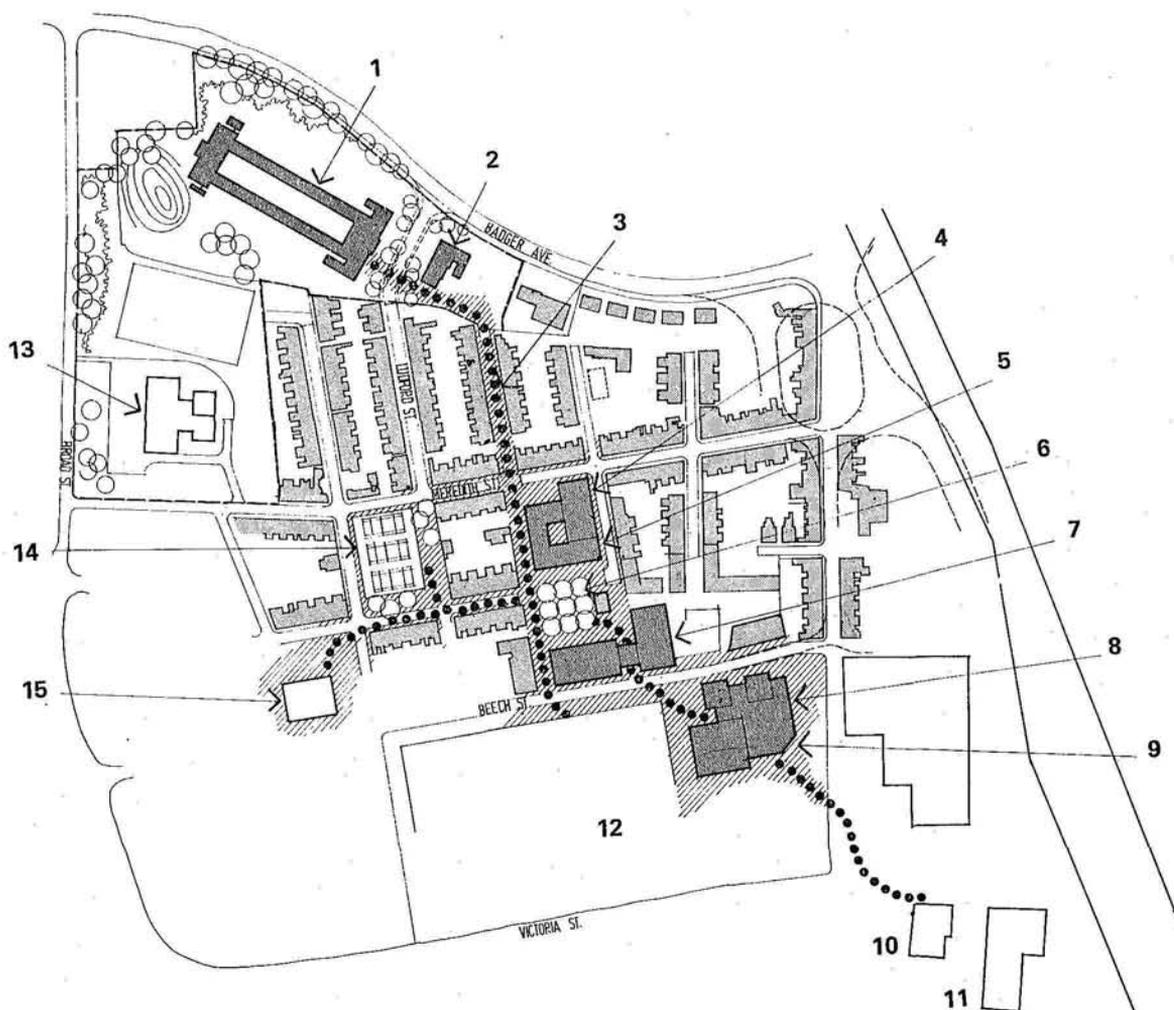


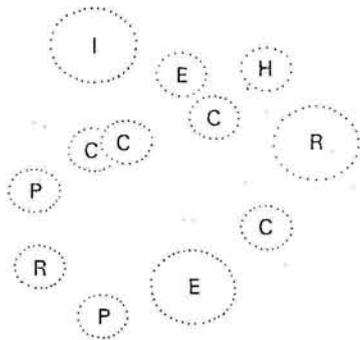
FIG. 19. The Ludford Street proposals, Crewe (United Kingdom). Ludford Street lower school, 11-13 years. 2. Welfare centre. 3. Pedestrian route. 4. Centre A, general study spaces, adult evening use. 5. Family centre, social lounge, crèche, snack bar, toddlers' play area. 6. Green square. 7. Centre B, science, craft, general study spaces. 8. Centre C, music, drama, general study spaces. 9. Drama workshop, recital room, screen studio, exhibition, dining suite, shop. 10. Theatre. 11. Market. 12. Town centre redevelopment. 13. New Beech Street School. 14. Sports square five-a-side football, volley ball, tennis. 15. Day-care centre.

The planned example (Fig. 21 (a), (b)) shows the educational and community centre in a large residential area near Zwickau (German Democratic Republic).

In the Pontiac plan [2] (Figs. 22, 23), the central hub extends in a pedestrian spine linking the residential neighbourhood on one side with the central administrative district on the other. From the centre, at the lower level, learning spaces and school streets radiate into the outer spaces which contain the more quiet learning areas. The architects of the Human Resources Centre have tried to resolve the problem of urban integration of the large unit by matching the height of

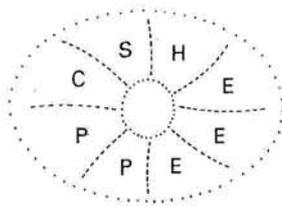
the residential units and gradually following the topographical rise of the site and the increased scale of the administrative units in the architectural design. The centre houses 1,200 students and serves many different community uses [2].

Linear systems have the advantages of satisfying most of the new demands of large school centres and community schools: easy orientation and access to all the different functions; flexibility in phasing, enlarging and adding (micro and macro growth). Often these buildings break off rather arbitrarily at the end, which may prevent their urban integration.

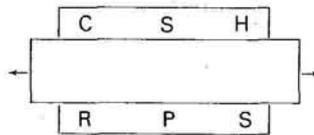


Traditional pattern of services distribution

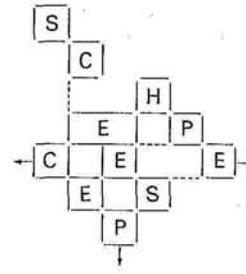
FIG. 20. Organization of spaces, C = Commercial facilities; E = Education; R = Recreation; S = Social services; H = Health services; P = Public services; I = Industry.



Central hub system

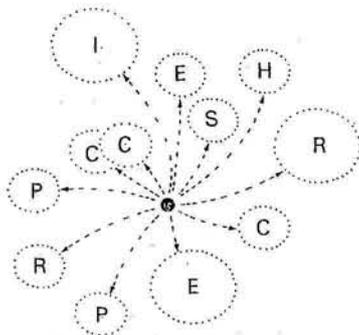


Linear system

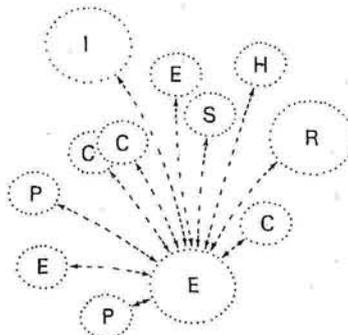


Network system

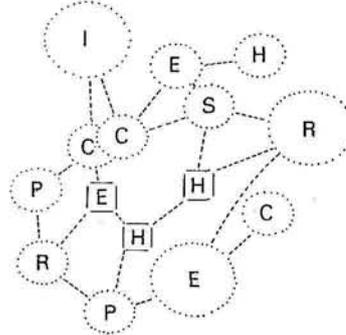
Integration of services in new comprehensive projects (→ possibilities for extension) (----- organizational link).



Use of community resources



Two-way open school-



Network system

Co-ordination of services in existing urban areas (→ direction of co-ordination) (----- organizational link).

Building community schools

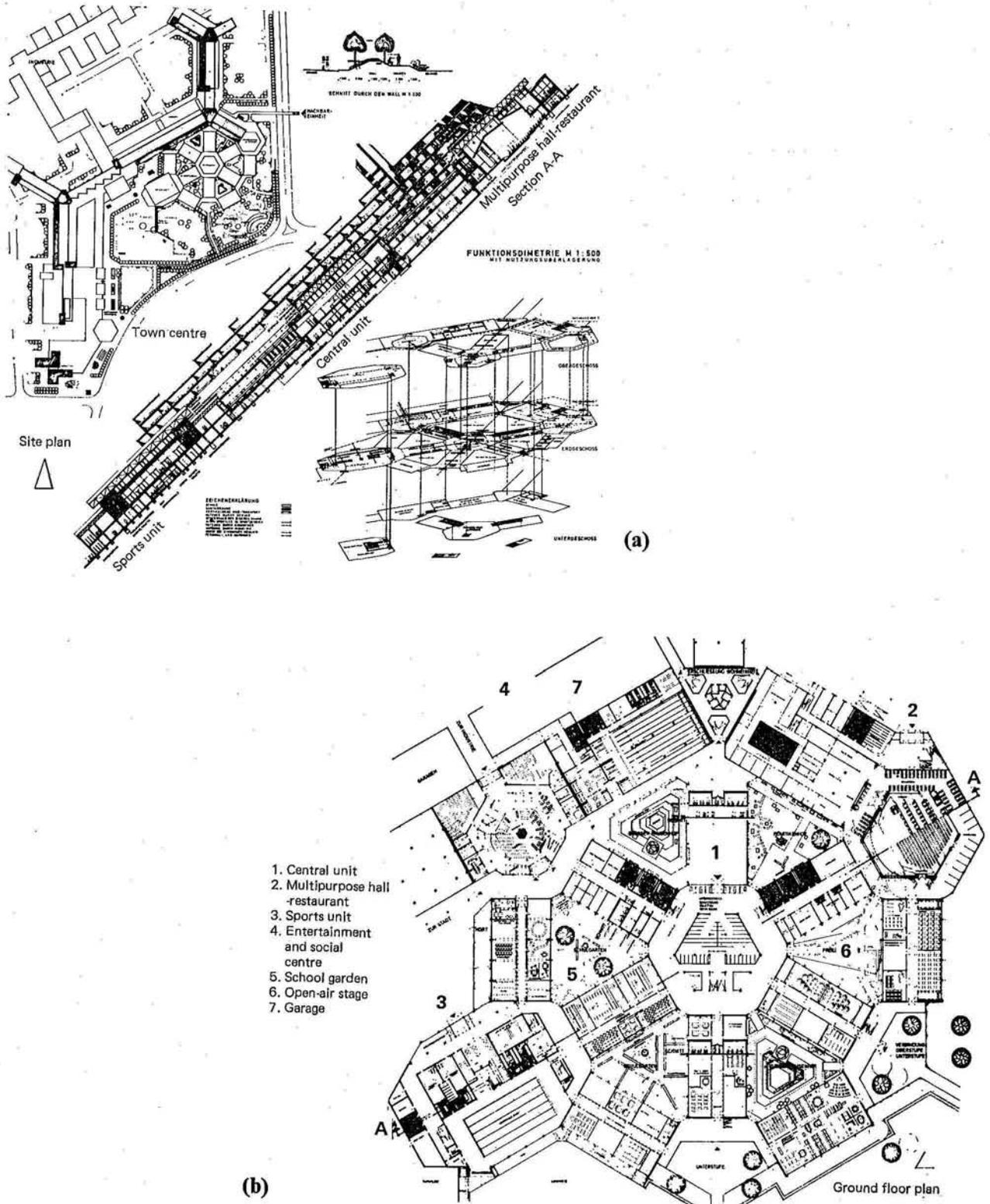


FIG. 21 (a), (b). Educational and community centre at Zwickau (German Democratic Republic). Source: International Union of Architects, *The Social Role of the School* (seminar report), Vienna, May 1970.

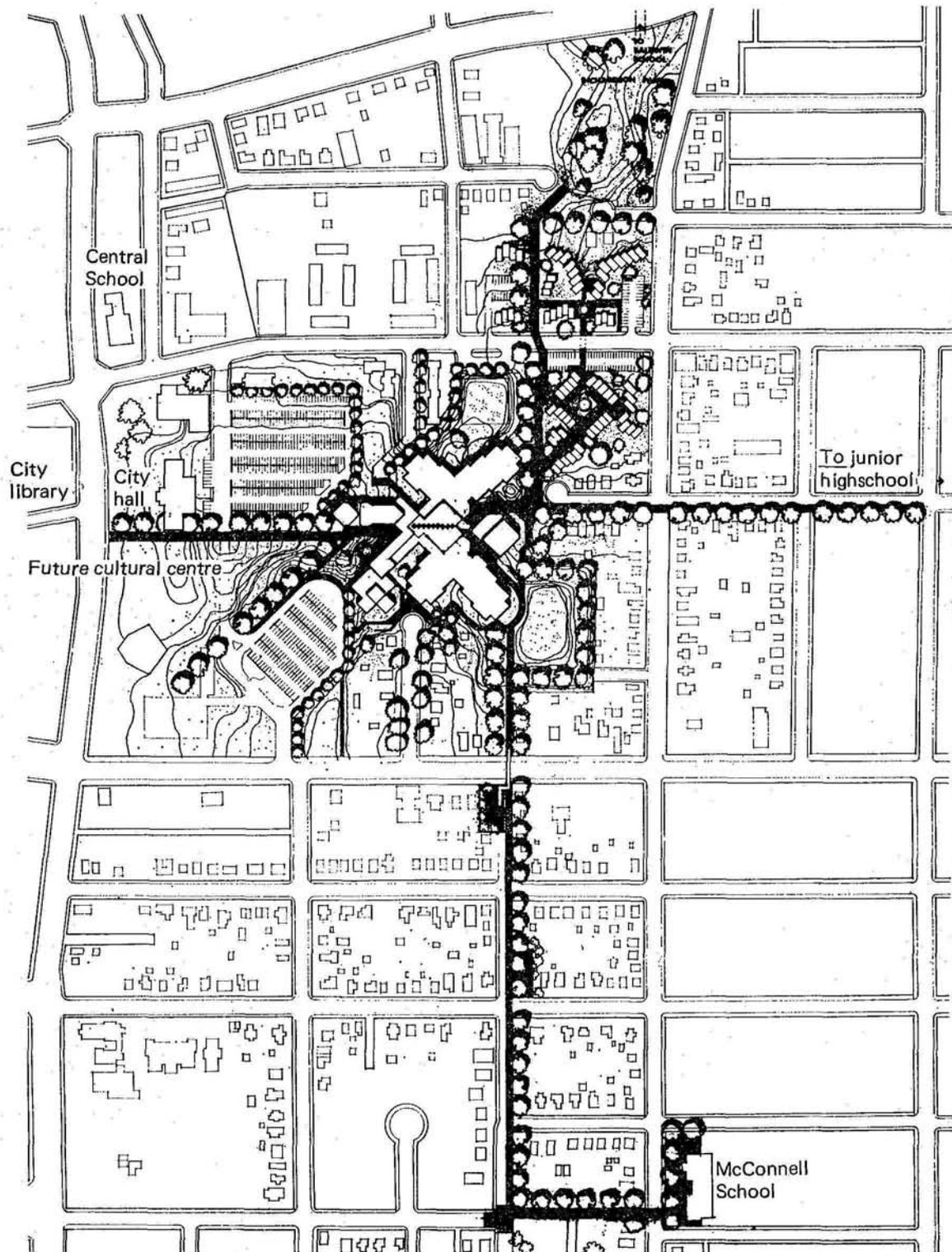


FIG. 22. The Dana Whitmer Human Resources Center, Pontiac, Michigan: site plan.
Source: Urban Design Associates, Pittsburgh, Pa.

Building community schools

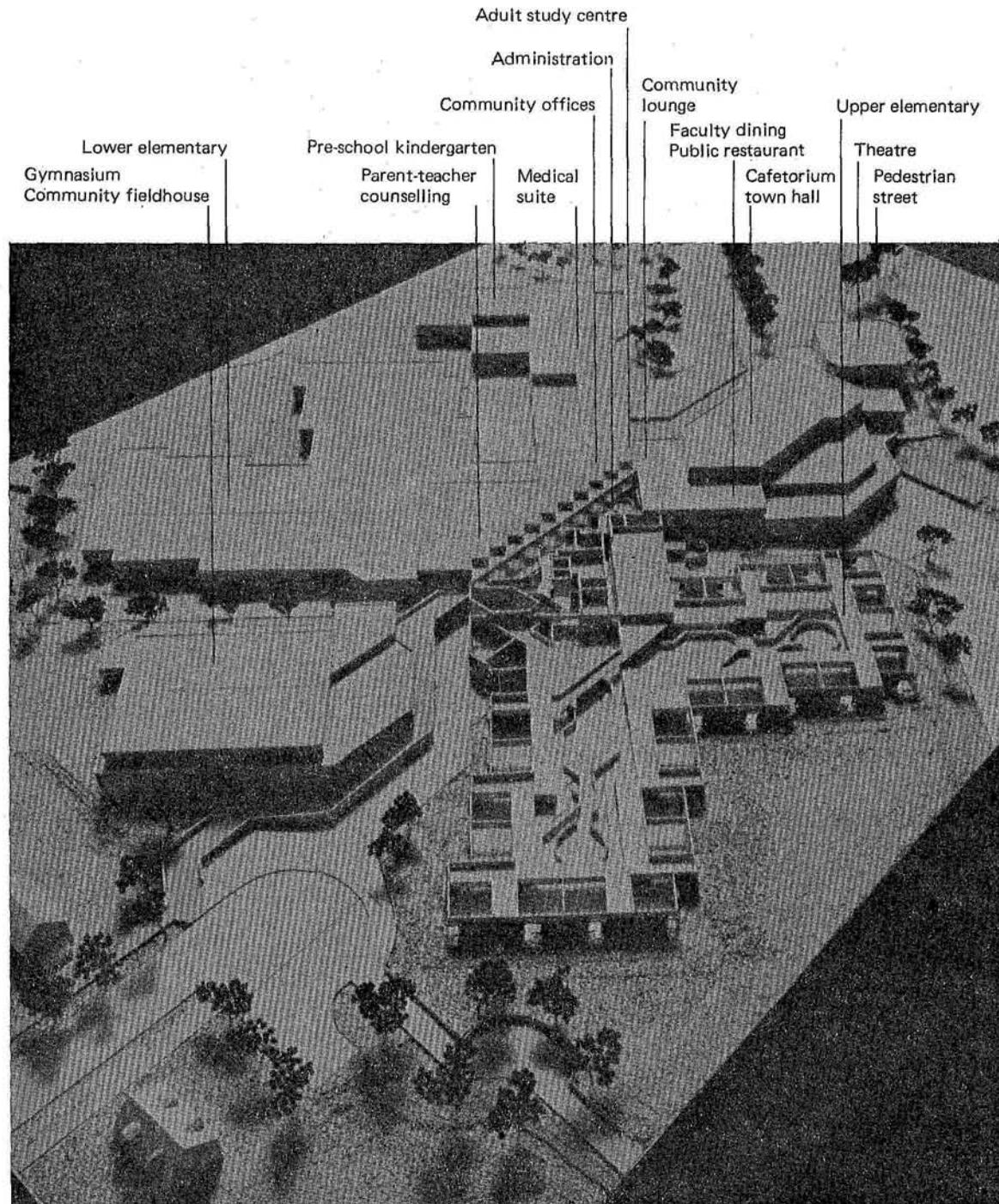


FIG. 23. The Dana Whitmer Human Resources Center, Pontiac, Michigan: model and main functions.
Source: Urban Design Associates, Pittsburgh, Pa.

Sometimes non-specialized instructional areas are clustered at the outer fringe and create an undulating façade or atrium-type interior courtyard. The planned example (Fig. 24 (a), (b)) shows the Cultural Centre in Sollentuna (Sweden).

The school and community centre plan in Mümmelmannsberg (Fig. 25) links the new commercial centre at one side with a park, sport and recreation area at the other. Two intersecting school streets lead through the centre. At full capacity the centre will house up to 3,500 students. Community facilities, youth centre, public library, recreation facilities and a kindergarten are located near the entrance areas of the two public pedestrian paths.

Network systems often have interior courtyards which allow only a limited number of storeys. They emphasize adaptability, flexibility and openness and function in the least rigid or formal way.

New parts can easily be added, or old parts demolished, without any loss of spatial coherence.

Two serious disadvantages are the length of the circulation system and the difficulty of providing orientation and differentiation.

The planned example (Fig. 26) shows a prototypical community school centre in the U.S.S.R.

The implemented example (Fig. 18) shows the site plan of the Abraham Moss Centre in Manchester which houses about 3,000 students. The surrounding external spaces are either open public vehicle or pedestrian areas or enclosed private courts. Interior courts vary from small intimate ones for lower age groups to larger, robustly constructed craftwork courts linked to arts and crafts areas or engineering workshops. They are seen as wind-sheltered extensions of the activity areas that adjoin them.

There is obviously a large number of possible variations between the three basic models (bent linear or angle systems, network systems with a central hub, etc.) (Fig. 27). The advantages and disadvantages of each solution have to be seen in the light of the site conditions and the surrounding urban structure. Past experience seems to indicate, however, that there is general agreement among architects, planners, administrators and teachers that large purpose-built centres (in whatever form they may have been built) do not respond closely enough to the objectives of community oriented facilities.

The co-ordination of services and the re-use of existing urban structures pose different problems from those of co-ordination in new purpose-built centres.

One of the most radical solutions in respect of the physical facilities aspect can be found in the almost exclusive use of community resources for education:

'Schools without walls', the 'Parkway System' or 'Learning Exchanges' can be housed in school buildings which contain only the very minimum of core functions: administrative offices, communication areas, some classrooms, library and media centre [11]. The implementation of this educational alternative, however, requires the existence of a large range of under-utilized resources for education, a willingness on the part of private and public agencies to co-operate, and students of a fairly mature age range, independence and motivation.

As an alternative type of education this model has found its place in Australia, the United Kingdom and the United States, where 'credit systems' rather than controllable and comparable final examinations (France, Federal Republic of Germany) offer a great deal more flexibility in using the enormously varied learning opportunities in urban areas.

In spite of its potential to broaden the range of choices, the use of community resources for education offers the least expensive model in terms of capital costs and spatial demands, and is limited only to the extent that resources may be depleted or inundated.

Although transportation, location and access are major variables, the real barriers to a wider implementation under the more centralized governmental systems can be found in sectoral decision-making procedures, rules, regulations, the schools' statutory obligations, insurance conditions, and union contracts.

Within the Benjamin Franklin Parkway programme (Fig. 28), half of the courses in the curriculum are taught by professionals in community organizations.

we have architects teaching architecture, hospital employees teaching medical careers, businesses offering students training in clerical and management jobs. Our art classes meet at the Philadelphia Art Museum. We have 16-year-olds studying government at City Hall, law with attorneys and cooking in restaurants. A student interested in learning car mechanics may go to a local garage for an apprenticeship; a student interested in anthropology may attend classes at one of five major universities in the area. A student capable of advanced work in chemistry might work in research at a local pharmaceutical house. So vast are the resources of the city that we now offer roughly three hundred such opportunities for the 540 students enrolled in our Programme, enabling each student to completely individualize his curriculum [12].

The 'two-way open school' (Fig. 29) is currently becoming increasingly popular and has the best chances of becoming the model of the future. Based on

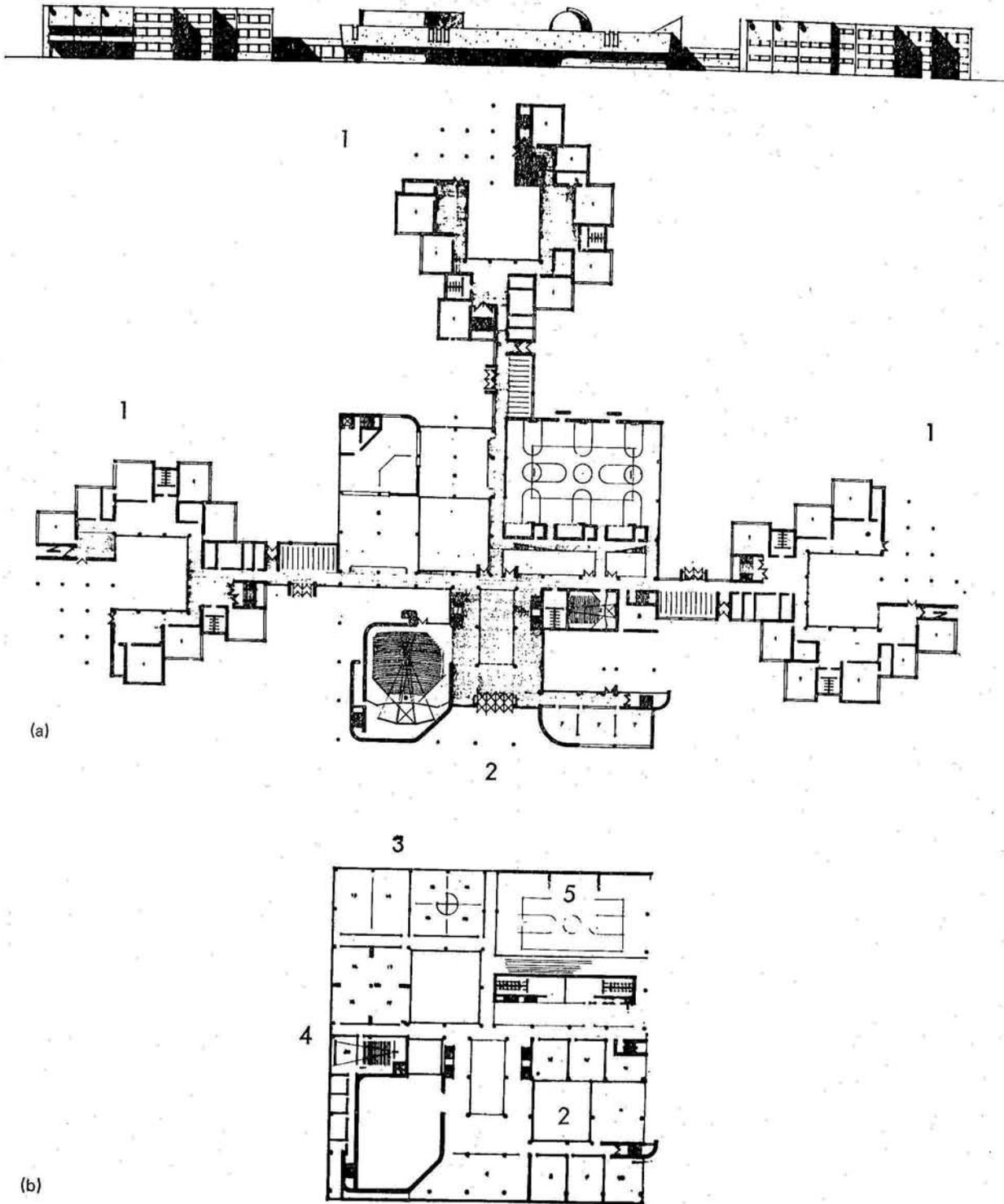


FIG. 26. Prototypical community school centre, U.S.S.R. (a) Ground floor; (b) Upper floor of central building. Source: International Union of Architects, *The Social Role of the School*, Vienna, May 1970 (seminar report).

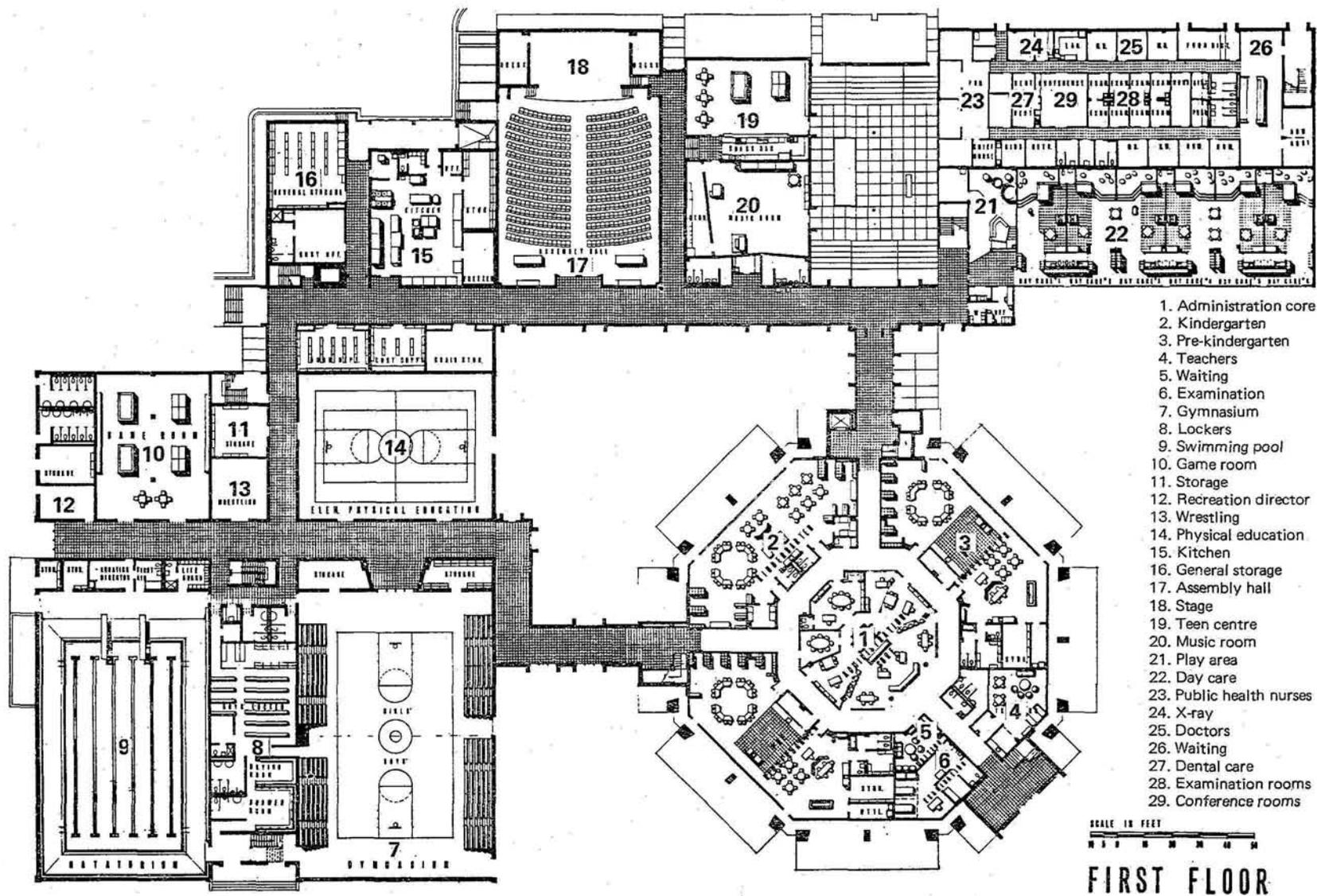


FIG. 27. Highland Community School, Washington, D.C. Source: George Skiadareis, 'Educational Facilities and the Community, Metropolitan Areas of Washington, D.C., and Baltimore, Md. (unpublished Research Study, Unesco, 1975).



FIG. 28. The use of community resources for education. The Benjamin Franklin Parkway, Philadelphia, Pa., along which the city administration, museums, libraries and offices serve as teaching spaces for the Parkway Programme. These materials and facilities which the community has opened to the students in the programme are unique and could not possibly be duplicated on any school budget. Source: Leonard B. Finkelstein and Lisa W. Strick, 'Learning in the City', *Prospects*, Vol. II, No. 1, 1972, p. 74.

the 'empty schools phenomenon', shrinking student enrolments and fluctuating population figures (see the first chapter), it meets the increasing spatial demands of various agencies, user groups and social services in opening up school areas for their use. At the same time, this model satisfies to some degree the 'quest for more relevance in education' by using existing community resources

In a way it offers all the advantages of the previous models and avoids their disadvantages: it usually is not too large to become as inflexible and organizationally difficult as the large purpose-built centres; it does not deplete or inundate existing resources; and it increases educational choices and supports other social services which in turn may provide a better ground for the educational service.

A proposal for this type of co-ordination can be found in Greece (Fig. 29) where in the context of urban renewal of the historic parts of Hermoupolis new relationships may be developed between cultural units (theatre, library), public institutions and professional associations.

The linking and development of educational facilities and their further integration with existing noteworthy buildings in the community constitute a broader objective. If the community can be rejuvenated from within and through the educational and cultural development of its residents, the existing architecturally rich heritage would be even further validated [13].

Other examples of this type of facility exist in the United States: the Community High School in Ann Arbor, Michigan, situated in an old primary school, for instance offers child-care programmes and community education services while at the same time using the educational, social and commercial facilities in the city [14].

The network system is the most advanced type of strategy employed in linking old or existing resources and new facilities. While older structures may be predominantly used for their original purpose, new additions or substantial renovative measures may take into account the latest multi-use considerations and changing user needs.

Like the two-way open school, the model capitalizes on the advantages offered through co-ordination but avoids the disadvantages caused by one-sided measures leading to a strong centralization of facilities or, in the other direction, to a depletion of resources. In addition, it creates new links not only between school and community facilities but also among the community facilities themselves, thereby enhancing

the possibilities for co-ordination outside the school, which indirectly also benefits educational purposes.

A proposal which has created a lot of enthusiasm for this type of plan is the 'Lowell Discovery Network' (Fig. 17) in Massachusetts, which turns an old industrial city into a huge human development centre. The plan provides a series of paths linking formal and informal indoor and outdoor settings. An old mill will be converted into an instructional centre, workshops and laboratories relating to old and new industries in Lowell. Churches, historical sites, railyards and even an old jail will be used for education for all its citizens 'from schooling of expectant mothers and infant education through post-graduate college studies' [15].

A second proposal which may be implemented in the near future is the Crewe project in the United Kingdom. The so-called 'Ludford Street Proposals' (Fig. 19) include the remodelling of a school (built in 1930) for 250 pupils and local community facilities for young mothers, pre-school children and elderly and young people. The site, together with that of an adjacent primary school, will be redeveloped and integrated within the available public open space in the town and for surrounding housing.

As funds become available the existing temporary accommodation would be successively replaced by a series of three new buildings, planned as infill development associated with the existing housing and new commercial development of the town centre.

Each of these new buildings would include, as an integral part of the accommodation, facilities which would allow extended and joint use of the school facilities by the community. The distribution of the teaching accommodation in the centres is designed to provide a series of mixed activity centres. Each will provide for a broad cross section of activities, subjects and space types. This will allow pupils to spend large blocks of time in the individual centres and so reduce movement between them. It will result in a fruitful mixing of pupils and subject disciplines and allow for a wide range of flexibility in the future use of the centre [16].

Complete city-wide networks linking educational and community resources have been proposed in two locations in the United States: Ann Arbor, Michigan [17], and Hartford, Connecticut [18]. Here the trend away from physical co-ordination towards organizational co-ordination is even more evident.

Although neither plan has been fully implemented, the design and building projects for educational facilities, whether in newly built, re-used or added spaces, have been greatly influenced by the existence of a process aimed at co-ordinating all the various urban resources.

The Ann Arbor master plan is radically different from past examples. It makes no attempt to project precise population and physical settlement patterns, but presents an infrastructure designed to respond to change and the lack of precise predictions. The infrastructure is regarded as a network linking various mini-systems as part of the overall system (Fig. 30). The Board of Education is regarded as a service agency which, along with other service agencies and jurisdictional governments, services the various components of the network.

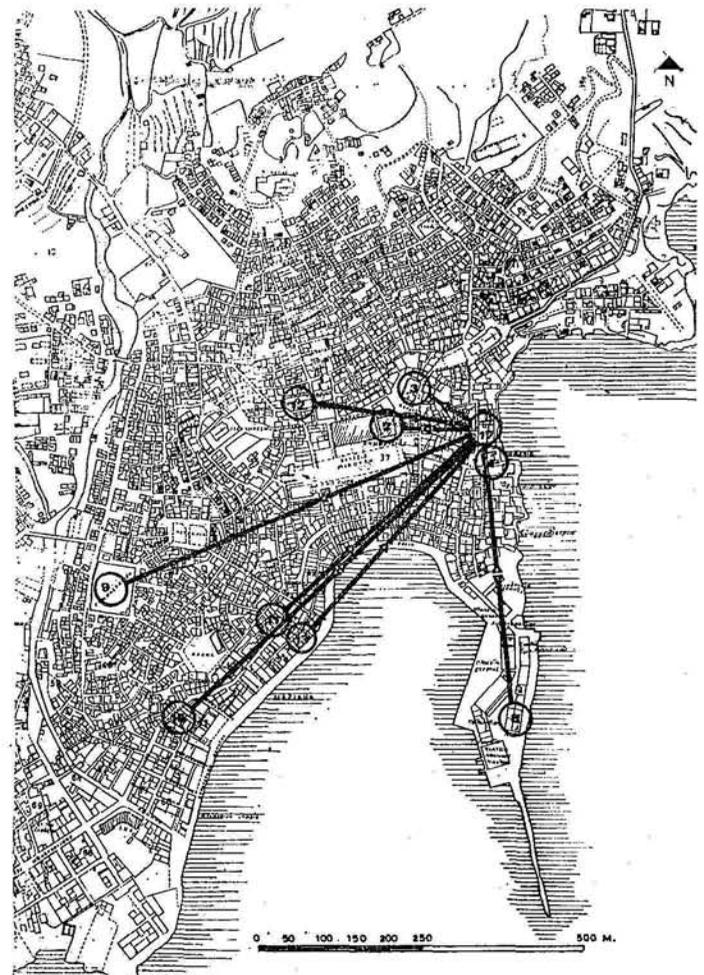


FIG. 29. The two-way open school. Proposed links between the school and other socio-cultural institutions in Hermoupolis (Greece). 1. Club Municipal Library. 2. Theatre. 3. Prefecture. 4. Yachting club. 5. Municipal Stadium. 6. Commercial Secondary School. 7. Boys' Secondary School. 8. Girls' Secondary School and Technical School. 9. Labour Centre. 10. Proposed Educational Unit. Source: Unesco, *Buildings for School and Community Use: Five Case Studies*, p. 74, Paris, Unesco, 1977 (Educational Studies and Documents, No. 26).

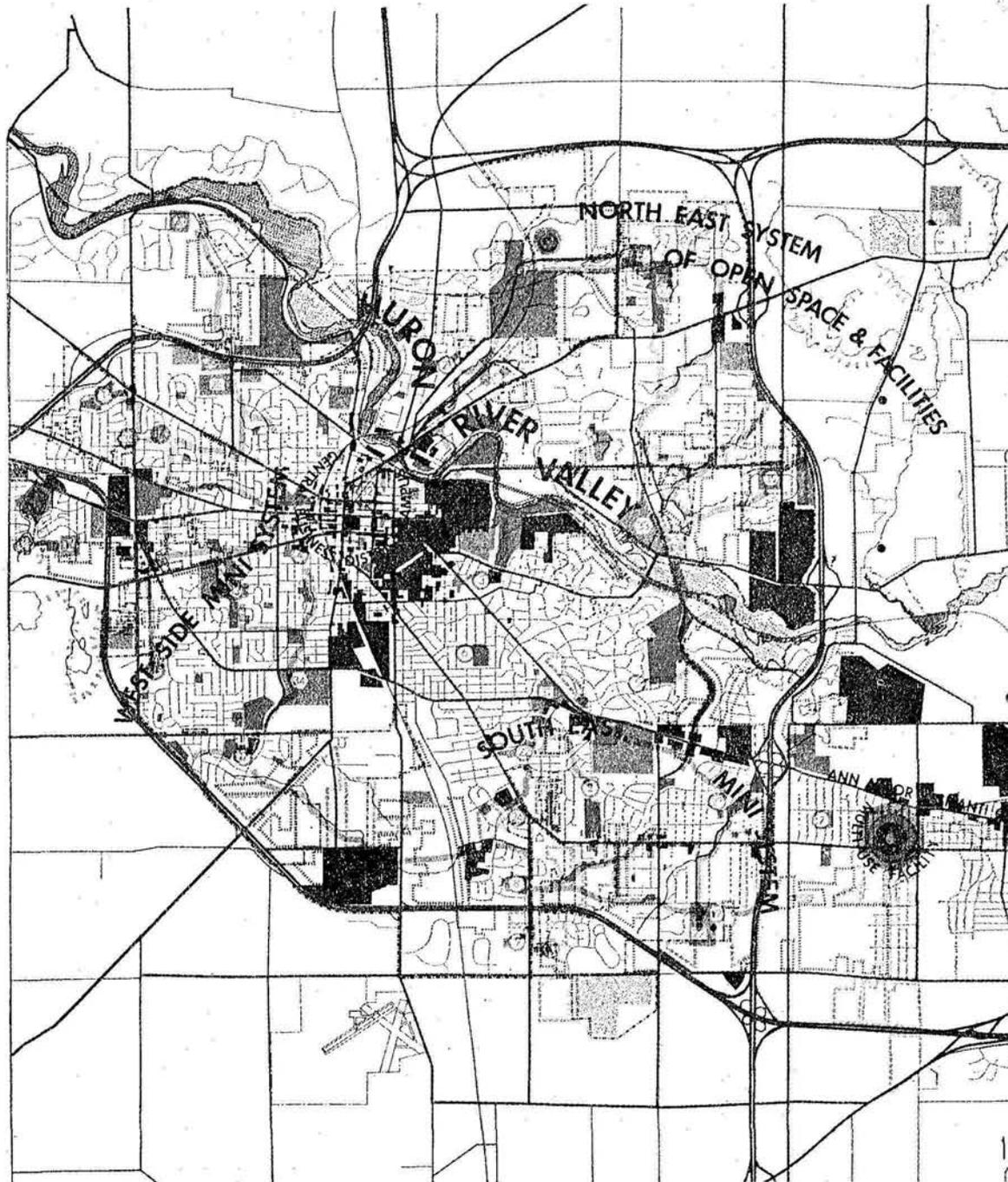


FIG. 30. Mini-systems within the city-wide educational network for Ann Arbor, Michigan.
Source: Urban Design Associates, Pittsburgh, Pa.

The school system is not regarded as separate schools but as a single districtwide structure of the interrelated facilities and programs.

Local amenities are regarded as elements in a resource and physical infrastructure which bear a time-space-resource relationship to each school and its programs.

The vitality of these local amenities is only partly material; the other part is human and there is therefore a human resource infrastructure of specialist citizens, parents, teachers, and students.

Many of the local amenities belong, like the schools, to city or regional agencies, and thus the school system perceived as a regional net relates to other agencies also perceived as nets [17, p. 54].

For instance the swimming pool, a result of multi-use savings and organizational co-ordination, adjacent to the Mack Neighborhood Center (Fig. 31) not only serves the immediate neighbourhood but also the entire city of Ann Arbor.

The emphasis on process planning similarly characterizes the Hartford plan, which envisages learning as a community-wide effort with people of all ages and skills participating both as learners and teachers, and the school as 'the activity hub of every neighbourhood and community' [18].

Although it cannot be said that every one of the city-wide processes is a direct result of earlier project plans (the Greater Hartford Process, for example, started at the same time as the building of some of the large centres in Atlanta, Arlington, Baltimore and Pontiac), it is quite certain that the earlier large projects of integration have deeply influenced the development and co-ordination of subsequent plans. Thus the Ann Arbor and Gananda processes were a direct result of the experience in Pontiac [19]. The Crewe proposals stem in part from the same group which acted as a consultant to the Abraham Moss Centre in Manchester [16]. The re-use of existing buildings for new high-school centres in West Berlin is based on the experience made in the thirteen middle and community school centres [7].

However, the conscious use of the early models for research (e.g. with regard to the influence of physical integration on the relationships between the various partners) cannot be found anywhere. This is particularly noteworthy in view of the extremely high public investments that went into these facilities; the continued interest in organizational and physical co-ordination (although on a changed scale); and the outstanding success of some (although few) of the early models.

Physical facilities requirements and benefits in relation to different types of partnerships

The questions relating to the feasibility and potential of various partnerships have to some extent been posed and answered earlier. In this chapter, we shall look more closely at the implications of four types of alliances on physical planning and design.

The integration of schools and social services probably characterizes the largest number of 'innovative' alliances which have come into existence in the last decade. Previous chapters have dealt with educational and socio-economic expectations linked to the co-ordination and physical integration of services, and with the types of services available and feasible at different levels of population.

In this context, only a few points relating to location, accessibility and proximity of various partners will be mentioned here. First, whether in new or renovated, large or small facilities, there is a general tendency either to locate communal areas entirely (and most ideally) on the ground floor near the entrance, or to group them vertically around an open hall or stair well. Secondly, circulation routes are often designed to become visible links between school and community activities, to provide a continuity of contact, a more lively and attractive means of orientation and contact. Finally, depending on the type of service, a close relationship may be of mutual advantage, or in some cases it may be undesirable and have adverse effects. In this respect, the separation of, for instance, the 'hard' social services (probation, employment offices) from the main school building seems to be appropriate (e.g. in the Dunbar High School and Community Centre, these uses occupy ground floor space which is somewhat separated from the rest of the school [11]).

The physical integration and co-ordination of schools, parks and recreational facilities is one of the most established combinations, due to a compatibility of interest and use which has often produced long-standing and close links between the respective administrative bodies. The use of school spaces, classrooms and sports facilities for recreational purposes and parks and wilderness areas for education is standard educational practice in most industrialized countries. However, improvements in the quantity as well as the quality of links are urgently needed. Some of the principles which have been established for developing school sites linked to urban parks as environmental classrooms in Ann Arbor, Michigan (Fig. 32) may stimulate further thought on how

Building community schools

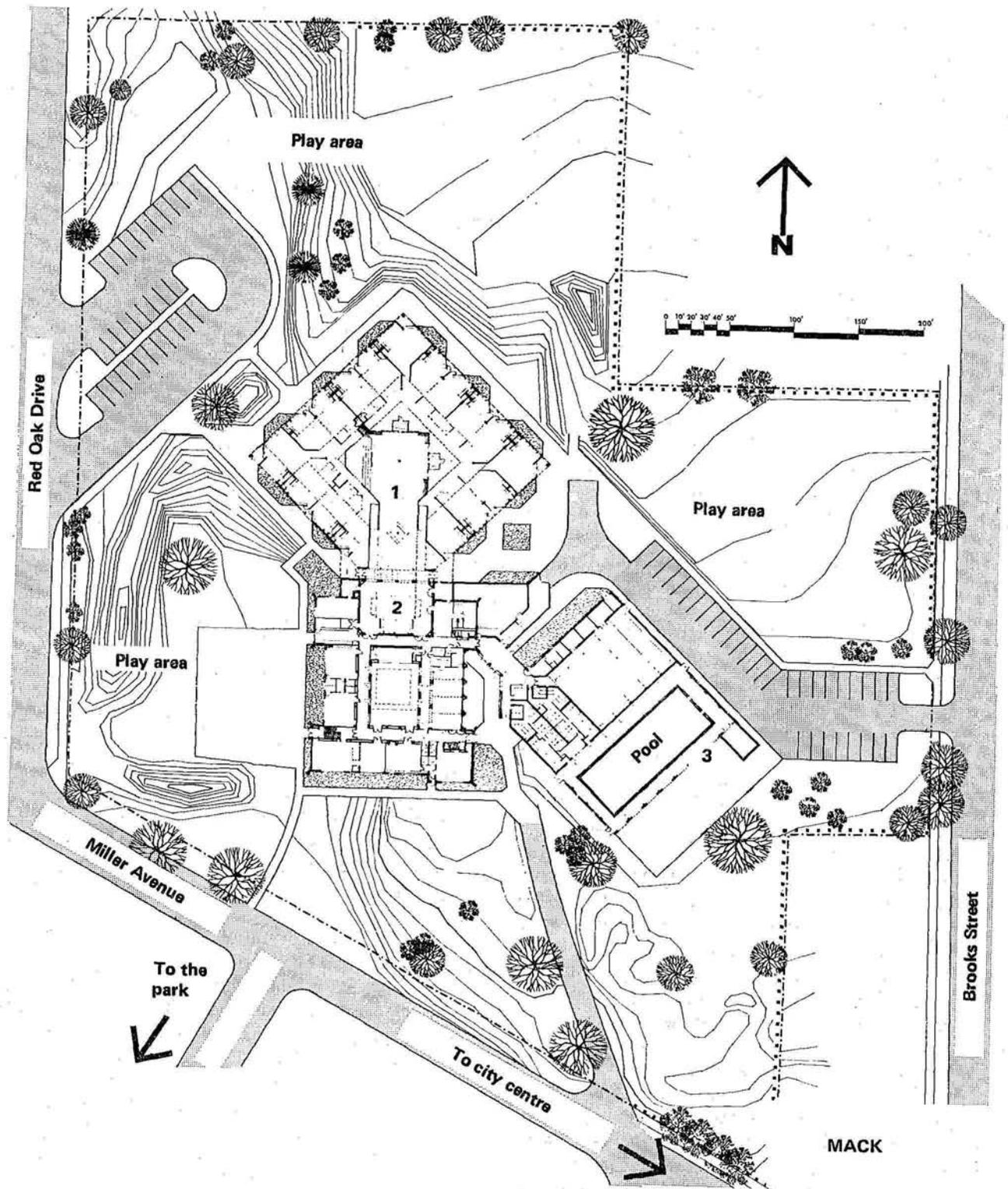


FIG. 31. The Mack Neighborhood Center in Ann Arbor, Michigan: site plan. 1. Extension with dual purpose uses for school and community. 2. Existing building, mainly used for community and social service uses. 3. New recreational centre. *Source:* Urban Design Associates, Pittsburgh, Pa.

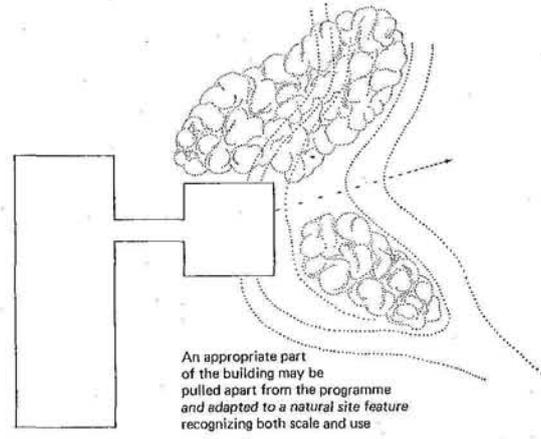
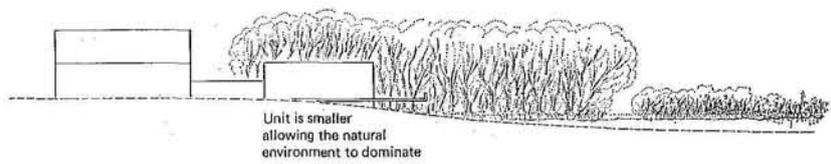
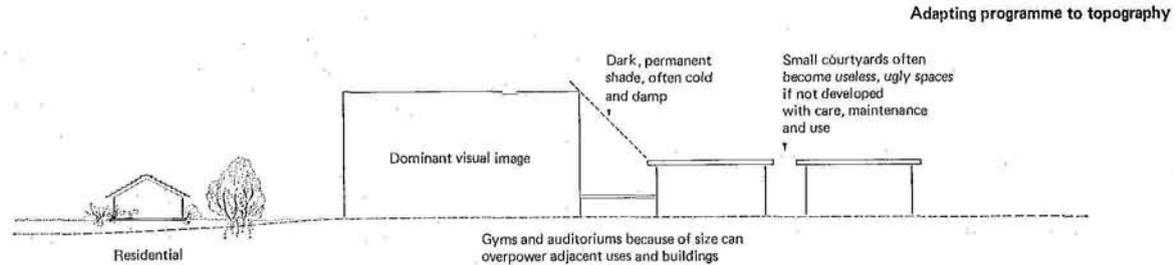
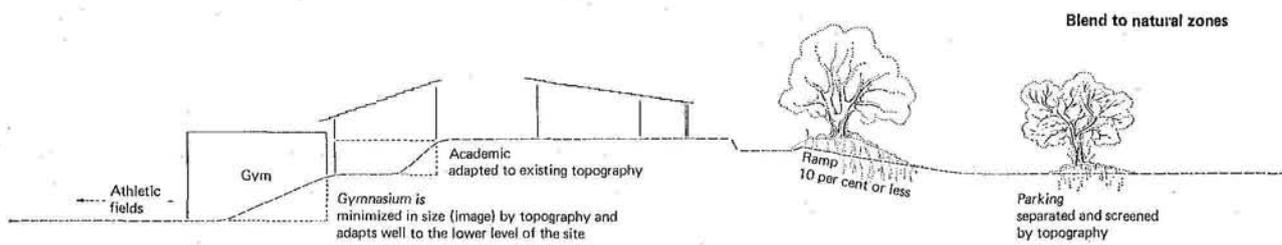
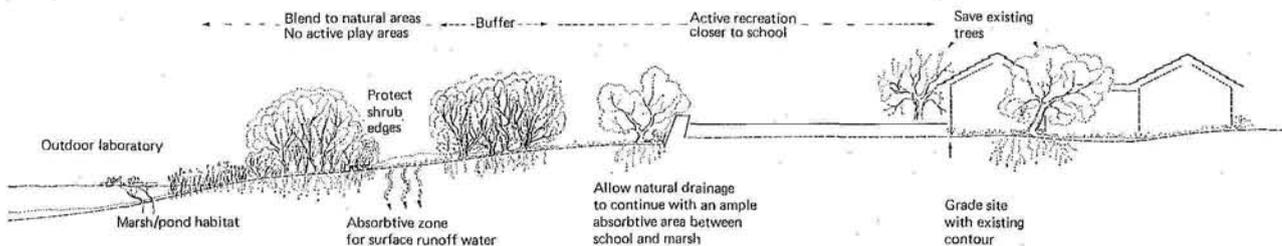


FIG. 32. Principles for the design of environmental classroom buildings. *Source:* Ann Arbor Schools Site Development and Selection Advisory Committee, 'Opportunities for Environmental Education on School Sites', Ann Arbor, 1971. (Report, limited publication.)

Building community schools

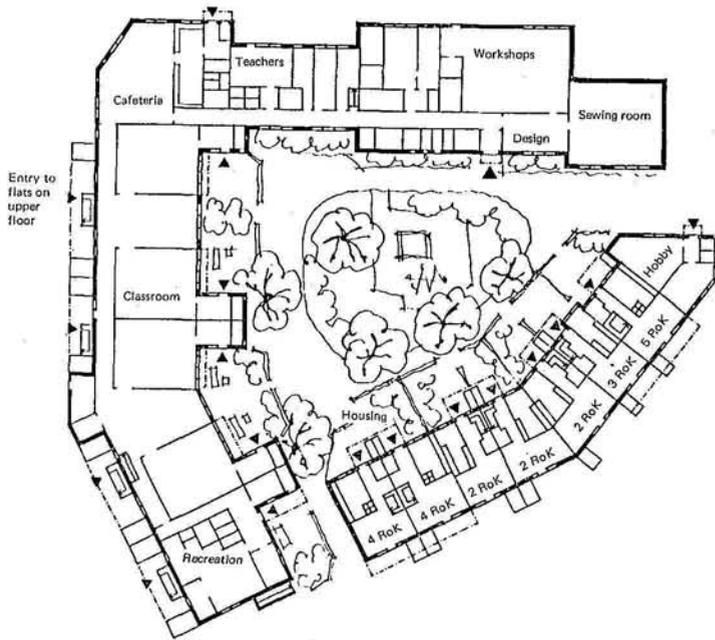


FIG. 33. Plan of Neighbourhood Block 1. *Source:* Upplands Väsby Kommun, 'Integrerade Service anläggningar i Upplands Väsby' (brochure prepared for OECD Symposium on Co-ordination of School and Community Facilities, Sweden, September 1976).

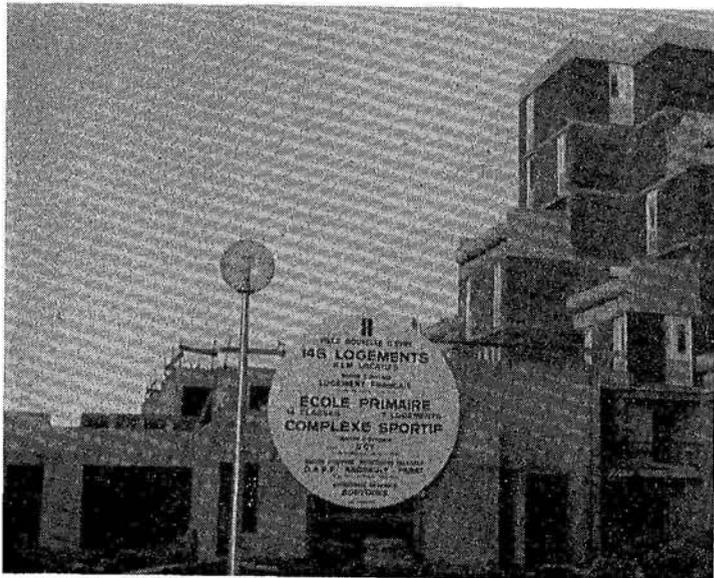


FIG. 34. Integration of educational facilities in high-density residential schemes in Evry new town (France): integration of a primary school/sports complex within the housing complex.

'natural and built' environments may be brought into a more harmonious balance.

It is probably true for most school sites that:

Not enough emphasis has been placed on the utilization of the natural environment to inspire creative play. The variety of play activities found on a thickly wooded hillside are too numerous to mention and often new experiences are discovered every day with each generation of students. It is therefore appropriate to avoid the contrived structured play syndrome when more imaginative and creative play experiences can be found on a site enriched with natural features [20].

In addition to providing excellent outdoor classrooms for earth sciences, physical sciences, botanical sciences and the conservation of natural resources, the financial benefits in terms of tax returns [21] and the social benefits of creating a community resource of highest value for the entire year should make this link almost obligatory.

Indoor sports and recreation facilities which are used by the school and the community are among the first items on each list of shared spaces. Although relatively simple in terms of scheduling, because in peak periods of 'public use' there will normally be very light demand from the school, a heavier and more irregular use may cause problems mainly in terms of ancillary facilities like storage rooms and locker rooms.

Thus the physical integration of school and housing in low-density residential areas is almost exclusively restricted to primary schools (Fig. 33) while only in higher-density developments can physically integrated primary and secondary schools be found (Fig. 34). In Evry (France), a junior and secondary school are hardly recognizable as such. The school provides communal spaces at ground-floor level and the public library bridges a pedestrian footpath between two apartment blocks. Multipurpose facilities have been integrated within the complex. Arts and crafts, sports facilities and specialized science laboratories are located next to the community facilities in such a way that they can be open after school hours and separately locked, thus offering a wider choice of leisure type activities (Fig. 34).

In both cases, social reasons (increased proximity to the home, the parents, and identification with the neighbourhood) as well as economic reasons (convertibility to residential usage, savings in floor, ceiling and foundation costs) have been important factors. The architectural solutions aim at a more human scale and increased diversification in residential developments. In a wider context, they both fit into the striving

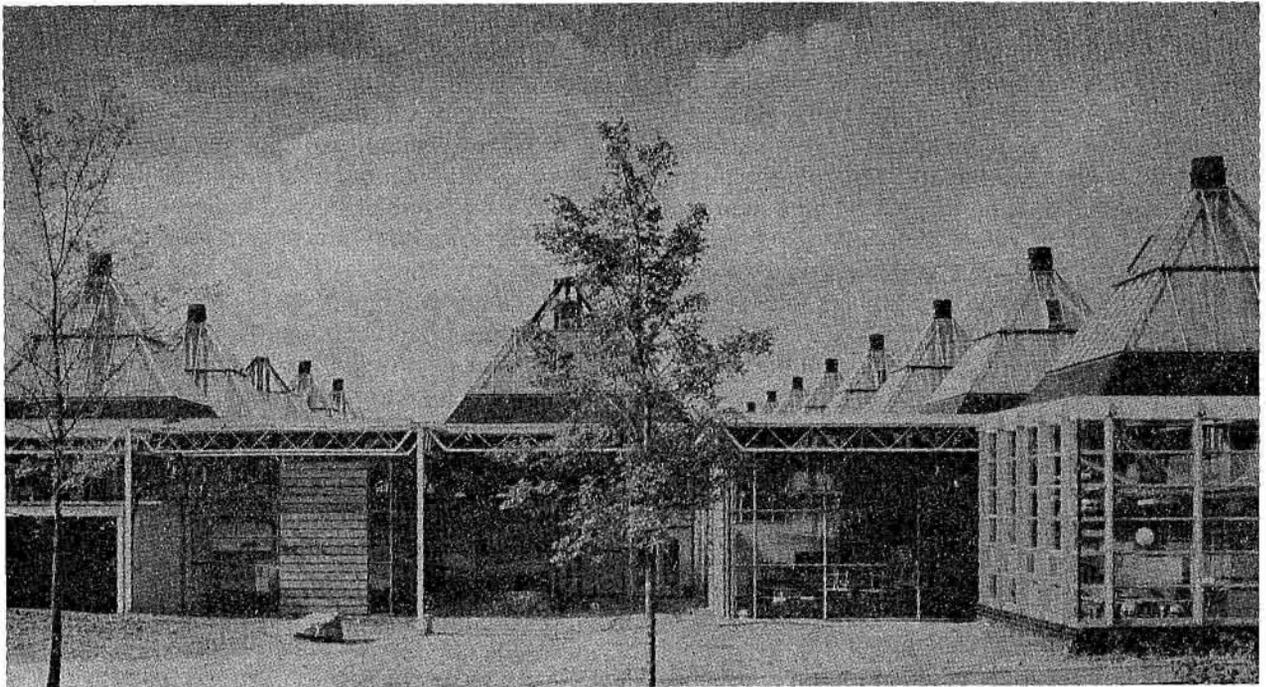
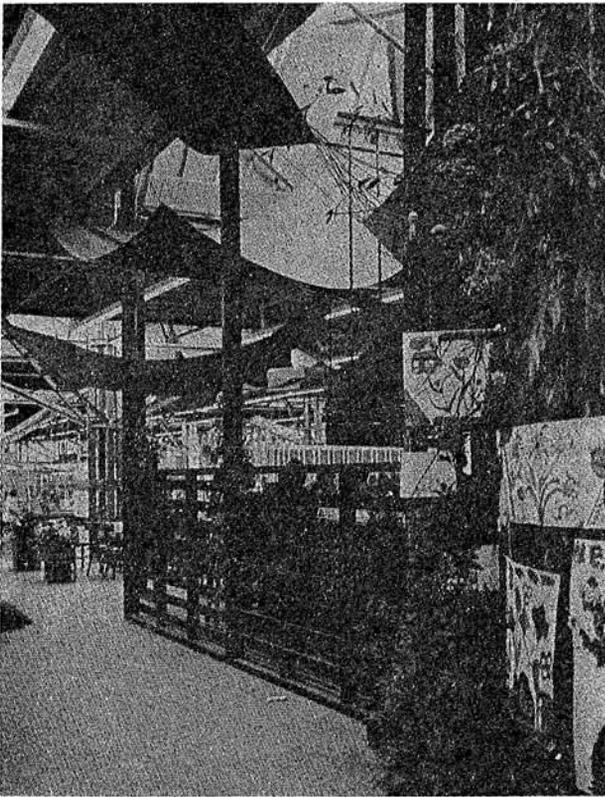


FIG. 35. District and school centre, t'Karregat, Eindhoven (the Netherlands): (a) passageway with interesting obstructions near the café; (b) communal space with overhead lighting and sign-posting; and (c) community entrance with bar and assembly hall to the right and social activities and caretaker to the left. *Source:* van Klingeren Architecten Werkgemeenschap (brochure of the District and School Centre, t'Karregat Eindhoven, undated).

for a more 'adequately complex' environment in which people may widen their range of interests and social contacts if they wish.

The physical integration of school and commercial facilities is one of the least frequent and possibly more problematic combinations in terms of conflicting goals and interests.

Where this combination has been put under one roof (Fig. 35 (a)–(c)) or in close proximity, however, a number of advantages have been achieved: the school becomes more accessible and part of the ordinary everyday life of the community; parents, teachers, and children meet more frequently; and possibilities of exchange of spaces (due to shrinking or expanding student populations) can be realized more easily.

In fact, it would be possible for the school (e.g. in new urban settlements) to lease commercial spaces without committing itself to imprecise forecasts until the growth of the area has reached the stage where more precise predictions as to population figures and educational needs can be made.

The fairly heavy load of users which commercial facilities require makes their separation from the school in terms of access and location a necessity.

Links between school and industry are usually restricted to upper high-school grades. An established practice in socialist countries, the implementation of these links in other political systems seems to have increased recently. An example can be found in the Federal Republic of Germany, where in the light of occupational sectors and manpower requirements, an attempt is currently being made to reach agreements between various bodies (trade, craft, professional and industrial associations and the unions) on a reform of the Secondary II curriculum. While the government is interested in including private industry and its associations in the discussions on planning facilities and instruction at this level, the private sector is somewhat reluctant to commit itself on a permanent basis.

The facilities question, in this context, centres around the provision of workshops linked with and in close proximity to or physically integrated with the school which would be planned, built and staffed by private industry.¹

Design and functional considerations

Based on the framework of co-operation which has been established in the planning process between various participants (see earlier and Fig. 36) and the agreements reached on ownership of premises, administration and operation, financing and functional

requirements, the task of the designer is to translate these into spatial solutions.

The major goals of the design process are to optimize use of available resources, resolve contradictory demands and satisfy preferences as well as limitations based on economic, technical, legal or other constraints

Basic inputs for the design process derive from an establishment of needs. Jean Ader² differentiates between three approaches to the identification of needs. One is an approach established on the basis of a given or anticipated population, usually through the various departments responsible. Although it is a necessary precondition for co-ordination and the allocation of resources, this approach tends to predetermine the outcome to a large extent in stating what is officially recognized as being necessary. In general, however, it can be said that these measures do not exactly match the 'real' and 'felt' needs of the community and should therefore be kept sufficiently flexible to allow of a closer fit, mainly in the light of new demands and possibilities for overlap which often surface in the process of co-ordination. The second, the empirical or scientific approach, differs in that more specific and detailed studies are made to determine the concrete demands and needs of present and future users. Third, the participatory approach provides a vehicle for including the population in the design decisions in the various forms described earlier under 'Policy, Planning and Decision-making Processes'.

An example of the type of structured process which allows users to participate in the planning process and the determination of these basic design data is given in Figures 5–8 concerning the Gananda planning process.

The data needed for the design can be grouped into six basic categories: (a) types of user, e.g. children, youths, adults, the elderly, single persons, small groups, large groups; (b) types of activity, e.g. reading, writing, discussion, drama, music, sport, lectures, social events; (c) area requirements, e.g. length, width, height, quiet, noisy, open, closed, light, dark (see

1. The Federal Government of the United States, as the main responsible level for vocational training, at present offers an 80 per cent subsidy of capital costs to the industrialists' associations in order to provide an incentive for practical experiments in various communities.
2. A more extensive analysis of different approaches to an establishment of needs can be found in: Programme on Educational Building, 'A Synthesis in the Light of International Experience', *Co-ordination of School and Community Facilities: Policies and Strategies*, para. 67-81, Paris, OECD, 1977.

Figs. 5-8); (d) functional relationships between various uses, e.g. school, health centre, child care, leisure programmes; (e) time schedules, e.g. frequency of use, morning, evening, weekday, week-end; and (f) other constraints, e.g. storage, heating, lighting, access and equipment.

In order to arrive at an optimal solution which takes into account all the factors, the design process should be an open-ended and cyclical one which proceeds in stages from draft design to technical detail with frequent feedback and consultation sessions between all interested parties. This design process

allows enough time for changes to be made in the programme and layout before a firm solution is reached for tendering (Fig. 36).

Special considerations relating to designing schools for community use, usually relate to flexibility and adaptability in view of future changes, the integration of facilities into the urban fabric, and new requirements posed through the joint use of space and details.

The type of open design process described above not only serves as a basis for the initial design but also provides a better preparatory phase for future changes. Changing needs, new demands and rising expectations

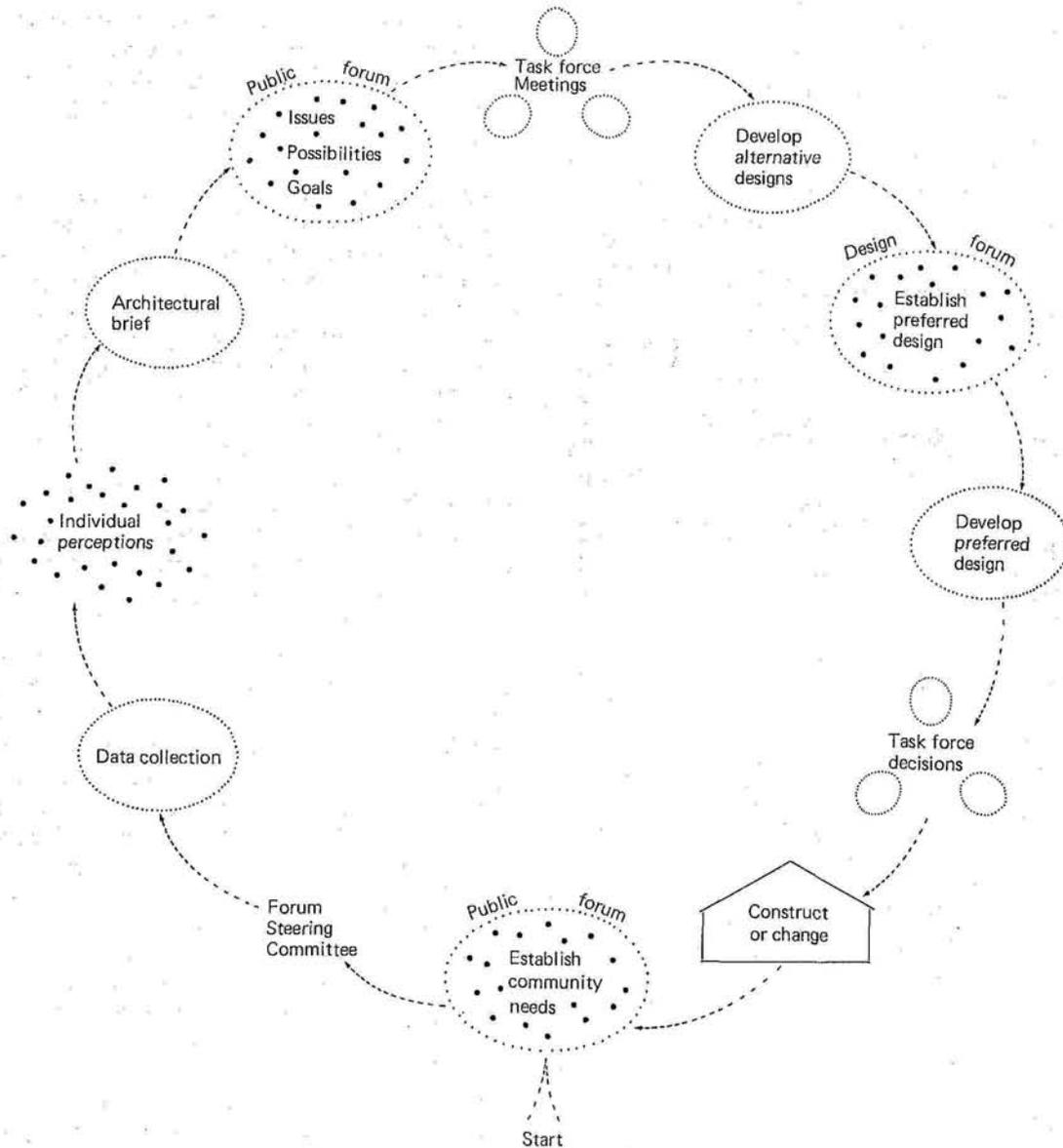
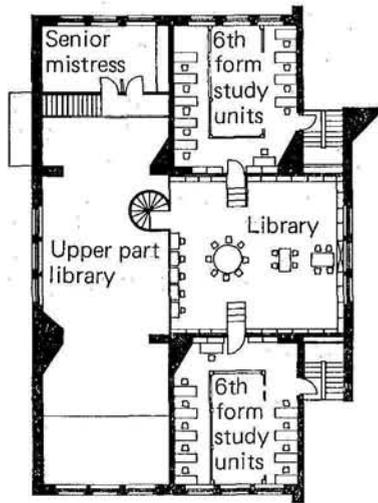
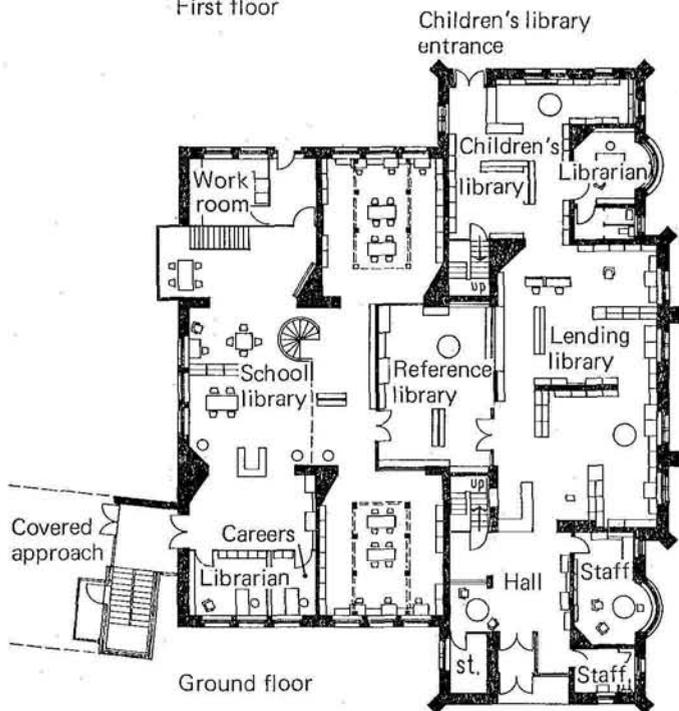


FIG. 36. Cyclical path of user involvement in the design process.



First floor



Ground floor

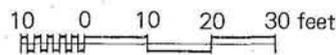


FIG. 37. Joint use of space at Wyndham, Egremont. Source: 'The School and the Community', *Design Note, No. 5*, London, 1970.

of the users require rapid spatial and organizational adaptation.¹ These new parameters are certain to develop—often they develop so quickly as to necessitate changes in the building process before it is completed.

Buildings have to be seen in this respect less as finite results of a fixed set of activities, but as that part of the change and development process which embraces and must adapt to changing uses, activities and programmes. Educational spaces may have to be leased to commercial establishments or be transformed into housing. Social services may be reconverted to school or administrative spaces.

In a way, this stress on adaptability seems to imply that there is no need to overemphasize initial design and the search for the optimal solution which, in fact, often develops at a later stage. As Oddie has pointed out:

Fortunately, the difficulties of both initial design and subsequent change are mitigated in two ways: first, the match between activities and accommodation is not like a point where two lines intersect: the ability of human beings to adapt to circumstances allows it to be more in the nature of a smudge. Secondly, instances are common enough which show that if a given activity comes to an end, the accommodation used for it or even specifically designed for it does not thereby become useless, but can still provide opportunities for other activities to take place [22].

Urban integration of community schools means adaptation to the local scale, central location, and easy access to public transport, as well as the use of pedestrian links to form a continuation of public streets and footpaths in the design. The latter demand is based on the assumption that pedestrian paths which intersect the school and follow natural traffic flows provide an opportunity for casual contact and interaction on which the frequency of use often depends.

The advantages of central sites and easy access must, however, be weighed against the scarcity, costs and the limited size of the site in contrast to more peripheral locations which may allow more space for recreation areas and pose a minimum of noise and safety problems. To be successful:

the school must probably be sited at the heart of the community it is to serve or, if that is impossible, at least at

1. This topic has been examined in several publications, for instance in: Jean Ader, *Building Implications of the Multi-Option School*, Paris, OECD 1975, and *Providing for Future Change—Adaptability and Flexibility in School Building*, Paris, OECD, 1976.

a point which is central and is accessible by public transport [23].

While the principle of joint use of space can conceivably be applied to most parts of an educational facility, it may be desirable to reserve some distinct area which the school on the one hand and the community on the other can identify with and regard primarily, if not exclusively, as its own. In many cases there has been some fear that the interests of the pupils would suffer that a climate of publicity-seeking and 'with-it-ness' would develop in which they were denied the protection and tranquillity necessary for their development. In fact, this is seldom the case. One study states (see also Fig. 37):

While ending the isolation of the school from the outside world, Wyndham has contrived a perfectly reassuring and normal environment for its pupils, to the extent that they remain entirely unconscious of the school's wider activities unless they are personally involved in them. The public, however, do not refer to Wyndham as a school. They say, 'we are going to the Centre' [23, p. 23].

For the school, identification with a particular area may be achieved through the 'house' or 'home base' system [11]. For the community, separate community offices, clubrooms, entrances, storage spaces, etc., may have to be provided. The space usage of different parts of the community/school facility (Fig. 38) shows how overlap can be organized to guarantee full use between 6 a.m. and midnight.

Some types of facilities, for instance indoor sports, arts and crafts, or workshop areas, require concentration in one area for flexibility in use and economy of operation. The design must therefore allow people to move easily and quickly from one such area to another. This implies that where possibilities of sharing space, equipment or staff exist, these should be adjacent.

Dining areas have a great potential as multi-purpose and multi-use areas. They can be used between meals for the serving of light refreshments or as informal meeting places for small discussion groups. Small decentralized units are in this respect more desirable than large centralized dining facilities. In the Abraham Moss Centre, dining rooms are even small

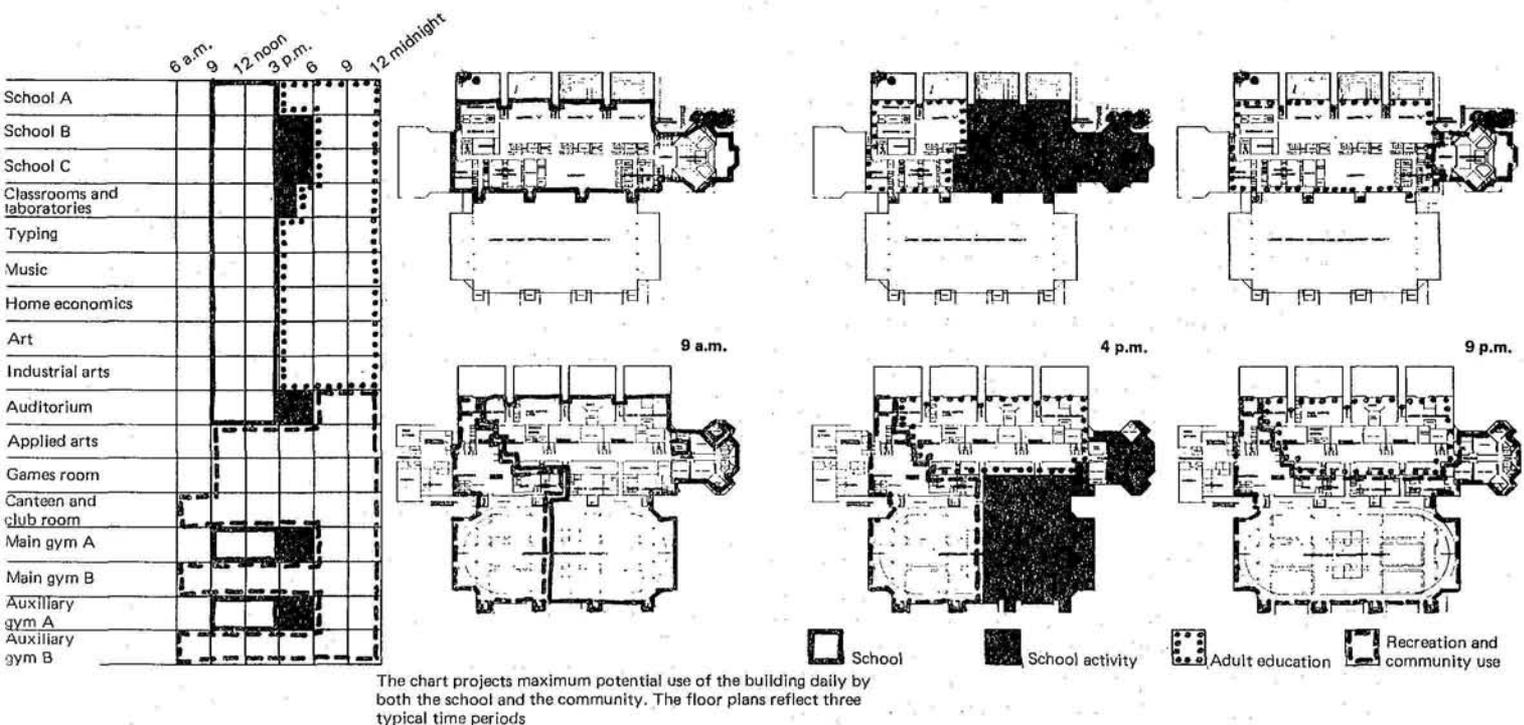


FIG. 38. Thomas Jefferson Junior High School and Community Center: space usage. *Source:* George Skiadaressis, 'Educational Facilities and the Community, Metropolitan Areas of Washington, D.C., and Baltimore, Md.' (unpublished research study, Unesco, 1975, p. 121).

enough to be useful for occasional teaching or other purposes [5].

Details and technical aspects must be adapted to heavy use and new user groups who are not obliged to attend courses and programmes in similar vein as the school-age population.

... the amenities offered need to be well designed, and must both meet existing demands and also attempt to create new interests. The problems of apathy and vandalism, to which civic ventures seem particularly prone in cities, cannot be overcome by a condescending missionary spirit embodied in a shoddy and mean environment. If facilities are to be accepted and respected, those providing them must give full weight to local judgment of what is needed, and also be able to acquaint local people with a wider professional knowledge and opinion of the considerable range of opportunities and possibilities open to them. Respect for the user must also be apparent in the *standard of provision which should at least bear comparison with whatever may be commercially available* [24]. (Author's italics).

Different parts of the facility should be designed for independent use and access at different times of the day (Fig. 38). Social areas need to be equipped for smoking, food vending, etc., and have separate access convenient to the public. Private work spaces, separate toilets and storage rooms often prove convenient and enhance the ease with which sharing may occur.

The designer has to bear in mind that the load on facilities becomes greater and unpredictable in intensity; they will be in use for far more hours in the year; and the people using them are likely to be less subject to supervision. This all adds up to the requirement for more durable materials which are easy to maintain and clean, or which are cheap enough to replace. Parking facilities, handrails, ramps, lifts and other special provisions should be available for elderly and handicapped people.

... ensuring the *easy movement of audio-visual aids* and books from the library to other parts of the building or network is essential if the full benefits of sharing are to be realised. For the library to act efficiently as a resource centre it must be possible for trollies of teaching materials assembled in the library to be moved quickly and easily from the library to any other point in the centre [5, p. 12].

The same applies to the distribution of food to decentralized dining facilities, snack bars or cafeterias.

The re-use of existing buildings

While in some countries innovative programmes characteristically take place in new purpose-built structures (Federal Republic of Germany, France, Sweden, United States), the adaptation of old or underutilized buildings for new purposes has been a traditional solution in other countries (Australia, United Kingdom).

The premises from which the greatest benefits can be derived for educational and community activities are, however, impossible to categorize. Swinburne Community College, an annex to Swinburne Technical School, for instance,

is based in an Anglican church hall which it shares with other groups. ... Next door is an old theatre building, the hall of which is used as an indoor sports stadium. Next door to this is the art room in what was previously a funeral parlour. The school seeks its major specialist facilities outside its own building fabric [25].

Existing schools or older buildings that have become unfit for their original use are often situated in central locations and provide ideal starting points for school and community facilities.

Conversions to community schools have been found among bank buildings, churches, cinemas, factories, funeral parlours, private houses, stations, town halls and warehouses.

Among many interesting examples is the Fairmount Theatre, an old cinema located in the Bronx, New York. It has been adapted in its balcony section to an ethnic learning heritage and natural-science centre for school and community use. Located at different levels with interspersed small amphitheatres for lectures and slide projection, the idea of providing a non-classroom found its architectural expression in simulated ethnic African and Puerto-Rican neighbourhoods, planetarium and underwater environments.

Sometimes new concepts fit easily into existing structures, as in Salamanca Place (Hobart, Australia) where workshops, offices and other community services have been grouped around a free space or 'indoor city square' in an old Georgian sandstone warehouse [26]. In other cases, major alterations may have to be faced as in the case of Hermoupolis [9], Greece, where

... a fundamental difficulty is convertibility of spaces and in general the possibility of carrying out re-arrangements. These difficulties are of a constructional nature since the building with its stone-built supporting walls and its wooden floors presents an immense degree of structural inflexibility. ... [26, p. 53].

Inadequate natural lighting and inflexible arrangements of rooms are other reasons for conversion plans to be abandoned [25].

Where community schools need to be established in existing buildings, which are usually quite old and run on very limited budgets, much physical planning may be *ad hoc*, casual and temporary in character. Distinct standards of floor or ground area per student in these instances must be abandoned or revised to allow of acceptable adjustment to existing spaces.

The fact that some of the most innovative combinations of activities have been encountered in remodelled buildings may suggest that adaptation by the user rather than a precise match of functional requirements and spatial solution through the architect could be the best way to create community schools.

Rural areas in developing countries: design for self-help

There is wide diversity in the building and design of rural schools and community facilities for rural areas in developing countries. Along a continuum from the most advanced models in terms of architectural norms and building techniques to locally constructed facilities without any 'professional' input in the conventional sense, any type of construction seems possible. Many of the principles which have been discussed in the previous section may be applicable to certain of the larger and more comprehensive programmes in developing countries. Thus the organization of spaces (Fig. 20), the establishment of needs and the cyclical path of user involvement (Fig. 36) are applicable not only in industrialized countries. In Colombia, Cuba, Mexico, the United Republic of Tanzania and other places, there are community schools and production centres of considerable size and architectural sophistication.

However, in view of the number of schools needed in rural areas and the resources available in most developing countries, the issues relating to physical facilities centre around another set of problems: the potential of community participation in self-help projects, the use of local traditions and contributions, prototypical plans and building systems, building as an educational process, functional criteria and communication and guidance.

Building on local traditions and with local contributions

In some developing countries there is a strong tradition regarding the provision of school sites and school buildings throughout the community. Thus in Africa, according to El Jack [27], the self-help school is now the rule rather than the exception, and communities no longer endure the long wait for governmental action to reach them. Sharing in the effort, citizens in the community emerge as partners.

In Africa this attitude is based on long-standing traditions which serve as a foundation for the way in which community contribution is solicited today. Bergmann and Bude found in their survey of a central African country that:

No matter whether schools are run by government or by voluntary agencies, a community hosting a school is always asked to contribute to the costs of education. Most of the time, contributions have been made towards the building of classrooms and the maintenance of the school. In 77% of all sample schools the communities had started (18%) or completed (59%) the building of one or several classrooms during the last two years. Contribution towards the upkeep and repairs of schools are made in various forms: financial contributions in 75% of all communities, communal labour in 68%, imported and/or local building material in 44%, school furniture in 5% and other contributions in 9%. It is not uncommon for parents of class I pupils to be asked to supply their children with benches before they are admitted into school. Besides this, the common tools for farm work—the cutlass and the hoe—are most of the time supplied by the parents. Communities with a full primary school tend to restrict their contribution to collecting money. The resort to community labour seems to be the more difficult the larger a community is and the weaker its political and cultural integration. Supervision and the enforcement of equal contributions becomes increasingly difficult, and the more ethnically different groups with their own elected authorities there are, the more quarrels are bound to come up about such contributions. This is the case in many of the urban and semi-urban areas [28].

In other cases, however, the involvement of the community in school building has dried up with the advancement of governmental school building programmes:

In days gone by, it was common for rural schools to be built by rural communities but, with the onset of independence, . . . governments, anxious to hasten the introduction of universal education, assumed the responsibility for the construction of schools. With hindsight, it can be said that this was, in many cases, an unwise decision in relation to the human and material resources available and, as a result construction programmes began to fall behind [29].

Today, involving rural communities in constructing their own schools in Asia turns out to be a difficult endeavour. The existence of governmental standards and design has dominated the provision of educational facilities for too long.

Although it has been widely recognized that governmental programmes which do not provide for local involvement in educational plans are likely to fail on social as well as economic grounds, practical implementation of this principle often lags behind.

Efforts are frequently badly managed and result in inadequate facilities which fall much below governmental standards. This sometimes burdens governments with heavy reinvestments to bring schools that have already been built up to standard, and creates disappointment for the donating communities. Adequate technical and managerial support to reinforce self-help efforts at the start is therefore of prime importance.

Even in cases where the opportunities offered through the traditional building sector are being gradually recognized, and comprehensive inventories of traditional building practice have been made, their potential to provide social and economic solutions may still remain latent because a majority of national development projects will still be based on 'modern' construction techniques. Nimpuno points out that although in the United Republic of Tanzania

almost all rural construction uses traditional technology, constituting over 70% of the total construction volume in the country . . . educational institutions do not try to develop and improve this important sector; instead, they ignore it completely. At most it is accepted as a second or third best solution to be used only when western technology is too expensive [30].

The use of local materials is a basic precondition of any design based on the principles of self-help. 'Local' materials here refer to any type of material available, whether it is wood or steel, mud blocks or bricks, palm leaves or corrugated iron. There is ample evidence that the way in which a community/school building itself develops determines its acceptance or rejection by the community.

If it is built out of local materials, in keeping with local construction, and built by the people of the community, the school may have a good start in the community. A community centre of permanent materials but imposed from outside may go unused while one less pretentious built by the people may be fully utilized [31].

The main point, however, is to maximize local resources and skills in order to make better use of the limited money available and to create opportunities for an effective maintenance of the building. Often local materials and construction techniques are used alongside imported methods. The construction of a boys' dormitory in traditional materials (Fig. 39) and the director's office in modern materials in the Panamanian production school in the province of Veraguas is a typical case in point.

In other cases, the use of traditional construction techniques may not only suit the climate better than modern products, but also have a significant impact on the employment situation.

The Yemenite case is one example where, during more than 2,500 years of uninterrupted urban civilization, original ways of building have been developed and have reached the highest standards. Architecture seems to have been the art most appreciated by Yemenis even in very remote villages [22].

Now so-called 'modern' construction schools (reinforced concrete frames, concrete blocks, imported doors and fixtures) are built with foreign bilateral assistance.

A comparison of different architectural solutions illustrates not only the difference in aesthetic quality but also evidences the superiority of local construction in terms of adaptation to local climatic conditions and in terms of maintenance and labour intensity:

Out of ignorance, lack of imagination and contempt for Yemeni culture, these architects and engineers have been building structures completely inadequate in regard to the climate, cultural background and economic conditions of Yemen Arab Republic. . . . It took some time for the

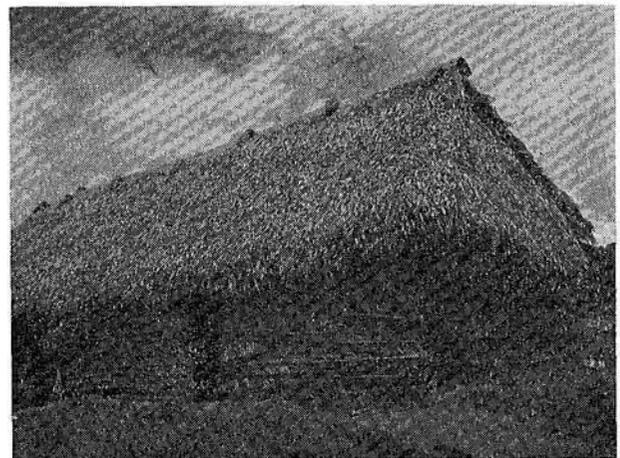


FIG. 39. The use of traditional and modern building materials in a central production school in Veraguas, Panama: boys' dormitory.

Yemenis to realise that they had been shortchanged and that in fact those shiny, bright-coloured, oddly shaped buildings were soon full of cracks, with their paint and cement coatings crumbling away. Besides, those new buildings were cold in winter and hot in summer. Furthermore, this fashion could have had a disastrous effect on the economy. By discouraging people from using local building methods and local building materials, the advocate of the so-called 'modern' architecture were in fact transforming skilled craftsmen into unskilled labourers [32, Annex XII, p. 1-2].

In Colombia, a return to traditional constructions can be found in the rural development centre of Natagaima. A modern type of construction had been used in the first stage of implementation. Further expansion of the same type seemed too expensive so classrooms using local materials and a modified local construction were built in the second stage of the project (Figs 40, 41). After the initial mistrust of the 'step backwards' had been overcome, teachers and students found the individual thatched huts cooler and acoustically more agreeable than the previously built modern brick and aluminium sheeted classrooms. Through their rounded shape, the classrooms also allowed a more informal seating arrangement which enhanced the use of modern teaching methods. For workshops and other types of uses, however, brick structures seemed preferable.

The experience naturally penetrated the community and after a short period of getting accustomed to the idea that older methods, in fact, could prove superior to new ones, an experimental construction site was set up on the school site to explore the possibilities of using the improved traditional method for housing construction.

In general, traditional building industries seem to be effective in many respects. In the light of local climatic conditions, they can offer adequate shelter. The choice between solid mud, earth blocks or hewn stone walls, light timber or reed construction usually corresponds to the materials available and the prevailing climate.

Some types of construction are of a very high standard; others may be improved, but by and large a wide range of solutions is offered. The only two areas where traditional methods often fail are the roof and sanitary facilities—both are very costly.

Combining local materials and methods with modern components or techniques may therefore improve and widen the range of options for school and community buildings.

In Peru, for instance, a way of combining local and imported materials for school construction has been

devised. After a prefabricated lightweight steel structure had been assembled on the site and covered with an aluminium roof, the community built the walls and partitions and provided the woodwork [33].

In Bangladesh, plastic resins have been mixed with locally available jute to produce a cheaper and more stable panel for the roof and walls of the school [34].

In Iran it has been found that the quickest way to obtain educational space is to rely on traditional masonry. Through the development of improved doors and windows as well as long span trusses, this country has constructed prototype school buildings where circulation areas can also serve educational activities [24, p. 7].

In the public buildings of villages in the Dodoma region (United Republic of Tanzania), roofs with large spans have been used with conventional trusses

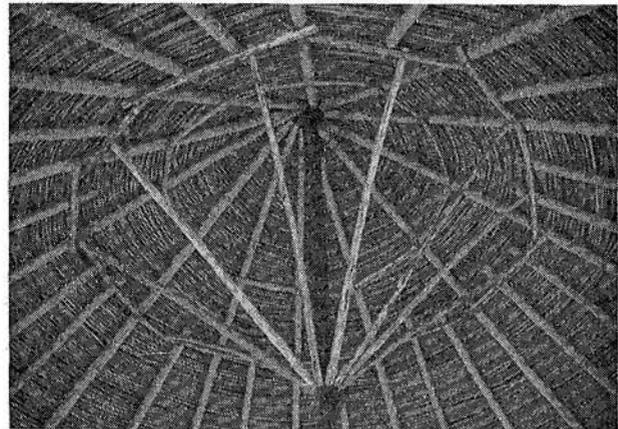


FIG. 40. The return from new to traditional types of construction in the Rural Development Centre, Natagaima, Colombia.

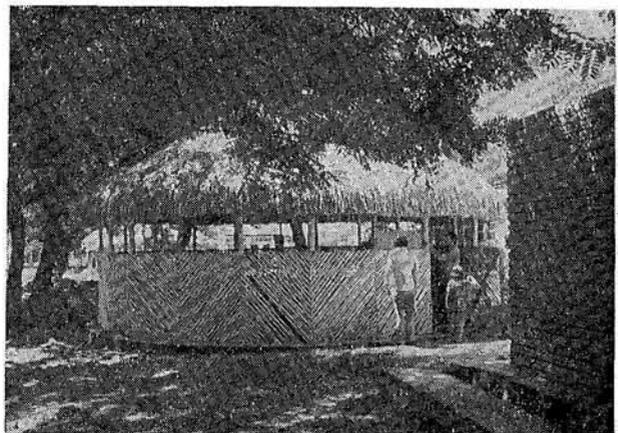


FIG. 41. The teaching environment now preferred at the Rural Development Centre, Natagaima, Colombia.

and iron roof sheets. The floors are sometimes still made of rammed earth, sometimes of cement. Buildings of this type, now fifty years old, are still found in the district.

These constructions have a number of advantages. First, very little imported material is needed. Secondly, it is possible to construct fairly large buildings using a collective effort. This obviously promotes the identification of the people with the building. But the most important factor is the cost of the buildings. While the improvements discussed above often bring the cost close to the limits of the financial resources of the people, collective efforts reduce labour costs.

There are, however, a number of disadvantages associated with the use of local resources: often they do not meet the community's aspirations to have 'something better' for their children. Some of the primary schools in rural areas too closely resemble local conditions of extreme poverty to be a symbol of advancement and development. Between the totally foreign type of construction (sought most often for secondary schools) and the more restricted local types of construction, an intermediate solution must be found.

Prototypical plans and building systems

The usefulness of prototypical designs, especially for school and community centres, can be questioned on a variety of grounds. The first problem in most developing countries is the absence of a mechanism which communicates prototypical plans to the local people. Second, there is a critical shortage of skilled labour to implement and supervise the construction with foreign components. Third, prototypes seldom relate well to neighbourhood scale or specific local detail, and often their finish is neutral and uninspiring.

The result is a greatly diminished possibility of developing active relationships between the school and the surrounding community.

The best evidence in support of this statement is provided by what can be described as the 'uniformity paradox', by which, despite the diversity of cultures, climates, building materials and very different types and stages of educational development, the image of school buildings is one of relative uniformity—a uniformity which can be found in both urban and rural situations almost universally. Figure 42 shows a survey of the Asian region where:

This uniformity may be attributed to a variety of circumstances . . . until recent times, 'practical' subjects formed no part of the curricula; there was thus a continued and

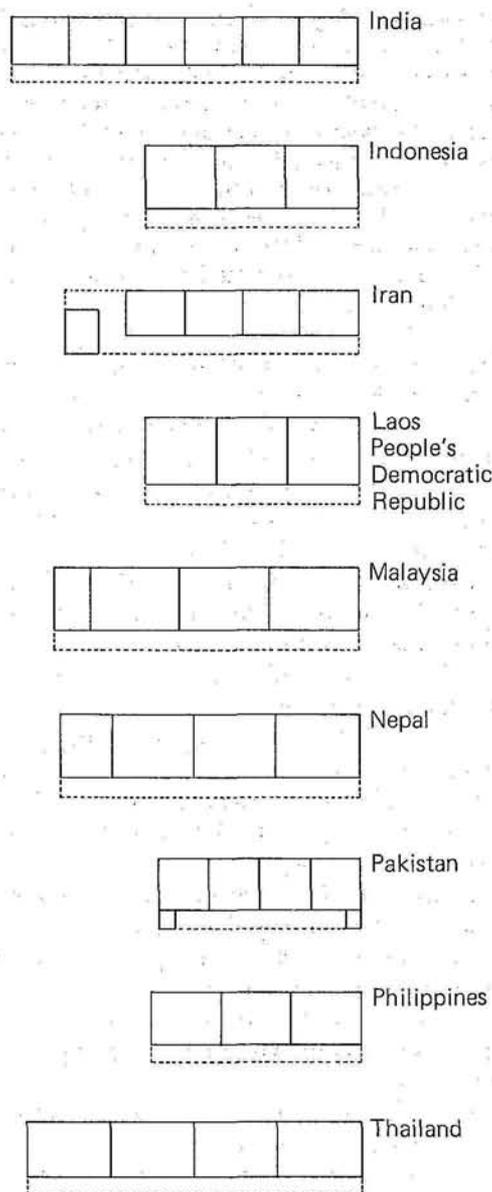


FIG. 42. The 'uniformity paradox': primary school plans in Asia. These free sketches (not to scale) represent the plan views of primary schools, usually rural, that have been built in the countries listed. The existence of classrooms comprising a row of cells in uniform size in a single building would suggest that the number of children in each space is the same. This, particularly in rural areas, would rarely be so. Architectural solutions can easily be found to avoid the waste of money resulting from building space that is not required. Source: Unesco Regional Office for Education in Asia, 'Educational Building and Facilities in the Asian Region', *Bulletin of the Unesco Regional Office for Education in Asia*, No. 17, June 1976, p. 13.

universal acceptance of the classroom as the base for education. . .

Second, the shortage of school building designers, until quite recent times, resulted in the need to use standard designs for schools for the quantity of buildings to be constructed has been far too great for individual designs to be produced for each new building needed [29, p. 18-20].

Various ways of dealing with these problems have been devised. In Peru, for instance, the communication problem has been overcome by three-dimensional drawings which show, for each major step of prefabricated structures, the various types of work that need to be done (Figs. 43 (a), (d)). In other cases the lack of trained builders has been overcome by training a number of local people in regional courses or centres who, upon their return to the village, are able to train and supervise others [35].

Flexible prototypes which can be adjusted to local needs in terms of layout and to local materials in the

non-structural components and finishes are becoming an ever-increasingly acceptable practice in order to avoid the 'uniformity paradox' and the neutral look of standardized schools.

In Liberia (Figs 44 (a), (e) and 45), simple floor plans which can be adjusted to different materials and various shapes and sizes have been developed to ensure the application of some minimum sizes and standards. The result is that every school looks different although the basic materials are the same.

In the Yemen Arab Republic it was suggested that a prototypical design should aim at the creation of an environment where the traditional values of the Yemenite way of life meet with the requirements of improved hygiene, nutrition, child care and other factors.

In the United Republic of Tanzania and Mali, prototypical site plans and designs for primary schools include the creation of community activity spaces (Figs. 46, 48). In order to intensify the utilization of

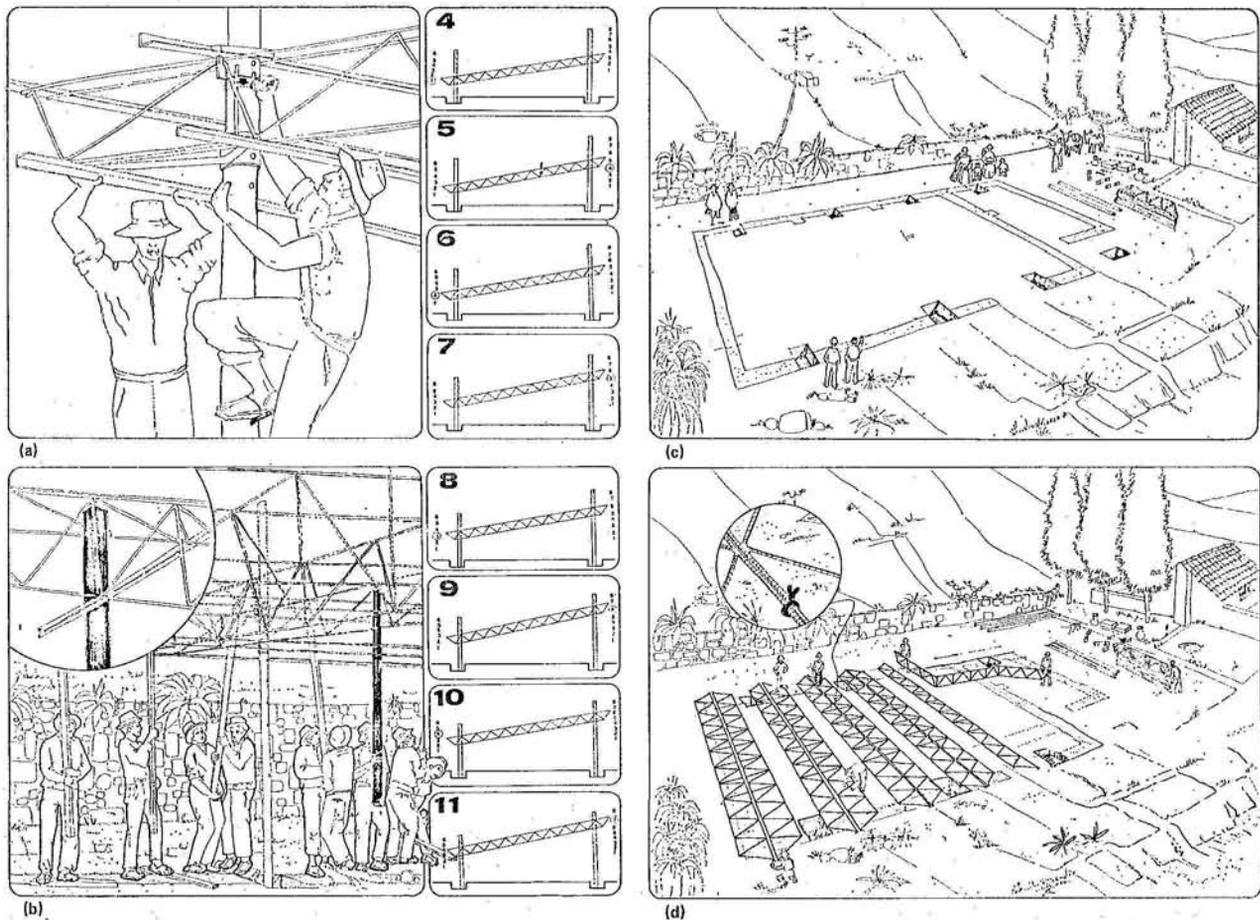


FIG. 43. Examples from the instructions for the assembly of prefabricated school structures in Peru: (a) optimal conditions for the assembly of the structure; (b) instructions for the connection of the different parts on the ground; (c) positioning the trusses; (d) lifting the roof. *Source:* Peru, Ministerio de Educación, Oficina Infraestructura Educativa, op. cit., p. 7-11.

Building community schools

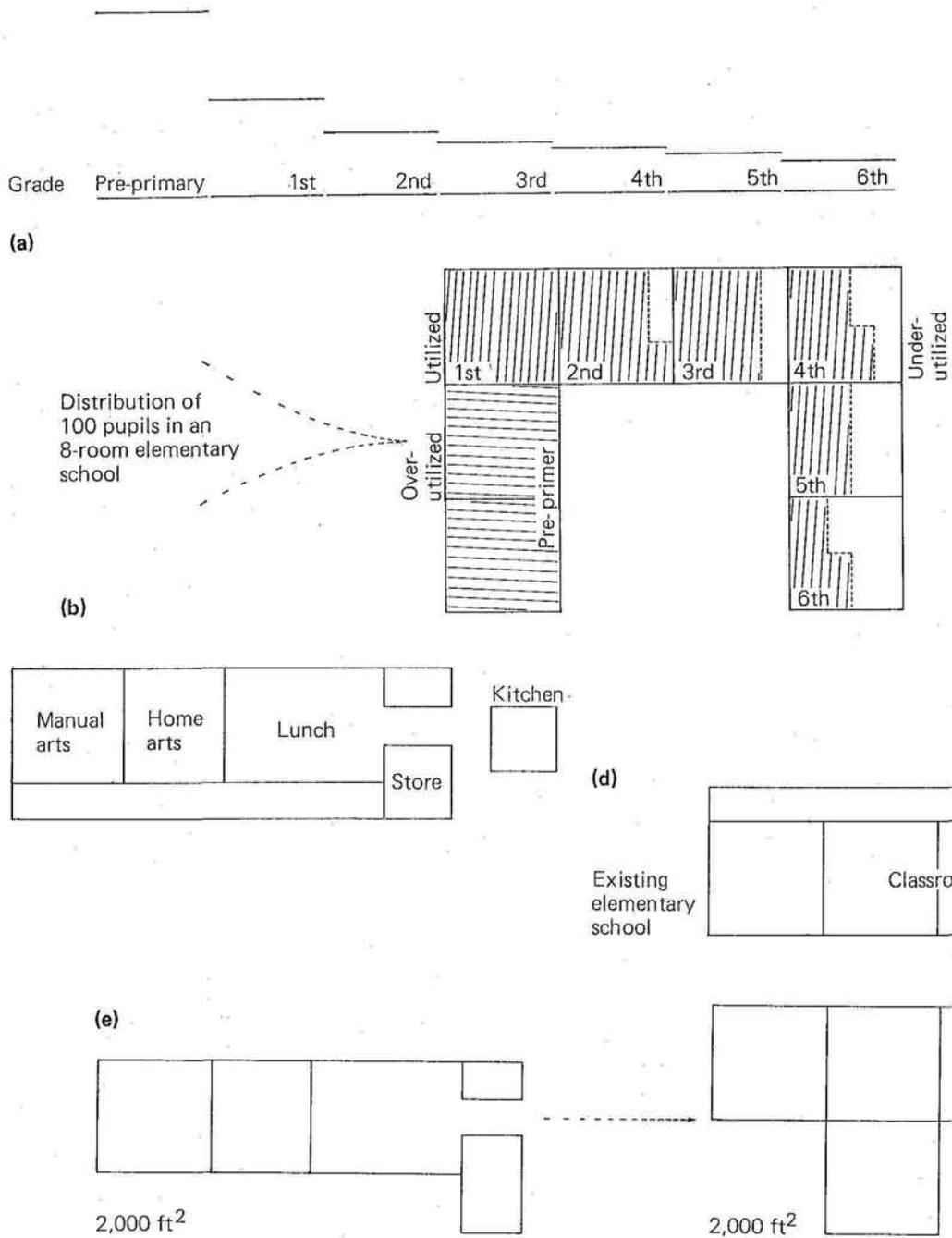


FIG. 44. Development of the prototype—Liberia. (a) Any worthwhile educational environment must readily adapt to the needs of the educational process and the welfare of those seeking to learn. The grade distribution of the school population in Liberia at this time is heavily weighted towards the lower grades. (b) The typical elementary school built in the past fifteen years is a series of classrooms, all the same size, to which the various grades are assigned. This results in overcrowded classrooms in the lower grades and under-utilized classrooms in the upper grades. (c) The community school programme was established to enrich the elementary school offering in rural areas; an educational structure was designed to annex to existing elementary schools to provide facilities to accommodate: a school lunch programme; a manual arts programme; and a home arts programme. (d) This design perpetuates the inefficient utilization of the elementary classroom and adds special purpose rooms that have a low utilization. (e) The transition. *Source:* Ken Branch, UNDP Programme, 'Design Guidelines for Elementary School Buildings', Monrovia, 1975 (draft paper).

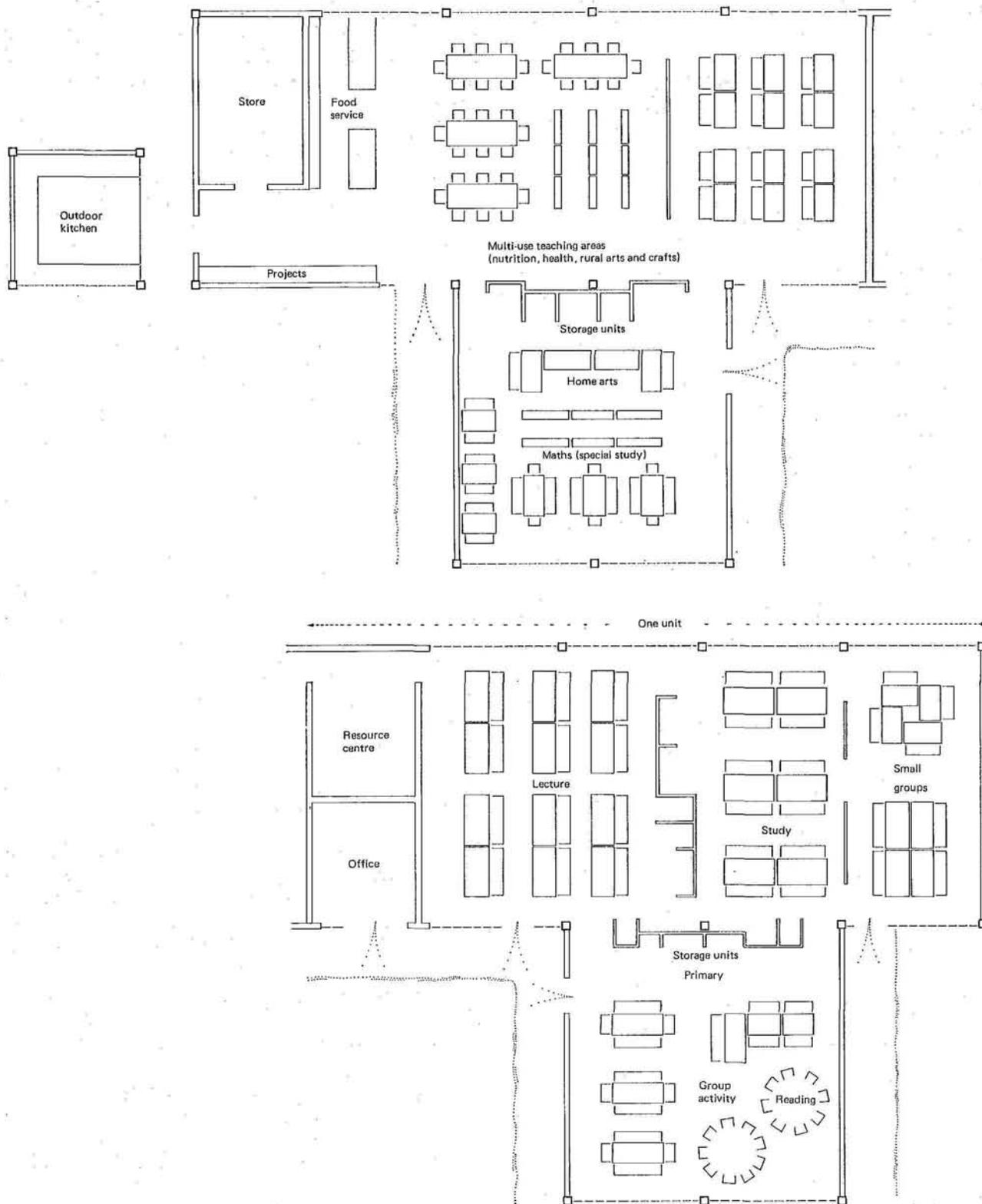


FIG. 45. Modular design: an elementary school. One unit = 2,000 ft² (seating for 100 pupils). *Source:* School Building Office, Ministry of Education, Liberia, April 1976.

the facilities and to integrate the school within the community it serves, a non-linear layout was employed in both cases. Courtyards between classrooms are designed in such a way that they may serve as a stage, an open assembly area, or for the projection of films. This also meets the requirement of reiterating the qualities of traditional dwellings and provides open-air teaching spaces and natural ventilation.

Building as an educational process

In order to create centres for education and community development, the involvement of the community in the design and building process is of critical importance. The building itself, in many cases, can become a part of the educational process in the way in which it is designed and built.

In small as well as large construction programmes, this idea has been tested. The construction of 2,000 schools using prefabrication in rural Uttar Pradesh (India) in a period of two years has largely borne out these ideas and has demonstrated that, with appropriate management, it is possible to construct schools in an economical way using modern building techniques in a rural setting [29].

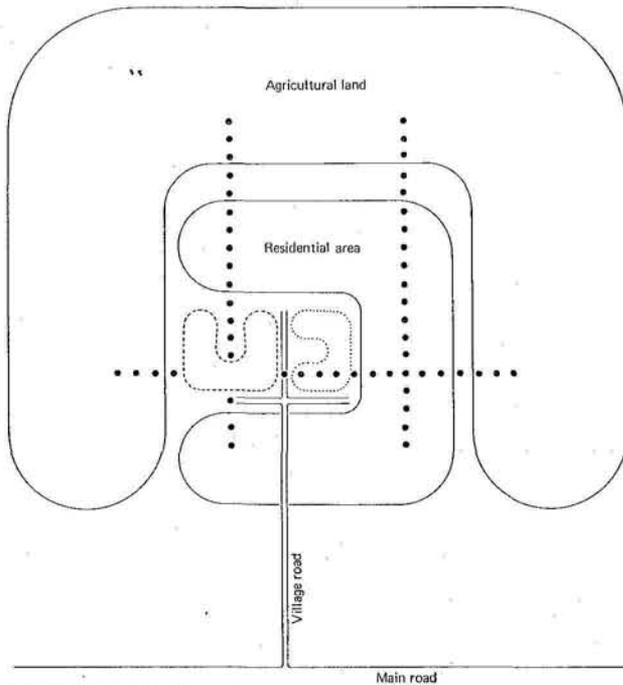


FIG. 46. Community education centre—Prototype for Tanzania: location within the village. Source: United Republic of Tanzania, Ministry of Education, Project Planning Section, *Community Education Centres*.

Similarly in Bangladesh a design commissioned by the University of Engineering and Technology can be used for large-scale building programmes for rural areas in which community participation is assumed [29, p. 23].

Two well-documented processes including the critical assessment of the results of popular participation in the design and building of community education centres (CEC) exist in Colombia and the United Republic of Tanzania. Guidelines adopted at the start of the programme as an integral part of the Tanzanian development policy stress the design on the basis of popular consultation and an avoidance of alien technologies through the maximum utilization of local labour and materials. Since each of the Tanzanian CECs aims to integrate all public services previously offered separately and to be the heart of the village agricultural and industrial development, it serves to link education and production, theory and practice.

The idea to use village construction projects as a step in adult education towards village industrialization seemed promising. It would require extra educational investment in the construction project but might yield a greater motivation and identification by the people. It was then planned that a mobile construction team would be set up directly under the Ministry of National Education. It was argued that the Rural Construction Field Unit in the district lacked the necessary capacity. The team would have a foreign field engineer and 18 professional craftsmen (8 masons and 10 carpenters). It was decided that 4 villagers from each village would attend a 3 months building course at the Rural Training Centre in the district. . . .

In practice certain aspects of popular participation were successfully implemented, other elements did not materialize after sudden changes in the planning team [36].

The planned use of the construction of the CEC as a demonstration and training activity for subsequent CECs did not materialize, due to lack of logistic preparation. Those who were engaged in preparing the cement blocks did not know for what purpose they were working. However, use was made of an existing rural training centre to teach some basic construction skills to selected villagers who were then able to supervise aspects of construction in the villages and to train others in turn.

Technical and organizational matters were discussed with the villagers and the mobilization of less-qualified workers was not entirely unsuccessful.

It is reported that after several months' delay, the production of soil cement blocks gained momentum and a trained team of twenty-two villagers, supported by others, produced 40,000 blocks in four months.

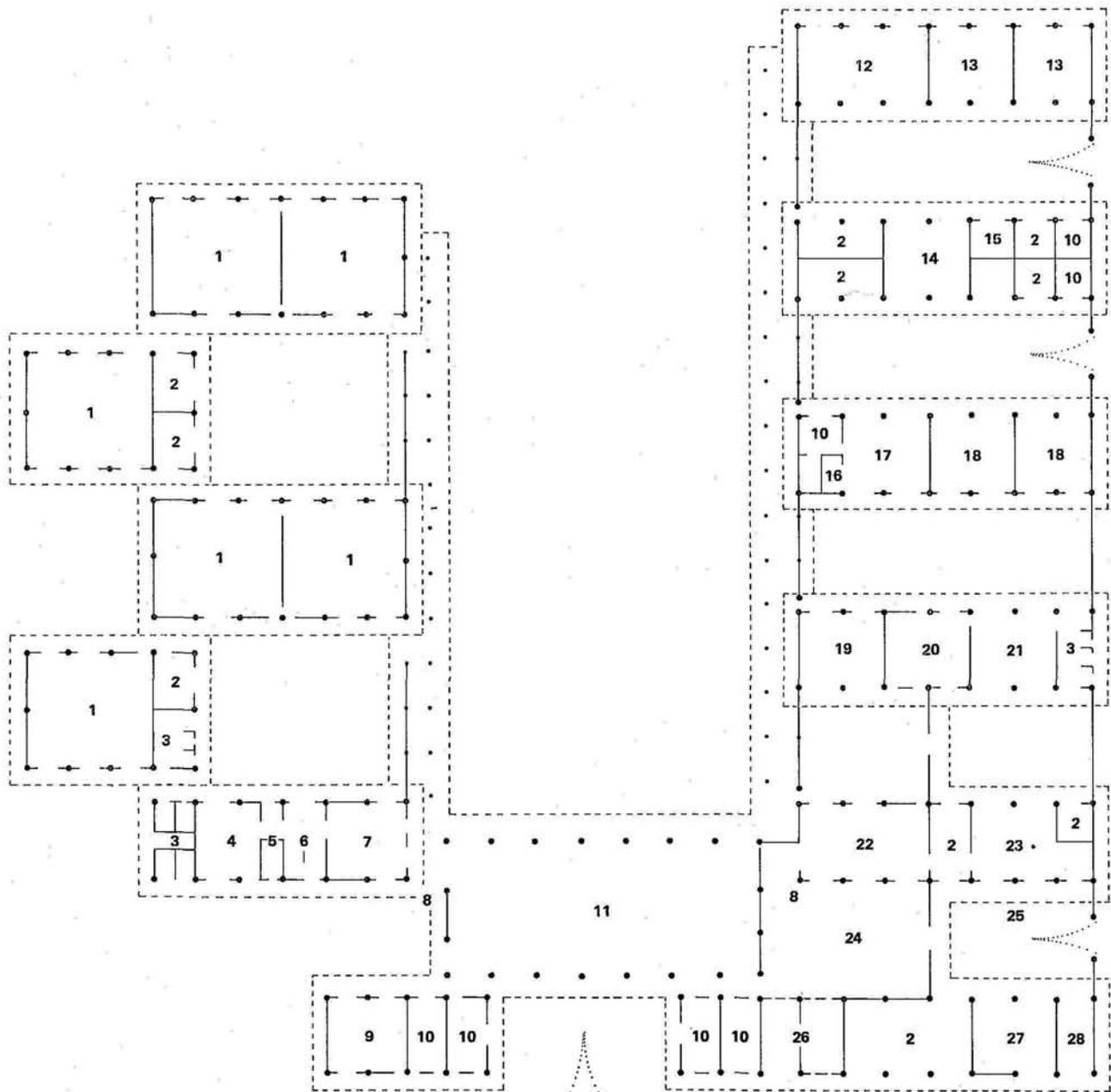


FIG. 47. Plan and elevation of the Community Education Centre prototype for the United Republic of Tanzania. 1. Classroom. 2. Store. 3. Toilets. 4. Treatment room. 5. Annex office. 6. Examination room. 7. Pharmacy room. 8. Water tank. 9. Book storage. 10. Office. 11. Assembly hall. 12. Masonry. 13. Metal workshop. 14. Teaching room. 15. Forge. 16. Trying-on room. 17. Sewing room. 18. Wood workshop. 19. Laundry. 20. Nurses office/teaching room. 21. Playroom. 22. Kitchen. 23. Dining/playroom. 24. Demonstration kitchen. 25. Silos. 26. Co-operative shop. 27. Mill. 28. Slaughter house.

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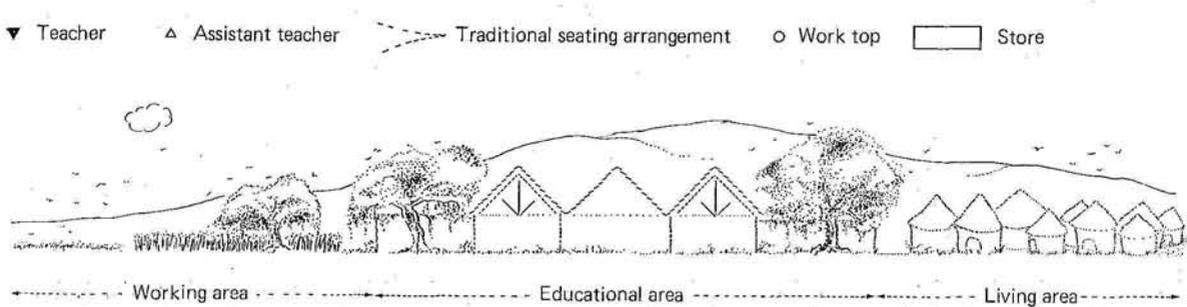
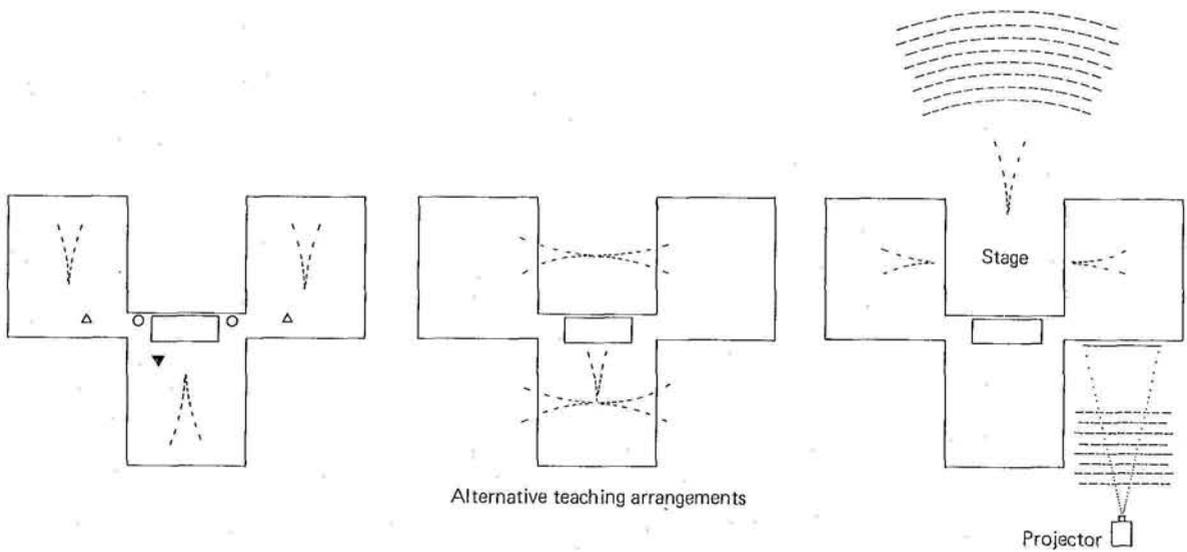
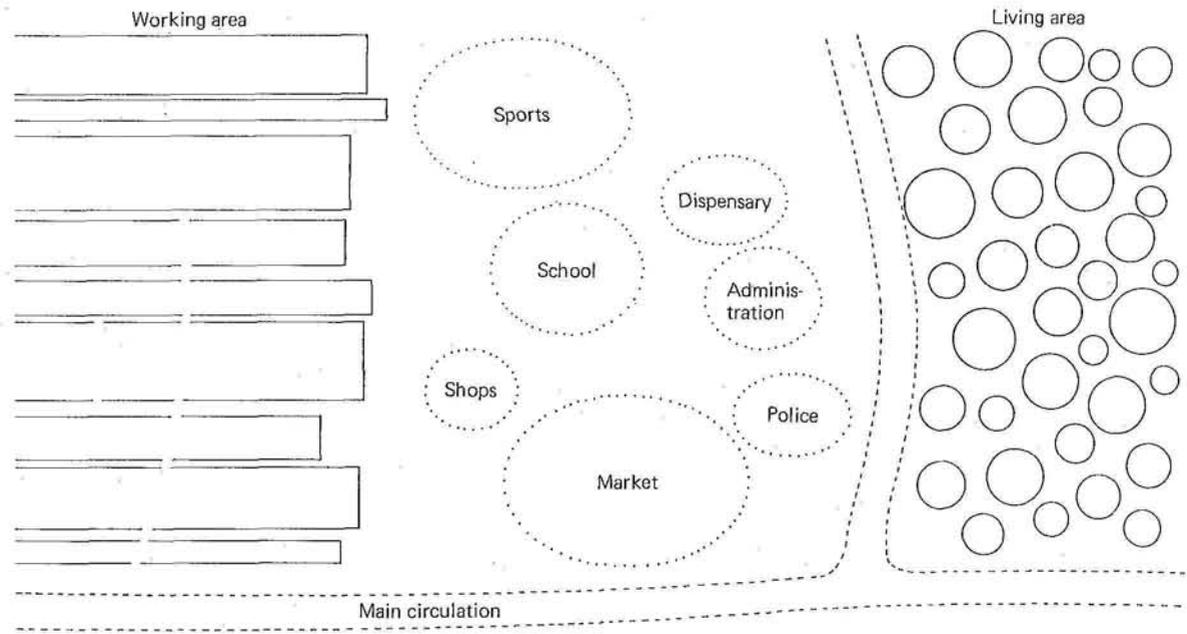


FIG. 48. Primary school prototype for Mali. *Source:* Unesco, the Regional Educational Building Institute for Africa, *Design of a Primary School: Prototype for Mali?* Khartoum, REBIA, 1970.

Although only the first five sites of the eight pilot projects have been activated, the preliminary conclusion can be drawn that the popular participation in the construction work is almost as high as planned. The educational effect of the construction work will be considerable as the training of village masons and carpenters has taken off well. Participation in planning of design has so far not materialized. In fact the village leadership has not yet fully grasped the vital role of the integration of functions as well as spaces in the CEC [36, p. 20].

This points to the fact that the help of outside experts, initially indispensable for project administration, design and construction supervision, may be a disruptive factor for the community. From the outset the extent of popular participation in programme formulation and implementation must be established. The much greater effort required in self-help projects on the part of the outside experts by comparison with conventionally contracted work is seldom recognized by administrators, government staff and foreign aid donors.

It has also been observed that the architect's reliance on drawings constitutes an obstacle to the full participation of laymen in design and planning.

At the highest level of national planning in Tanzania there is much ambition for the national development but simultaneously a clear consciousness about the economic realities of the country.

At the lowest level—among the peasants—the sentiments show a remarkable similarity. The peasant, who has to pay for everything from his own pocket, thinks twice before spending in a non-productive way.

The bureaucracy does not always have the same practical attitude. In many cases this can be traced to the very limited technical and economic knowledge of the bureaucrats, which can lead to less economical decisions [36, p. 21].

As the villager takes a very practical view of his priorities the change from bush poles and mud fillings to sundried mud blocks spread rapidly to individual houses in Dodoma. Grass roofs were replaced by iron sheets, and concrete floors instead of rammed earth were built later.

There are few governmental policies which are as explicit about popular participation as the Tanzanian. Even though it may not be rated a total success, the importance of guidance and management in large-scale programmes in which the construction process becomes an educational tool has never been questioned.

The necessity to improve local techniques and hence productivity cannot be overstressed. The training in vocational skills which we provide in our community

projects can be directed towards this. It is to be taken into consideration that such promotion of skills is regenerative in as much as the cadres that will take the responsibility for training others can be found within the community. A good source to tap is the village craftsmen who represent the readily available subjects of our training programmes and in turn train others [27, p. 4].

The second example, concerning the experimental work done in Taguales, Colombia, goes even further in the precise use of every stage of construction to implant all necessary theoretical concepts linked to practical construction skills. Basic education, in fact, centred around the construction project and the community was not only involved in providing free labour but also in planning and decision-making, the determination of needs and priorities and establishing the content of an educational process built on community needs.

For instance, in the first stage of the school's construction (marking out and excavating foundations) members of the community were made familiar with basic geometrical figures (lines, angles, triangles, rectangles, squares), the concept of surfaces and the metric system. Further stages were linked to levelling of the ground, building floors, walls and roof, windows and doors, finishes and paintings. People learned how to budget (add, subtract, multiply, divide), to calculate volumes, to batch and mix the different ingredients of concrete, to calculate surfaces and the number of bricks needed for certain thicknesses of walls, to



FIG. 49. Satellite school in Taguales, Colombia, now used as community recreation centre and local pub.

deduce the perimeters of frames and to determine the proportions of paint or cement needed for the walls of the school or their own houses.

In addition to the concepts and skills linked to the construction as it proceeded, the instructor also taught language, geography and history in an informal way, relating them to the practical everyday life of the community [37].

The emphasis was on getting people to think and express their own ideas instead of swallowing ready-made truths. The result was a new school and a nearby community centre situated in the old school (Fig. 49). Both were built and equipped in a relatively short time and with intensive community involvement.

The primary goals in Taguales were achieved, nevertheless, one important element was lacking as it turned out later. This was the establishment of a process which would survive the departure of the prime movers (national and international experts). With the completion of the school the process of community involvement and participation came to an almost complete halt. No new projects have been developed since.

Perhaps one of the best explanations has been given by one of the experts in the project, Yolanda Sanguinetti [42] who pointed out that a 'project attitude' towards development dominated the period of intense involvement and could not be transformed into a 'process attitude' afterwards. In retrospect, she concluded that it would have been better to have proceeded more slowly, in a more process-oriented way.

Functional considerations

In addition to disparities in *access and location* of educational and community facilities, a second obstacle to an integration of basic services is that services in larger rural settlements are usually widely dispersed: a police station is located in one place, a dispensary in a second and a school in a third. Education, public health and safety, churches, administrative agencies and others are separate functions which do not operate as a team. This reflects the usual lack of co-ordination between local administration, planning, public works and education.

The origin of many schools in Africa has been responsible for, and reinforced by, the notion of separateness. Historically, the missionaries who founded schools often regarded their task as being to release local people from evil superstition and to civilise them. The school was deliberately set apart from the village in its own compound, use of the

vernacular language on the school compound was often forbidden, and tribal customs and dancing were prohibited [43].

Even today the separation of school sites from the local community is a common practice. Secondary schools, for instance, are often located between various villages or outside the village, and students and staff are thus isolated from the rest of the community:

In some places there is no real community in existence: in others, the school is serving several communities. At post-primary level many institutions are boarding, and this creates a double obstacle to school-community liaison. First, pupils come from far away and their parents and families are physically remote and unable to visit or associate themselves in any way with the life of the school. As the institution grows it may develop its own shop, health clinic, post office, primary school, and its links with the community may actually diminish [43].

In contrast, a site and building which is central, or at least near to the community's geographical centre, has a far greater chance of becoming a community centre which can be linked with other community institutions and resources.

In newly planned villages, as the prototypical plan for the United Republic of Tanzania (Figs. 46 and 47) has shown, this is not too difficult to arrange. In existing villages, the school might be placed at the periphery but in the main direction of village growth. Where schools are closely linked to agricultural production, a location which optimizes access to both fields or barns and central community facilities should be found. Stretching scarce community resources along a central pedestrian and vehicular link between village centre and production school might enhance possibilities of sharing and communication.

From a functional point of view, the organization of spaces in a community centre may be seen along various scales from the most public to the most private, and from the noisiest to the quietest.

Starting with the most public uses (administration, multi-use facilities), these may be grouped around the entrance, while the more specialized or private uses (education, production, living quarters) tend to be located successively more towards the periphery. It seems useful to separate the noisy from the more quiet uses by placing a buffer of open space between the two, which also offers possibilities for expansion or the additional integration of new functions (Fig. 50).

Upon arrival one first meets the representative facilities such as administration, assembly hall and co-operative. The quiet and more theoretical functions are separated

from the more active and noisy ones of which some at the same time require traffic from lorries, e.g. the school unit and dispensary to the one side and workshops/home economics to the other.

The school unit consists of six classrooms each with 48 seats. Four of the classrooms face each other two by two, enabling one teacher to supervise two classes at a time, in case of teacher shortage.

The assembly hall, which is essential, is a roofed area serving as a multi-purpose space. By subdividing the space with moveable screens (straw mats) it can serve as waiting area for the dispensary, reading area for the library and as dining hall served from the kitchen simultaneously. For meetings or large gatherings the screens can be removed, bringing the seating capacity to approx. 300. The open adjacent yard provides space for additional hundreds. In the productive part of the complex other facilities have been integrated as well, such as home economics and day-care centre. This may seem unusual—it is, however, considered that, for instance, needlework can be very productive as well as educational, and it can function with woodwork as well.

In order to expose the children to technology at an early stage the day-care centre has been placed such that the children can watch with fascination the sundry activities in the workshops [44].

Some important conclusions can be drawn from a variety of plans (of which the Tanzanian plan is one of the most complete). In general, spaces should be organized to serve a variety of activities, including mainly adult education and community functions (festivals, prayers, ceremonies). A multi-use assembly hall is therefore of primary importance; it should be big enough to house the largest possible gathering or (where climatic conditions permit) it may be enlarged to include outside spaces. For larger centres including production activities or secondary school facilities, a network plan seems to emerge which groups public and administrative functions and uses separately from school and/or production functions. Although orientation, colour and detail must be decided separately for

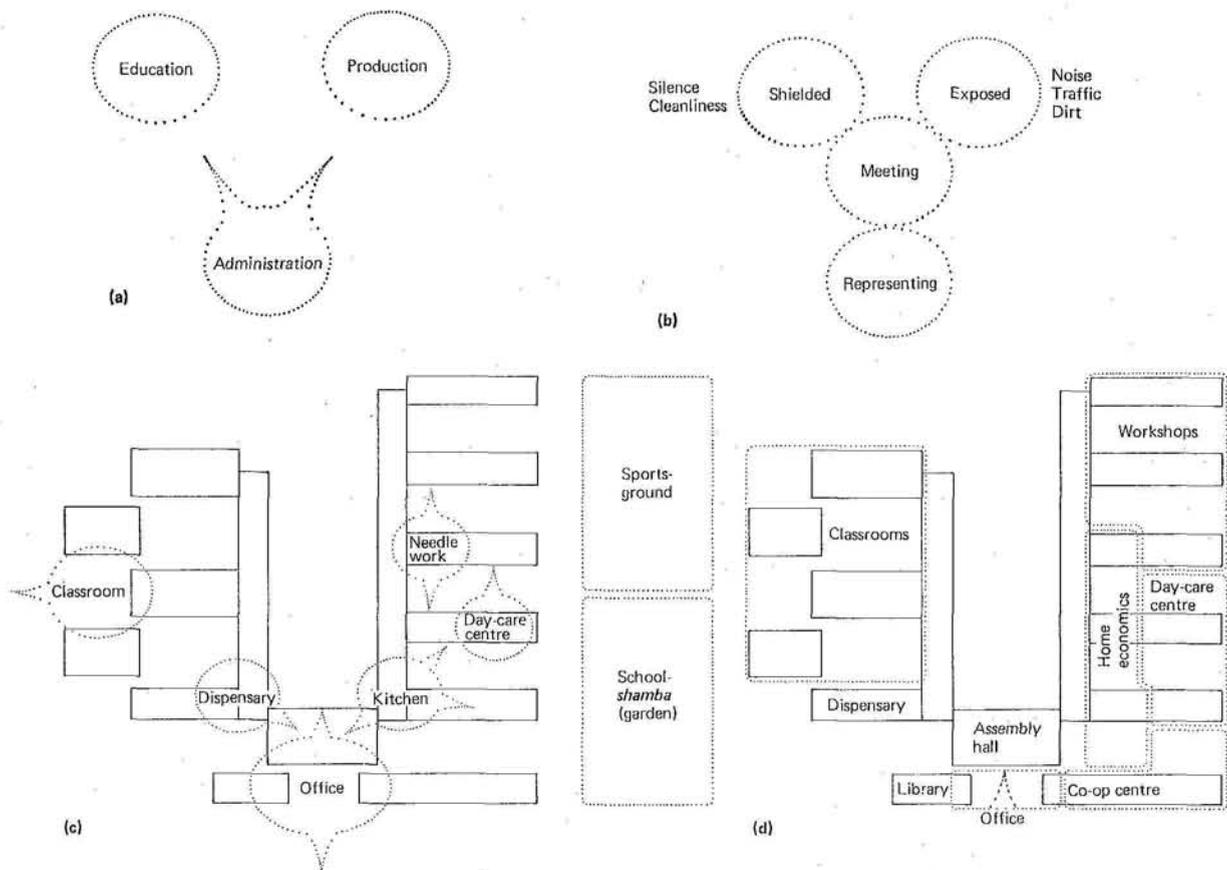


FIG. 50. Functional analysis of the Tanzanian Community Education Centre prototype: (a) the functions of the centre; (b) the characteristics of the functions; (c) important connections; (d) the organization of the plan. Source: United Republic of Tanzania, Ministry of National Education, Project Planning Section, *Community Education Centres*.

Building community schools

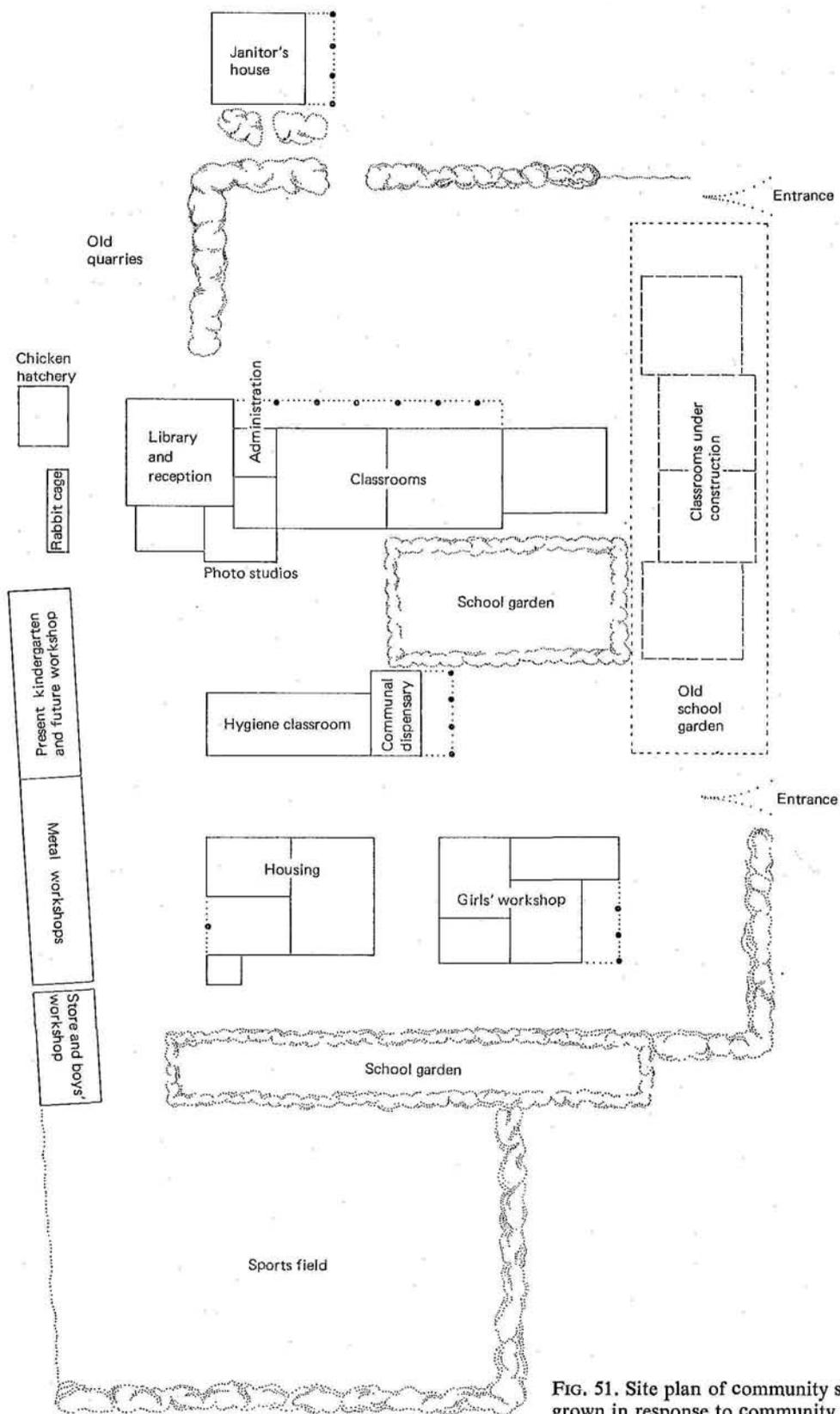


FIG. 51. Site plan of community schools which have grown in response to community needs. *Source: J. P. Contesse.*

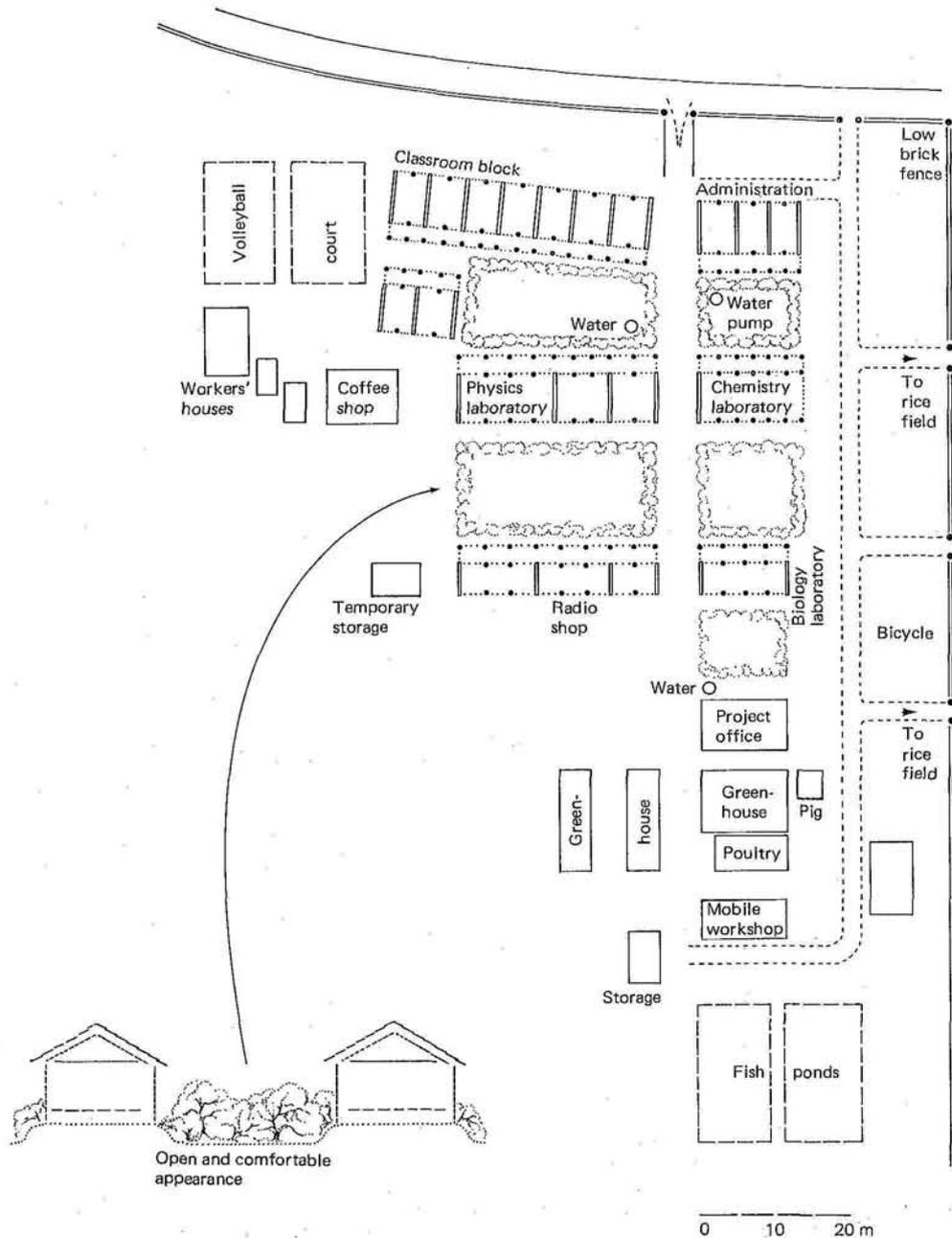
each locality, it seems important to provide an open and welcoming environment to which people would like to go.

Communication and guidance

Two opposite trends in regard to the national involvement in guiding the planning and building of school and community facilities can be observed.

On the one hand, in some countries the central administration leaves local communities free to build their schools and/or community centers as they think fit, i.e. Kenya, Panama, the Philippines and Peru. Here the cost of the site and resources needed to build

FIG. 52. Malang development project high school, Indonesia: site plan. *Source:* H. Noguchi, 'Joint School and Community Planning', *Educational Building Digest No. 10*, p. 6, Bangkok, Unesco Regional Office for Education in Asia, 1977.



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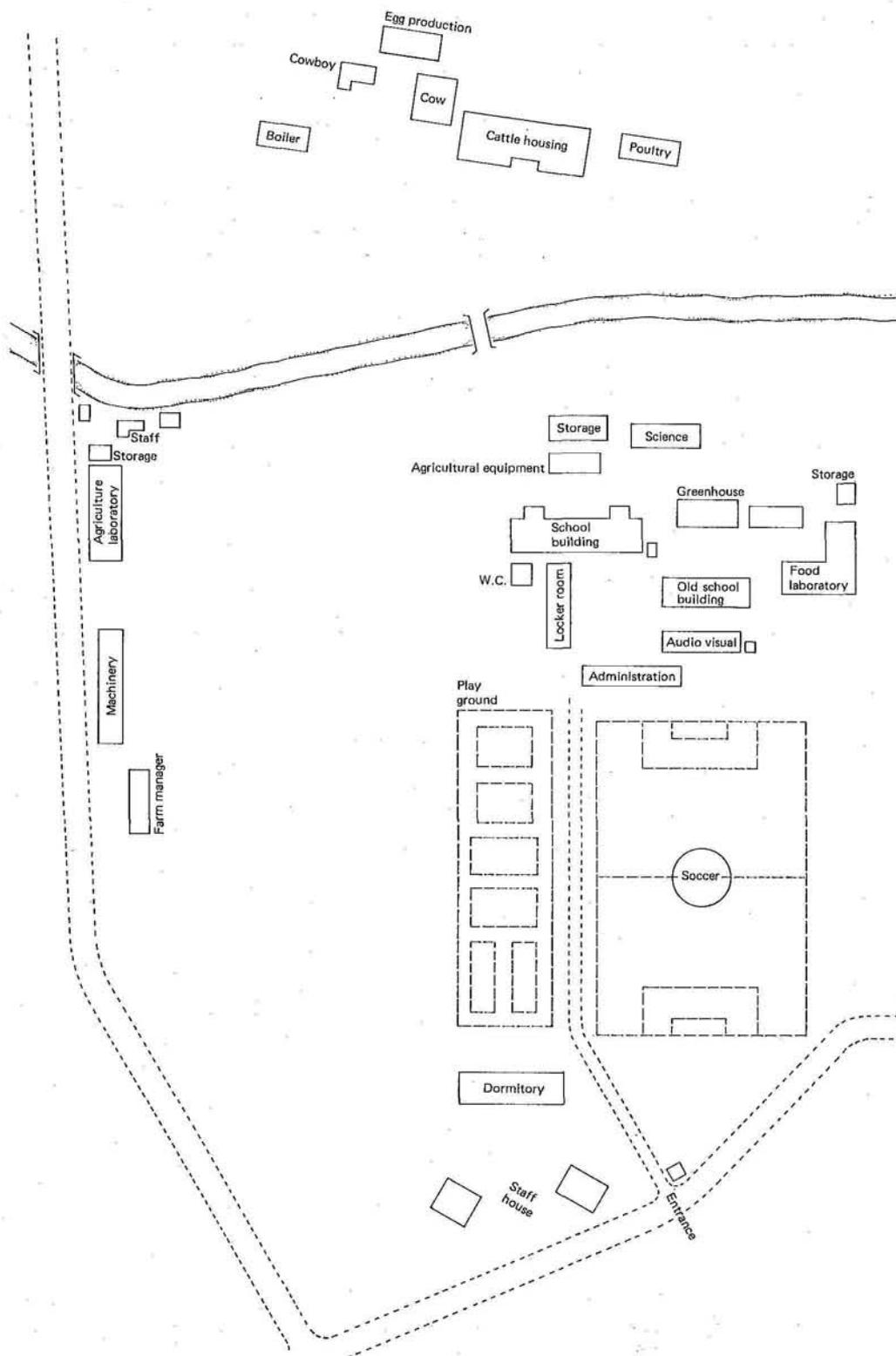


FIG. 53. Suwon agricultural and forestry high school, Suwon, Republic of Korea: site plan. *Source:* David Vickery, 'Community Schools Study: Report from Regional Units', prepared for sixth Workshop of Educational Facilities Units of Unesco, Paris, 1975 (Annex of Mission to Indonesia, Philippines and Korea by H. Noguchi, p. 24).

the facility are usually borne entirely by the community, just as in the individual projects which have been developed. Figures 51-53 show three site plans which reflect the way in which the project has grown 'naturally' in response to arising needs. The emphasis at the national level is either total involvement or aimed at supporting agricultural and socio-economic development, the training of teachers and community co-ordinators, animators or other specialized staff and/or the provision of sufficient resources for production (land equipment, seeds, etc.). The facilities question clearly ranks among the less important preconditions for development, and standards or regulations are limited or non-existent.

On the other hand, there are countries which consciously attempt to use the provision of new facilities to support their development strategy, among them Colombia, Cuba, India, Mexico and the United

Republic of Tanzania. In these cases, a large share of the resources for construction comes from the national governments (sometimes supported by international agencies) and the design of facilities always emanates from the central level; however, the planning and construction process may become part of the educational process at the local level (Figs. 54 and 55).

There are no clear-cut indications as to which of the two approaches works best; successes and failures can be cited in each category. The first seems preferable from the point of view of getting the community involved in the process of development and in creating enthusiastic support from below, but it seems to fail where governmental support cannot be provided fast enough in terms of teachers and production resources. The second approach guarantees a large share of governmental support but has been known to fail in terms of communication between governmental

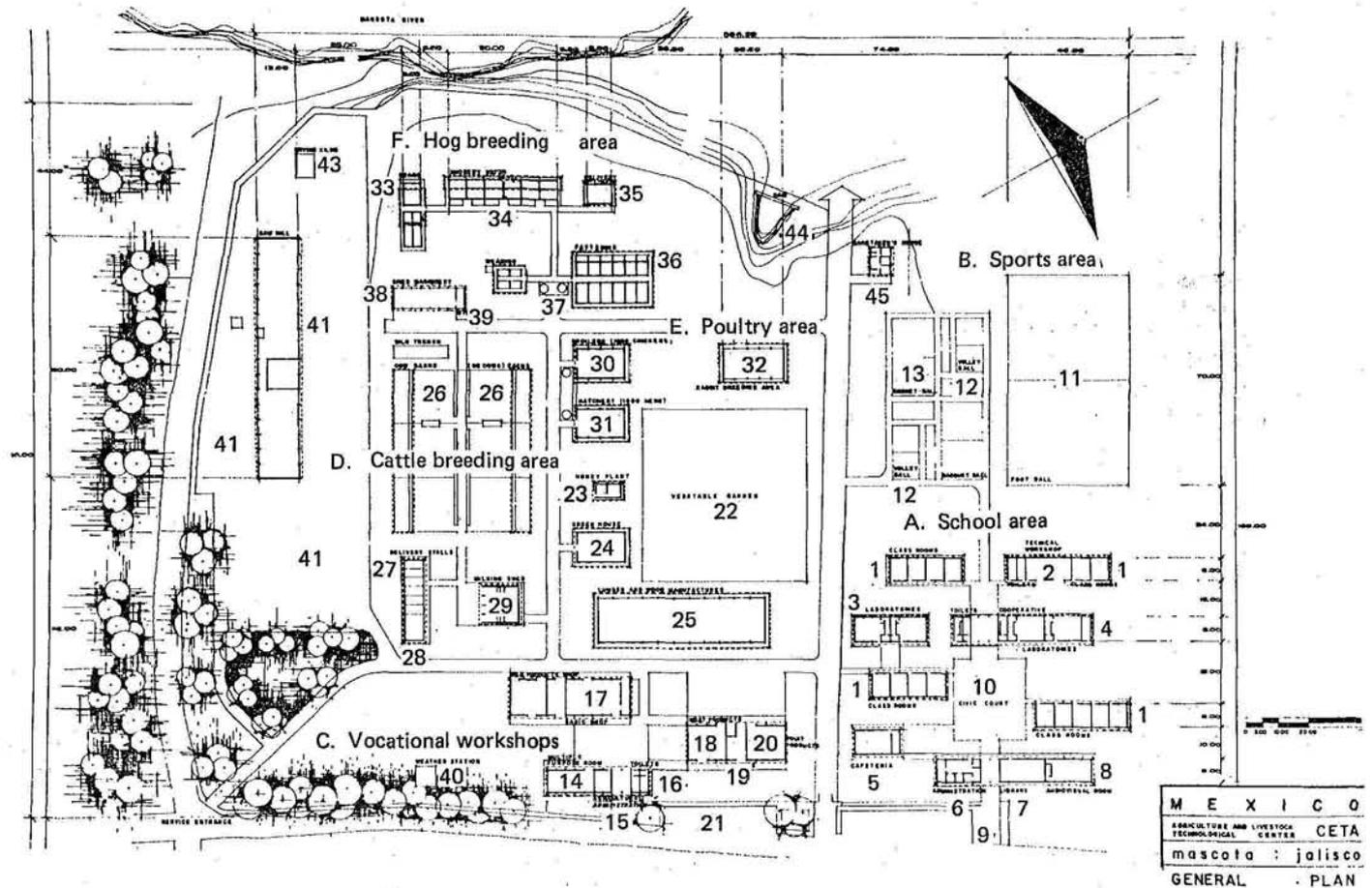


FIG. 54. Agricultural, livestock and technological centre at Mascota, Jalisco (Mexico). *Source:* Carlos Zamarripa, 'The Rural School: An Educational System Integrated to Community Development' (UIA seminar paper, Athens, Greece, October 1976, p. D XV 9).

agencies and local people. In addition, governmental agencies have tried to achieve too much in too short a period of time. This seems to suggest that the discrepancy results from the imbalance between initiator and follow-up agent and that both roles can be taken by either government or user.

Certainly the second approach tends to be more costly. Neither in Colombia nor in India, Mexico and the United Republic of Tanzania can the centrally designed prototype be implemented throughout the country. Often it may prove administratively cumbersome to implement in the face of urgently needed large-scale changes.

A third alternative has been suggested and is beginning to be explored in various places: the decentralized regional guidance unit. It combines community participation and contribution in design and construction with central support or, in the latest version, decentralized guidance units.

This implies that in cases where people from the community can be employed, the responsibility for guidance and management in technical questions nevertheless rests with a properly qualified body. El Jack has pointed out:

because of the fact that communities were not provided with guidance during the first stages of their projects, their efforts resulted in a considerable amount of wastage of their generous contributions. Every effort should therefore be made to respond promptly to their needs in this important area. Such response can be in the form of providing administrators, planners, architects and building technicians who are well adjusted and able to provide such guidance as collaborators and who should be fully aware of the implications of working with rural communities [27, p. 4].

Langley [45] suggests that because not enough architects can be trained to serve every village, regional mobile units should provide building advisers who in turn train development workers on the site and may be called in at critical points or stages of construction (similar to a mobile medical care system).

This type of decentralized organization would have enormous advantages over the link between central and local level: (a) delays in communication would be considerably shortened; (b) a step-by-step approach towards building could be implemented and, for simple projects, even drawings might become superfluous; (c) difficulties at the local level could be dealt with more individually; (d) an approach towards explaining 'why' rather than 'what' might be possible (e.g. 'why' do you need a west-facing wall to be a cavity wall? Because the result will be a cooler building); (e) reliance on building regulations could be

avoided or diminished; (f) network imbalances (e.g. upper primary school too far away, lower primary not linked to other local resources) can be adjusted; (g) local materials may be transformed into better building materials (e.g. sawn wood instead of branches, gypsum can be burnt locally and replace cement, bricks may replace mud blocks) and replace imported materials; and (h) co-operative buying at regional or local levels may be organized to obtain necessary imported building materials at an acceptable price.

At the national level, however, a central planning and research unit may be useful for basic research and the dissemination of information to regional and local units.

The importance of building and design in greating new links between school and community

The significance which 'facilities' assume in the effort to co-ordinate various programmes and services has been grossly overestimated in some cases and grossly underestimated in others.

In industrialized and developing countries alike, some of the best, most imaginative and innovative programmes and combinations of services exist in seemingly substandard facilities: in an old church, bank and funeral parlour as at Swinburne Community College (Australia); in an old warehouse as in the SAND project in Hartford, Connecticut; in simple local structures, as in the production schools in the province of Veraguas (Panama) or the Barrio high schools (Philippines). They all provide ample evidence of the fact that the motivation of the people and a gifted leader or enlightened public policy are the essential ingredients for creating a community school with a tremendous impact on its immediate environment.

In contrast, many programmes which have stressed the development of new design solutions and comprehensive planning have had major problems in terms of continuous community involvement, whether Mümmelmannsberg and Steilshopp Hamburg (Federal Republic of Germany), or Istre (France), the Community Education Centres (United Republic of Tanzania) or the *Concentraciones de Desarrollo Rural* (Colombia). Often difficulties encountered in terms of continuous community involvement seem due to the fact that the design has been initiated from the top and although the community may be involved to some extent, it is not 'their' thing. The building should always be seen as only one important element among other key

factors for development. For a community school, in contrast to traditional schools, the way in which it comes into existence, and who takes responsibility for the way in which it is built, seem more important than academic architectural criteria.

In developing countries, local initiatives and local materials and construction techniques should be used to the extent which is feasible in any given situation. Great care must be taken to provide guidance and control in a non-disruptive fashion. Support where needed rather than guidelines and regulations from above seems to provide the most acceptable form of government aid. The decentralized approach (described earlier) for the establishment of regional guidance units may be the in-between solution which could help to avoid both rigid governmental control from above, which kills local initiative, and wasteful or substandard local construction efforts.

In industrialized countries, the problems are not

dissimilar in terms of 'where' governmental input should end and local initiative and involvement should begin. A total takeover of the building process by the people, which may be possible in developing countries, is obviously out of the question in industrialized countries—except in rare cases [46]. Building has become a specialized activity which requires, at least for new structures of any size, professional services during a rather complicated process from inception to implementation. However, the direct influence of users on programming and design decisions are of crucial importance.

In many countries of the world, and in many kinds of projects, methods are being developed for jointly enfranchising citizens and bureaucracies in open-ended design processes. . . . There is at once a learning and an unlearning that has to take place. Bureaucrats have to learn how to listen, and what to hear. They have to be inventive in redesigning public programmes, and even legislation, to

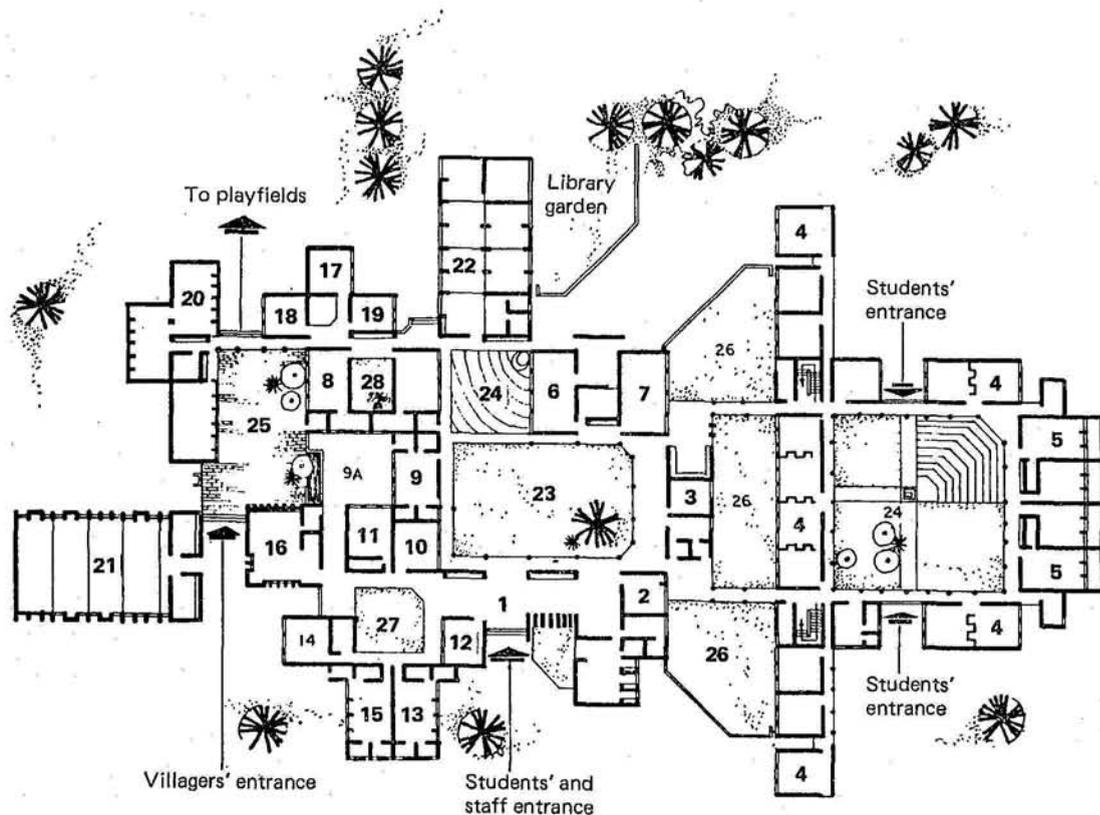


FIG. 55. Proposals for a community school—secondary section in India. 1. Entrance foyer. 2. Administration. 3. Medical counseling. 4. Classroom. 5. Specialized teaching. 6. Home science laboratory. 7. Group activity room. 8. Art and craft. 9. Biology practical. 10. Botanical garden. 11. Biology theory. 12. General science room. 13. Chemistry theory. 14. Chemistry practical. 15. Physics theory. 16. Physics practical. 17. Science museum. 18. Teacher training. 19. NCC/ACC/youth club. 20. Adult education. 21. Workshop. 22. Production centre. 23. Library. 24. Assembly court. 25. Informal teaching. 26. Paved courtyard. 27. Maintained lawn. 28. Science court. 29. Sculpture court. *Source:* R. D. Srivastava, 'Community Schools in India' (UIA seminar paper, Athens, Greece, October 1976, p. D X 11).

enable them to respond to what they hear. Architects have to unlearn the traditions of modern practice . . . they have to learn that they are not surrogates for citizens. They are citizens, and like other citizens they bring special talents to offer to the public pool of talents in a common process of problem-solving. Citizens have to learn that their city is a mirror of themselves; its form is a mirror of their civic responsibility and pride, their sensibility, and their aspiration. There cannot be surrogates or abrogations [47].

This approach to planning and design is radically different from normal bureaucratic procedures. Obviously the building should function according to the criteria established at the outset. But where schools are to function as community centres, criteria cannot be set by bureaucrats alone. For the final outcome and use, it will matter greatly whether people can identify with the building and whether they can rediscover in the design their own hopes and aspirations, and feel that they themselves have achieved something.

There is no doubt that 'facilities' have been a major entry point for co-ordination in industrialized countries. In building anew as well as in the use of surplus space, a major impetus has been the fact that large capital investments in facilities and equipment needed better use. Only now initial experiences have shown that large facilities are in fact not a necessary precondition to new educational and social programmes, but that surplus spaces in schools as well as obsolete industrial, commercial and private facilities may give similar programmes an even better chance to enfranchise the user in shaping his own environment.

Whether this opportunity can be seized depends again on the recognition on the part of the public authorities that all they need to do (in most cases) is to open up a possibility for self-help and self-directed activity in order to tap the large reservoir of popular creativity and action.

Through international expertise and assistance, experiences in industrialized countries are channelled to developing countries. Thus, a close congruence can be observed between the Paul Laurence Dunbar High School and Community Centre in Baltimore (one of the most comprehensive community school centres in the United States) and the Tanzanian CEC's (which probably present the most complete model in developing countries). They both combine educational, recreational, cultural, health, political, administrative, governmental, commercial, productive and ancillary functions. Although the types of construction and layout vary considerably, these functions can even be

matched and compared in their precise spatial requirements. In both cases they provide a multi-purpose hall or theatre which serves cultural, recreational, political and educational purposes and is central to the community centre, administrative offices in the centre to establish the necessary close link between public officials and their constituency; a restaurant (or beer hall) which serves as an attraction and to supplement school and community occasions and functions; instructional areas, which also serve adult and on-going learning programmes (in both cases, they have a clear and straightforward educational focus and are therefore somewhat removed from the central or entrance area); a day-care centre which enables the women of the community to pursue their work in spite of motherhood and frees them to attend courses which may enhance their employment opportunities; a library (or media-centre) serving educational and recreational purposes; workshops which are used for teaching and production, repair and skill training; staff rooms for teachers' and staff needs, for meetings and for retreat from daily involvement in community and educational programmes; health care, which includes preventive medicine, dental care, general medical treatment, family planning, and nutritional counselling; basic commercial facilities; and stores and sanitation.

The reasons for going into such detail here are twofold: first, the list demonstrates that the range of basic community facilities may be similar even under vastly different cultural, political, geographical and developmental conditions. This summary may therefore provide something approaching an 'international' checklist for links between school and community facilities; a 'menu' from which others may choose according to their own priorities.

At the same time, however, one needs to put these elaborate conceptions into the perspective of reality. Nowhere in the United States or in the United Republic of Tanzania, nor in any other country is it possible today to realize these comprehensive types of community education centres on a national scale, on a regional scale or (in the case of large urban areas) even on a metropolitan scale.

The case of Cartagena, Colombia, where plans to build seven new neighbourhood centres have been modified in favour of an immediate action programme and services concept, seems symptomatic of two general trends: towards small-scale and networks rather than opulent monuments, and towards processes rather than projects.

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Operationalizing complex objectives: financing, personnel and administration

From economic arguments to day-to-day action

The operation of community schools in many ways reflects and depends upon the way in which they have come into existence. Although linked to a different point in time, the analysis of different aspects relating to financing, personnel and administration may therefore seem to repeat some of the findings contained in previous chapters. Where this cannot be totally avoided we apologize for the necessary duplication. In general, however, this chapter aims to deal in more detail with some of the practicalities of operating joint ventures.

If we look at the economic argument on which co-ordinated and integrated facilities have been based, it seems of interest to find out whether the argument that savings are achieved through co-ordination can be substantiated and whether one can state more precisely where they occur.

If we look at the educational and social assumptions which have been analysed in the first two chapters, we may be interested in finding out the extent to which their implementation has changed personnel requirements and administrative structures. This in turn may have direct relevance for future developments.

These questions involve a good deal of evaluation and evaluation is a complex task. Of the few cost benefit studies which try to measure the savings and cost increases of co-ordinated schemes, for instance, only a fraction has been published. The reasons lie in the complexity of the criteria involved. The first questions relate to what should be measured and compared: the cost of the facility per pupil or per adult user? The availability of spaces, programmes and services to primary clients or to the total population? Exactly what return on expenditure can be measured and validly compared with traditional provisions?

The draft report on the Human Resources Centre's fiscal analysis demonstrates the difficulties involved; it states the substantial grants obtained from three levels of government and the remarkable savings in capital cost through shared use. Yet in a narrower

sense, it arrives at the conclusion that the basic question is one of trade-offs, e.g. what else could have been obtained from the school system's share in the provision of community facilities had it been used for educational purposes?

In the end any choice of action must remain subjective, based in part on one's judgement of what the community is willing to spend 'in toto' and on an assessment that money spent for community facilities not directly necessary or useful for the school's educational program does not reduce (but rather, hopefully, enhances) the money available for school construction [1].

It does indeed depend on the angle from which the observer judges whether the benefits or the costs of sharing dominate. In the very narrowest sense, a community school may neither be cheaper in capital outlay or running costs, nor less of a burden to the city, the school, the administrators and teachers. In the widest sense the social benefits are hardly quantifiable.

It is probably true that any forms of community involvement

will increase the burden carried by the school staff, who will be faced with reconciling demands from without and stresses from within the school. But their reward will come in the wider context in which their work will be set, and in the ending of an isolation which has perhaps hindered as well as protected them [2].

Not only may teachers be rewarded, but citizens may gain new confidence in their own power to direct the courses of events. Whole new possibilities for development may open up which did not exist previously. People may get to know each other where they used to be strangers and co-operative action patterns may enhance the individuals' daily lives as well as the community's prospects for economic advancement.

Whether this can happen depends not only on good advance planning and effective implementation, but even more on the way in which the day-to-day running of programmes, services and facilities occurs.

Both in industrialized and in developing countries new specialists have been employed and administrative structures created to deal with the changed professional and managerial tasks in co-ordinated projects.

The scale on which this change has occurred, however, is different. While in industrialized countries it seems more a matter of degree, in quantity as well as quality, in developing countries it is gradually becoming a matter of kind. While in the former only a limited number of institutions have modified their programmes and services provisions to enter into joint ventures, in the latter a number of nations have restructured or are about to restructure their entire services systems along co-ordinated lines. While in industrialized countries users may be included in on-going governance and policy-making, in developing countries a real transfer of power from the central to intermediate and local levels of government will be needed to realize projects based on self-help and self-reliance.

Operationalizing complex objectives means the reconciliation of contradictory demands on a daily basis. It is sometimes a matter of simple detail, sometimes a question of complex strategies.

Industrialized countries : change as a matter of degree

Higher costs and better services

Cost savings through optimal use of facilities, shared site, maintenance and personnel have been the most persuasive argument in the 'co-ordination battle'. Those who are in favour of co-ordination point out that schools are only used for a fraction of the time during which they could be used, while for example youth clubs and other recreational facilities, remain largely empty during school hours (Figs. 56 (a) and (b)).

Opponents of the idea, however, point out that few co-ordinated programmes have been cheaper than traditionally separated services.

Both, in fact, are right, because the first argument refers to capital costs while the second refers to running costs.

Savings on the national scale in terms of capital expenditure are substantial by comparison with unco-ordinated plans. This has been substantiated in a proposal to join the United Kingdom Sports and Arts Councils' deficiency projections for 1971-81 with a secondary school programme of seventy-eight schools for 1971-72, extrapolated to 780 schools for the ten-

year period. If these schools were upgraded to full leisure-time centres, only £170 million would be needed for the same facilities which separately would cost £470 million. The £300 million difference, spread over ten years, would mean £30 million saved per year if joint facilities were adopted.

This principle, as we have seen earlier cannot be applied to all potential partners for co-ordination. Social services, for instance, often need their own locale just as do certain school functions.

The one-sided focus on economic benefits, however, distorts the perspective in which co-ordination efforts have to be seen.

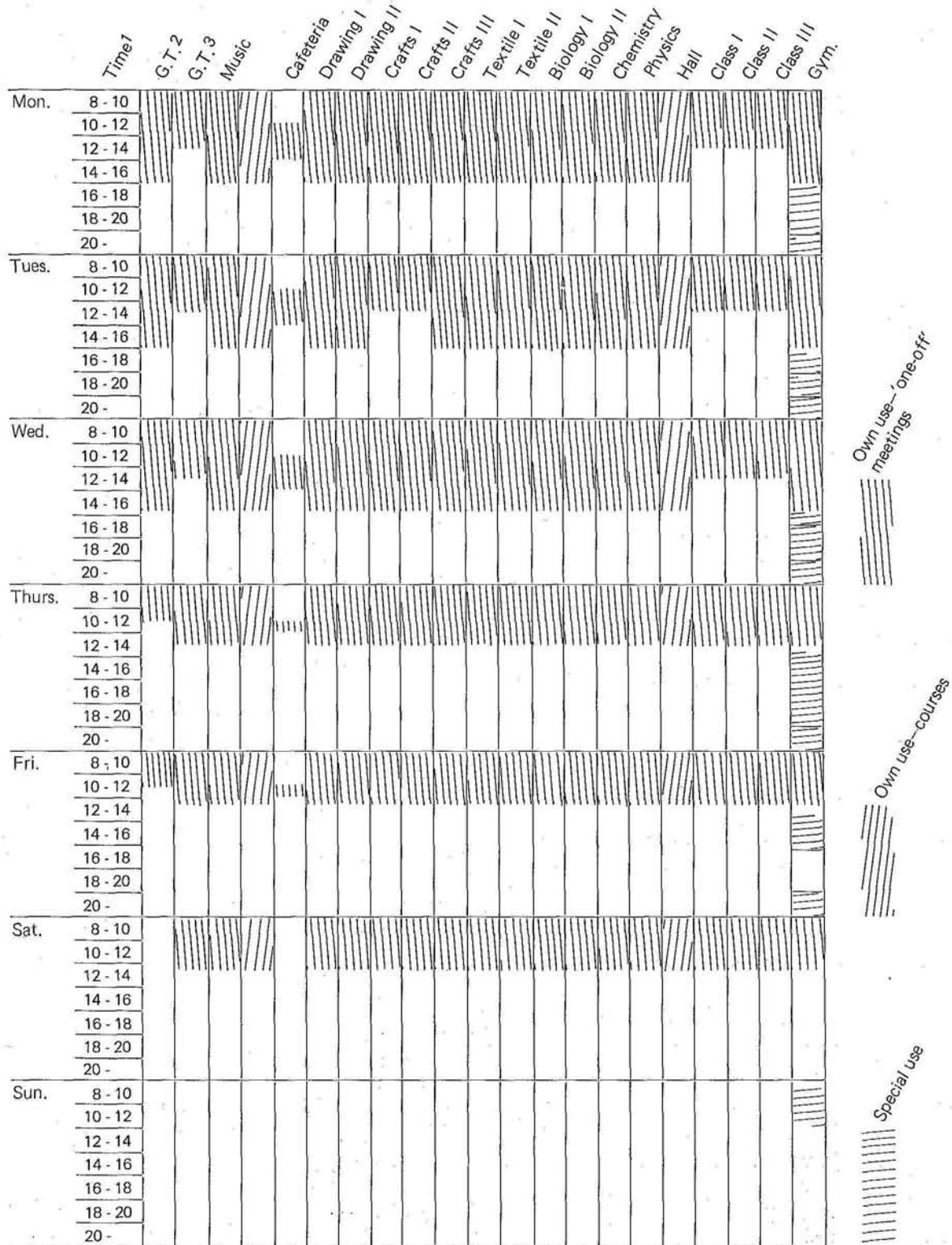
In addition to capital savings, which may be substantial, the major benefits relate to social improvements, which are always more difficult to measure. Thus Munn cites 'a marked reduction in vandalism where neighbourhood centres have been started', a phenomenon he attributes to 'the integration of youth into a adult situation, thus giving them a sense of belonging' [3]. A similar argument has led Boston's Department of Public Facilities (which administers the community education programme) to convince the 'Safe Streets Act' agency to commit \$500,000 over two years to support community school staff in order to combat delinquency. The grant approval states that:

A community school program can provide an alternative to jail, a range of attractive and rewarding alternatives to criminal behavior, a program which better equips youth with socially accepted skills, and a subsequent reduction in the flow of such youth into the juvenile justice system [4].

Governmental recognition of the fact that co-ordinated programmes and services are desirable can best be measured in terms of budgetary and legal provision. Thus far the most common form of support has been the provision of special funds for innovative experimental or pilot projects.¹

1. An institutionalized form of this approach toward co-ordination can be found in the United States Department of Health, Education and Welfare's Community School Act. It represents one of the few legal provisions pertaining to community education which allows for 80 per cent of the costs of starting a new programme, 65 per cent of the costs of expanding or improving one, and 45 per cent of the costs of maintaining an existing programme 'in which a public building . . . is used as a community center operated in conjunction with other groups in the community . . . to provide educational, recreational, cultural and other related community services . . . in accordance with the needs, interests and concerns of that Community: 'Getting Glue Costs for Community Education', *Federal Focus*, Vol. 1, No. 1, January 1976, p. 2.

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1. Cleaning: 15.40 h. to 17.40 h.
2. General teaching: beginners (660 pupils).
3. General teaching: upper (660 pupils).

FIG. 56 (a) and (b). A comparison of the weekly schedules of a school and a community recreation centre in Neustadt, a middle-sized city in the Federal Republic of Germany, clearly shows that a large amount of sharing is possible between the two.

(a) Weekly schedule for room uses in a school centre.

	Hour	Club I	Club II	Hobby room	Music room	Cinema hall	Seminar room	Reading room	Citizen's assembly	Crafts	Discotheque	Day room	Other rooms
Mon.	8 - 10												
	10 - 12												Exhibition
	12 - 14												
	14 - 16												
	16 - 18												
	18 - 20												
	20 -												
Tues.	8 - 10												
	10 - 12												Exhibition
	12 - 14												
	14 - 16												
	16 - 18												
	18 - 20												
	20 -												
Wed.	8 - 10												
	10 - 12												Exhibition
	12 - 14												
	14 - 16												
	16 - 18												
	18 - 20												
	20 -												
Thurs.	8 - 10												
	10 - 12												Exhibition
	12 - 14												
	14 - 16												
	16 - 18												
	18 - 20												
	20 -												
Fri.	8 - 10												
	10 - 12												Exhibition
	12 - 14												
	14 - 16								Exhibition				
	16 - 18								Exhibition				
	18 - 20												
	20 -												
Sat.	8 - 10												
	10 - 12												
	12 - 14												
	14 - 16								Exhibition				
	16 - 18								Exhibition				
	18 - 20												
	20 -												
Sun.	8 - 10												
	10 - 12												
	12 - 14												
	14 - 16												
	16 - 18												
	18 - 20												
	20 -								Exhibition				

||||| Courses.

||||| 'One-off' meetings.

(b) Weekly schedule for room uses in a community centre

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TABLE 6. Economic comparison: capital costs¹

Integrated scheme	£ (1969 prices)	Alternative scheme	£ (1969 prices)
Buildings		Buildings	
8 FE school including land	798,200	8 FE school including land	820,000
FE college	650,000	FE college	673,000
Residential unit	21,700		
Youth club	16,300		1,493,000
Sports centre	388,900		
District library	98,300		
Old peoples' club	18,300		
Shops	14,300		
Recreation facilities	10,000		
	2,016,000	Consultants' services	28,000
Consultants' services	40,000	Furniture and equipment	362,000
Furniture and equipment	416,000	Books	15,000
	2,472,000		1,898,000

1. The differences between the sums shown for the school and college in the right-hand and left-hand columns are attributable to savings in site works and net building cost gained by sharing the same site. Professional services which would normally be provided by Manchester City Architect's Department are not shown in this comparison.

Source: United Kingdom, Department of Education and Science, Architects and Building Branch, Abraham Moss Centre, *Building Bulletin*, No. 49, London, HMSO, 1973, p. 55, 56.

TABLE 7. Economic comparison: annual costs

Integrated scheme	£	Alternative scheme	£
Debt charges on capital	243,900	Debt charges on capital	189,100
Running expenses		Running expenses	
School	148,800	School	156,300
College	102,500	College	105,000
Residential unit	2,500		450,400
Youth club	1,000		
Sports centre	40,800		
District library	27,000		
Old peoples' club	2,300	Continuing annual cost of	
Shops (profit)	2,000	Crumpsall District Library	21,500
Recreation facilities	1,000	Cheetham Baths	12,300
	537,700		484,200
<i>Less savings on closure</i>		<i>Less savings on closure</i>	
Existing secondary school and adult education centre	55,000	Existing secondary school and adult education centre	55,000
Crumpsall District Library	24,600		
Cheetham Baths	12,700		
		Net annual cost of providing new school and college only, and continuing existing library and baths	429,200
Net annual cost of the integrated scheme	445,400		

Source: as Table 7.

A more integrated approach to the provision of services can be found in Cuba, the German Democratic Republic and Sweden. In these cases, a certain services percentage must be provided in the total budget for new residential areas.¹

In Australia [5] and France [6], recognition of the potential for co-ordinated savings in conjunction with recognition that co-ordination could most easily be operationalized at local levels has recently led to the availability of block grants for counties or municipalities willing to support co-ordinated programmes.

In the Netherlands, a policy of financial incentives (higher central government grants) and practical guidelines for pooling resources has been established at the national level [7].

On the local or project scale savings can be measured more easily. Obviously a large share of social and educational benefits which can be realized through co-ordination relate solely to more intelligent administrative arrangements for the use of personnel and local resources.

In the United States, it has been estimated that a school district must increase its regular operating expenditure by 6-8 per cent in order to pay extra staff and to pay the expenses for a year-round recreation programme after school hours.² In relation to the social services gained, this may be a very small cost increase, but it still has to be borne by somebody.

There are very few cost comparisons for integrated versus separated schemes. One has been provided for the Abraham Moss Centre (Tables 6 and 7).

The assumptions adopted to assess the effect on capital costs of combined facilities were simple and applied consistently in the assessment of cost targets. They were:

That all savings should be based on areas saved, and that the area price relationship was fixed. That all savings should be costed on the basis of the average cost per square foot of the component from which it derived.

It was recognised that real savings could only come from savings in built areas due to sharing space between users. Other possible savings, for example those obtained from low wall/floor ratios, could only be considered when the cost targets were being used at sketch design/cost plan stage. . . .

Savings of this nature were expected from every type of sharing, and the total saving under this heading is estimated at £36,000, which is 7.1 per cent of the cost of separately provided buildings [8].

The comparison of the annual costs shows an increase of £16,200 per annum. Since at the same time

additional facilities were made available to the public, the 4 per cent increase seemed justified.³ This comparison seems typical of ordained projects, whether they are realized in centralized buildings or networks, in new or existing facilities. First, substantial savings occur in respect of capital and building costs. Second, these savings are most often used for the provision of additional facilities, better materials or equipment (which each of the partners alone would not have been able to afford). Third, additional facilities and services create increased running and maintenance costs. Fourth, these increases are justified on the grounds that they are minimal compared to the improvement in services for the user.

Just as planning, programming and building are continuous processes, so costing must be seen in different phases and as an ongoing process parallel with the various phases of planning, design, implementation and operation. The assessment of costs obviously becomes more difficult the more partners and funding sources are involved. However, in dividing the process into seven different phases (Fig. 57), two costing principles become clear.

First, each phase requires an adequate cost measure; and while the number of users and crude average figures relating to area per user may be of little use in the design phase, they may be a perfectly adequate measure during the assessment of needs and scheduling of accommodation.

Secondly, it is a truism that the influence of cost planning on the final capital costs for co-ordinated programmes is highest in the phases of need assessment and accommodation scheduling and rapidly decreases towards the design and implementation phase. But in co-ordinated programmes more than in conventional ones, this necessitates substantial

1. In the German Democratic Republic, for instance, 20 per cent of the funds are available for educational, cultural, social, recreational, health, public and commercial facilities. This provision creates and enhances the possibilities of a shared, physically integrated and organizationally co-ordinated services system, as has been established in Erfurth-Reid and Görlitz Nord for example: Trauzettel, op. cit., p. D III 2.
2. This would account, for instance, for one half of a community school director's salary, one full-time recreation person's salary during the summer, additional paraprofessional help, janitorial services, lighting, telephone, equipment and miscellaneous costs. Educational Facilities Laboratories, *Community School: Sharing the Space and the Action*, op. cit.
3. These include an expanded library service, a sports hall and associated activity areas, outdoor floodlit playing areas, a youth club and old people's club [8, p. 56].

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amounts of money (and time) being spent on the assessment of needs.

What is not shown in the curve is the cost increase over time due to inflation. This in some cases may be a serious argument for hastening the process of planning and implementation.

Particular difficulties which are encountered in costing co-ordinated programmes stem in no small part from the variety of funding sources and their different priorities. The creation of a largely autonomous body for administration is therefore essential if the full potential for sharing is to be realized.

Modified teacher core roles versus co-ordination specialists

Within the cases examined in industrialized countries, a wide range of personnel options can be found for running community schools. At one end of the scale,

one finds teachers who, in addition to their core role, venture into new fields of action (Australia, the United Kingdom, the United States) while at the other end specialists are being employed to fill new jobs. Community co-ordinators, animators, promoters, recreationists social workers and youth counsellors are being employed where the teacher's core role remains essentially unchanged (France, Federal Republic of Germany, Sweden). In general, co-operation with para-professionals, parents, students or other community resources seems to be on the increase.

Educational and social innovation in the community school seems to come from various professions which develop a sensitivity towards the needs of other groups as well as leadership and communication skills. In order to enhance the possibilities of the emergence of this type of professional a regular system of courses and workshops has been created in the United States whereby different universities and community education centres offer degrees and ongoing training for community school co-ordinators [9, 10].

	Phase I: assessment of needs	Phase II: accommodation scheduling	Phase III: preliminary sketch design	Phase IV: design	Phase V: implementation	Phase VI: operation
Decision variables	Major categories of accommodation	Specific areas and rooms, location, functional relationships	Building elements, rough concept of type of construction	Detailed norms and standards (consideration of capital cost vs. maintenance)	Control of standards and costs	Control of maintenance
Standard measures	Number of users (square metre per user)	Net area for different functions	Gross area including outside walls	Technical quality specifications	Price control mechanism	Upkeep
Dependency	Political and demographic	Educational and social	Design	Forecasting	External market forces	Labour and materials
Planning phases	I	II	III	IV	V	VI

FIG. 57. Capital investment costing phases for co-ordinated programmes.

The two levels of administrative action

Without a workable administrative structure, co-ordination arrangements soon fall apart. But an institutional framework at the same time needs to provide enough autonomy to ensure effective functioning and to encourage innovation and experiment. Too many strings attached, or no strings at all, will cause the most effective plans to be abandoned and the most elaborate spaces to remain unused:

Discords due to a lack of workable administrative arrangements are common. Community facilities in many cities are unused because there is no provision for joint management: parks shut because a single city agency cannot afford capital improvement; gymnasiums stay idle because a public commission will not accept the liability, and recreation centers close because no one is designated to administer their activities [11].

It seems obvious, yet it is often ignored, that the more joint school/community relationships differ from established patterns, the more care must be given to firming up commitments as to budget, recurrent financial and managerial structure, the establishment of proper channels of communication and the direct representation of the user in the management structure. Whether the initiative rests with a dynamic municipality which continually modifies its strategies in the light of experience gained (Saint Fons, France) [12] with a joint working group (Crewe, United Kingdom) [13] or a community council (Dunbar, Baltimore) [14] it is essential that the management structure reflects the projects' central philosophy of the shared or joint

use of facilities and services in relation to programming and funding.

For practical purposes we may distinguish between two levels of administrative action, the governing structure which sets policy and programme guidelines and ensures the continuous involvement of all parties in a co-ordinated decision-making process and the management structure for the daily operations of co-ordinated facilities or facilities networks (Table 8).

These two levels, although in some cases identical and in many ways interrelated, have differing tasks: the first may be seen as an outgrowth of planning and decision-making processes and ideally assumes a structure which transforms the previous experience with co-ordination during the planning phase into something more permanent. The second acts as the operational arm of the first and deals with the practicalities of sharing, scheduling and maintenance (e.g. detecting and eliminating peak and minimal times of utilization; balancing costs versus services rendered; establishing memberships fees and leasing arrangements; serving different catchment areas, age and user groups, etc.). Both levels need a certain amount of autonomy and regular communication to function well.

The choice between the various models which exist for ongoing governance largely depends on the general patterns of administrative decision-making in each country. Again a marked difference can be found between the Anglo-Saxon countries with a more decentralized structure of decision-making and those countries with centralized administrative structures. In the latter, school authorities in general have a dominant influence in co-ordinated schemes;

TABLE 8. The differing goals and conflicts of ongoing governance and administrative structure.

	Ongoing governance	Management structure
Goals	Create flexible policy guidelines for co-ordination and continuous adaptation to changing user needs.	Implement user-responsive system of scheduling and staffing of shared resources.
Method	Establish committee in which all interested parties are represented: community council, multiple agency committee, trust committee, etc.	Appoint responsible person for everyday running and management (headmaster, community-coordinator, facilities manager, etc.).
Characteristics	Voluntary, largely unpaid.	Full-time or part-time, paid.
Conflicts	Centralization of decision-making, compartmentalization of administrative structures, different goals, regulations, funding sources, establishment of fair rules for cost/services rendered, lack of proper channels of communication between various levels of decision-making.	Shared use of spaces, different catchment areas and user groups, scheduling (eliminating peak and minimal uses), supervision (enforcement of rules and regulations) maintenance (cleaning, liability), shorten delays and react fast to bottom-upward demands.

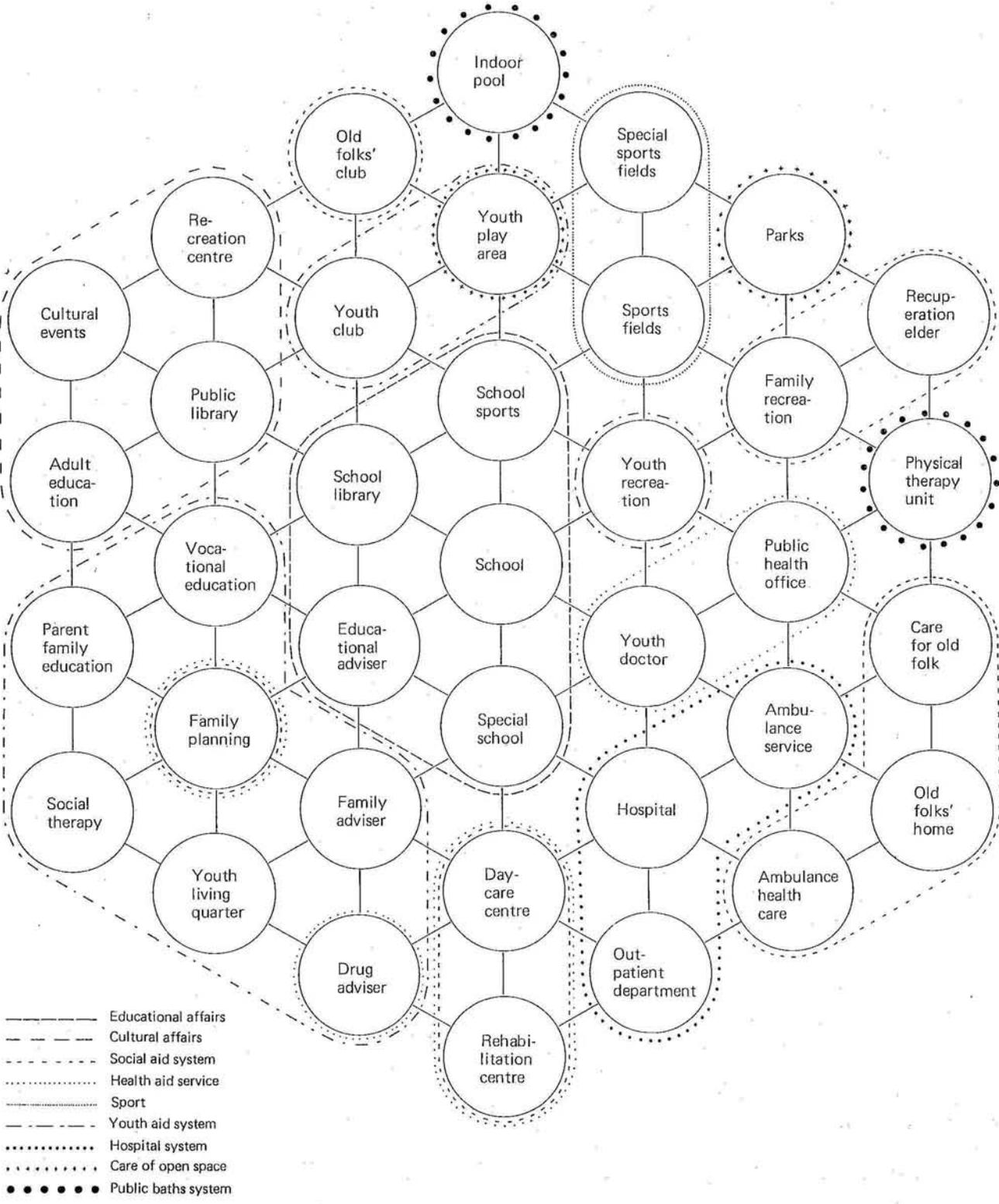


FIG. 59. Community facilities according to administrative tasks.

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otherwise, complicated patterns and administrative structures emerge. A study conducted for the state of North Rhine-Westphalia, Federal Republic of Germany, clearly shows the difficulties encountered in co-ordinating various administrative structures. Figure 58 shows community services ordered according to their social functions and their affinity to the educational sector. This would represent the 'ideal model' of administrative integration. Figure 59 shows the atomized pattern of existing links and Figure 60 the most likely combinations of community services.

Community council models have been developed in order to overcome the co-operation difficulties of agencies serving different constituencies. In Sturgis, Michigan the council is neither a part of the school system nor the city government. As a non-profit organization, it is composed of representatives of various public agencies and empowered to administer programmes, hire staff, purchase services and manage public facilities [11].

In contrast, the locally elected Dunbar Community

Council in Baltimore, Md. (an outgrowth of the original Parent-Teachers Association) has no statutory jurisdiction over the administration of the facility. However, it is politically very influential and has a strong interest and effective involvement in the operation of Dunbar as a community school [14] (Figs. 61 and 62; Table 9).

The centre is administered by the school principal and the programmes of all other agencies are co-ordinated by the Director of the Dunbar Neighborhood Facilities Center, who reports to the Mayor's Office.

The various agencies using the facility have their own budget and operating costs. A special community school budget contributes funds for expenditure on maintenance, repairs, custodial services, etc., related to the use of the school spaces for community programme the use of the school spaces for community programmes.

TABLE 9. Operations and funding: Dunbar Neighborhood Center programmes as of June 1976.

Programme	Staff	Persons served	Operation			Funding		
			City	State	Federal	City	State	Federal
City hall office	16	5,376	●			●		
Cultural arts programme	21	20,000	●					●
Community recreation programme	78	4,000	●				●	●
Social Services Office	55	3,573		●		●	●	●
Day-care centre	15	62	●					●
Dunbar infant-parent center	5	12	●			●		
Harbor City Learning Center	29	300	●					●
Harbor City Infant-Parent Center	19	65	●					●
Social security office	15	862			●			●
Urban Services Council	13	4,272	●					●
HCD Southeast Area Office	55	500	●			●	●	●
Manpower Office	7	500	●	●				●
Legal Aid East Office	21	2,000	●			●	●	●
Juvenile Service Office	6	610		●			●	
Youth Service Center	5	165	●				●	●
Parole and Probation Office	22	1,180		●			●	
TOTAL	382	43,477						

Source: Skiadaressis, op. cit., p. D VIII 17.

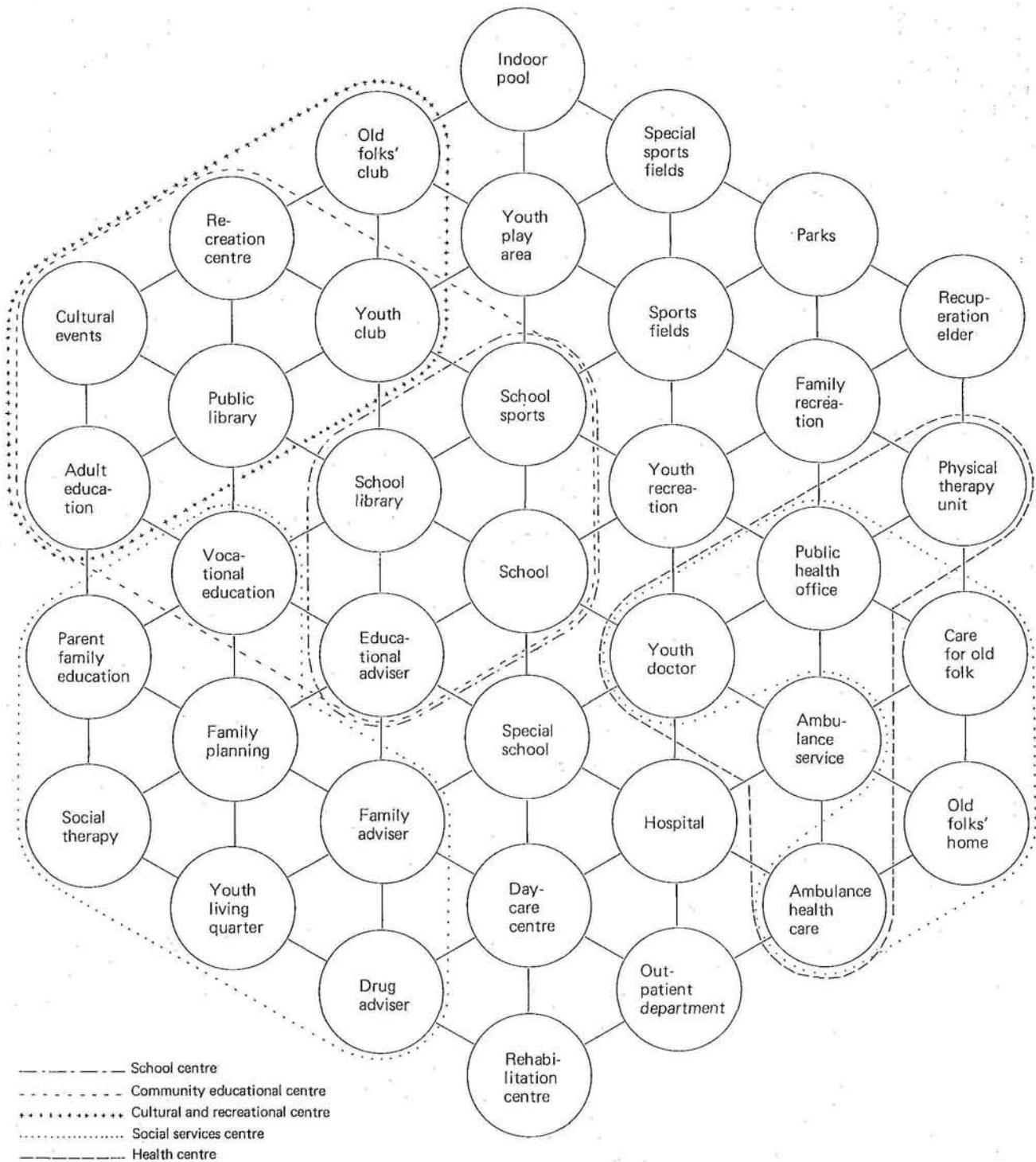


FIG. 60. Possibilities of combining community facilities. *Source:* Institut für Regionale Bildungsforschung/Arbeitsgruppe für Standortforschung, 'Voruntersuchung' (discussion paper, Hanover, 1975, p. 17-19).

Any part of the whole facility can be used by the community school after school hours and also during the day. To this end, the Director of Dunbar Neighborhood Services works closely with the Principal, while one Assistant Principal is in charge of co-ordination and scheduling of the use of space within the school.

The facility is owned by the City of Baltimore, which leases space to the principal users. These are on the one hand the School Board and on the other the various municipal, state and federal agencies, which are located at the ground level and are responsible for their respective community service activities and programmes.

A trust committee comprising representatives from the community, the schools and financing bodies is viewed as the controlling body for all shared facilities in Australia [15].

Multiple agency models orchestrate the equal involvement of all agencies and partners in the community/school. The Human Resources Development Center in Hamilton County, Tennessee, United States, comprises more than forty private and public human benefit agencies in a 250 square mile area of the

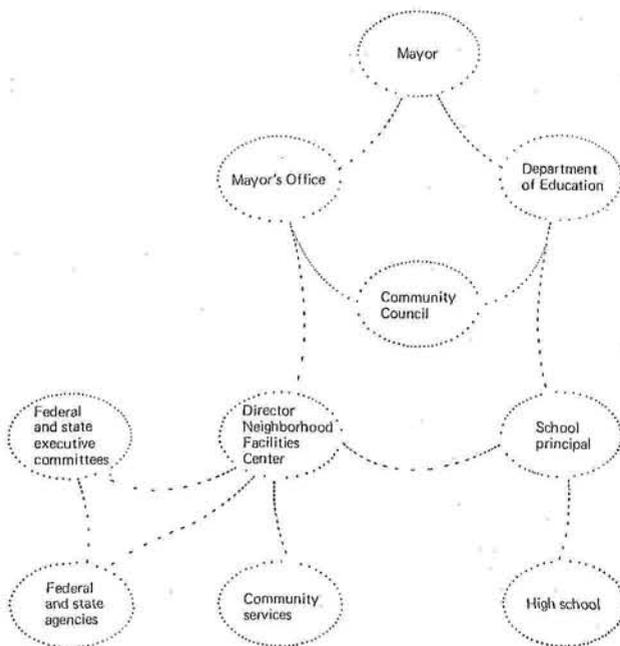


FIG. 61. Administrative relationships, Dunbar High School and Community Centre, Baltimore. Source: G. A. Skiadarsis, 'Paul Lawrence Dunbar Community High School, Baltimore' (paper at the UIA Seminar on the Integration of Educational and Community Facilities, Athens, Greece, 1976, p. D. VIII 19).

county. Eventually the county government intends to convert the management system and executive board into a new governmental agency. The board will be restricted to fourteen members. Membership will rotate and those agencies not represented will serve as a professional advisory committee during their interim period [11, p. 78].

At Istres in France an administrative committee presided by the *Préfet* of the region controls the running of the educational and cultural centre. It includes all the heads of the fifteen agencies comprised in the centre (each with its own structure and specific method of management) and forms the real driving force in the life of the establishment. The complex interrelationships between the centre's occupants are illustrated in Figure 63.

Models for the daily management of co-ordinated facilities are sometimes established only after the package deal on capital costs has been made and just before the centre opens. They require far more intricate decisions about sharing costs for maintenance, scheduling access to shared facilities, and security against theft. Ownership and co-ownership agreements must be made; rules, regulations and charges levied for different uses; user groups and affiliations established.

Union contracts specifying working hours for various professionals or janitorial staff are the most common obstacles to the full use of facilities.¹ Cumbersome application procedures and delays in permission for the use of spaces may preclude less organized community groups from shared use.

At the day-to-day level of operation, the attitude of persons who answer the telephone or the casual way in which people are allowed to enter, the quality

1. The school janitor, for instance, may be given low-rent housing on the school's grounds in order to be accessible and available during out-of-school hours on the basis that he will draw some extra pay; or, as a Norwegian example shows, the janitor may be considered such an important member of staff that he attends all staff and faculty meetings (Smith, op. cit., p. 35). In the United Kingdom it has been found that: ... the scale of caretaking provision based, as is usual, upon the size of the school may not be adequate in a building used intensively by the community. The problem is not simply a mechanical one of cleaning; it is a management problem which can often be overcome only by employing extra full-time caretaking staff. Yet, in spite of the additional work that may be involved, many caretakers welcome the extra responsibility that a centre brings and some play a key part in its activities' (United Kingdom, Department of Education and Science, Architects and Building Branch, 'The School and the Community', op. cit., p. 8.

of materials and colours—in other words ‘detail’s—are of decisive importance.

They may be simple problems which can be solved by simple means, but there must be a way to deal with them.

School-administered models are probably the most common. Directors or headmasters in elementary or secondary education serve as co-ordinators and umpires for both community and school. Sometimes he or she will be supported by an assistant principal or co-ordinator for community programmes. But by and large co-ordination is a school-controlled (and sometimes dominated) venture.

The Cumberland Further Education Centre and Cambridgeshire Village Cottages (United Kingdom) are organized along these lines [2, p. 8].

A different model is adopted at Wyndham Egre-

mont, where the headmaster is an *ex-officio* non-voting member of a management committee which controls facilities used jointly by school and community.

The close contact between school and community centre staff is often advantageous. In the United Kingdom the further-education tutor is a member of the staff and ‘not an unknown invader who descends with his Myrmidons each evening to disrupt and destroy’ [2, p. 22]. He can offer help to and receive help from his colleagues and frequently helps to acquire extra pieces of equipment:

The effect the centres have upon the schools whose facilities they share is not so easy to measure, since in a sense the more efficiently a centre is run, the less aware the school will be. . . . Though some further education tutors find

Type of space

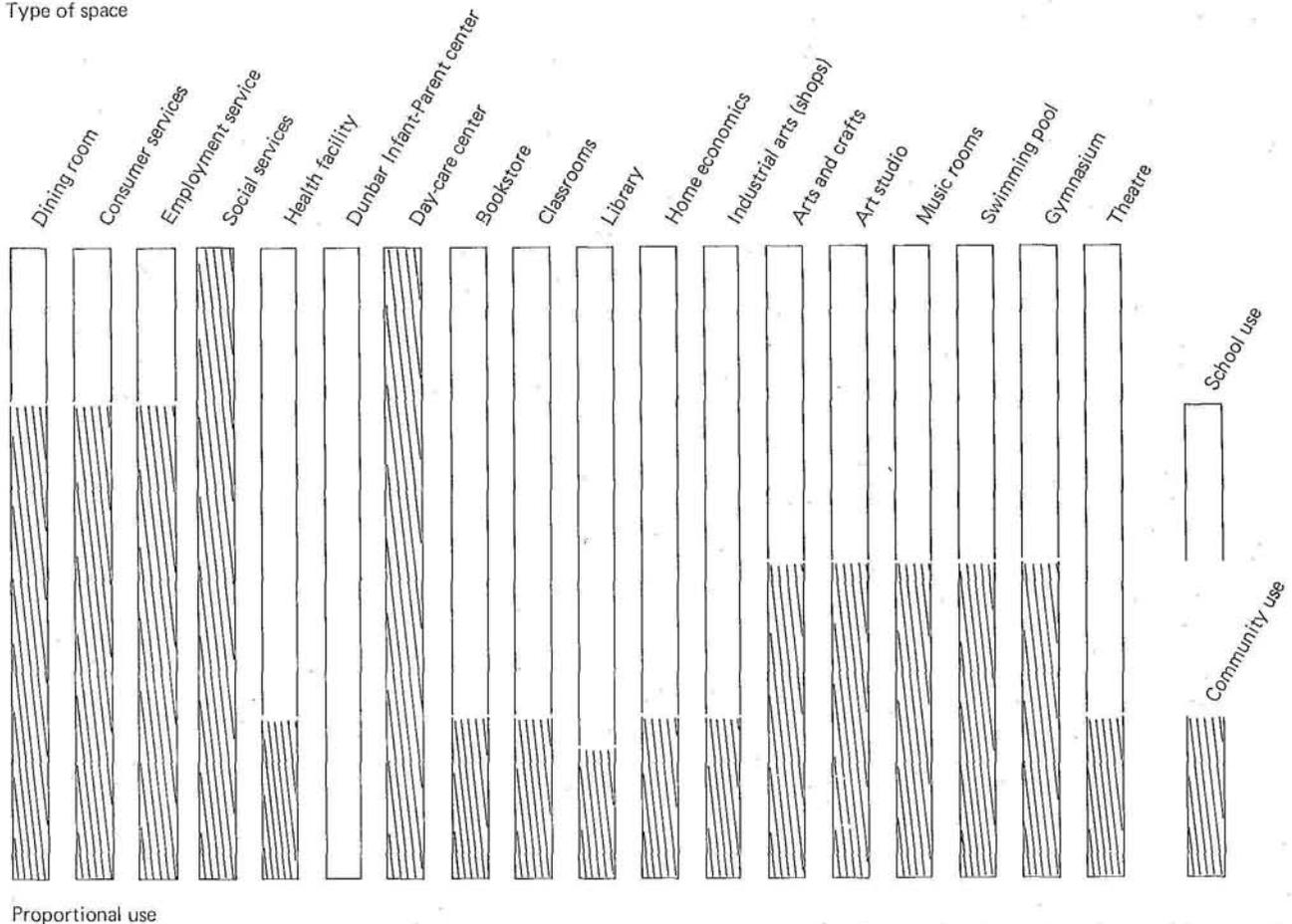


FIG. 62. Porportional use of major spaces. Source: Skiadaressis, op. cit., p. D VIII 18.

that, in an extremely busy life, their teaching in school imposes a rather heavy workload, they are conscious of its great advantages in bringing school and centre together into an organic whole, and also in the contact it permits with the more senior pupils who are their future 'customers' at the centre [2, p. 23].

Community-administered models are the exception rather than the rule. In some cases in Sweden (e.g. Brickebacken), a joint tenants' committee supervises the daily functioning of the community school [16]; in others, e.g. in Australia, voluntary groups share the supervision on co-operative lines [15, p. 30].

The facility manager model is another alternative. The Thomas Jefferson Junior High School and Community Center facility (Arlington, Virginia) is owned and operated jointly by two different county departments (schools and environmental affairs).

The administration is handled by a three-member committee consisting of the principal, who is the head of the committee and in charge of the whole facility, the facility manager, who is an employee of the School Board and reports to the principal, and the community

co-ordinator, who is an employee of the Environmental Affairs Department and is in charge of programming for community use and activities.

The annual budget, co-ordination of interrelated programmes, security and maintenance are handled jointly by the facilities manager and the community co-ordinator [17].

Combined budget models have been used in France and the United States to avoid cumbersome financing procedures. In the Istres Educational and Cultural Centre, a university bursar is responsible for the municipal or intercommunal establishments and for the charges common to all establishments. For the reception building, which continues within the Educational Cultural Centre in original co-ownership, the bursar takes on the duties of a trustee [18].

In Provo, Utah, and Gulf Breeze, Florida, combined budgets help to circumvent regulatory barriers to the co-operation between agencies that do not have coterminous boundaries, for example by hiring a community school co-ordinator who is an employee and legal representative of both agencies. He has the

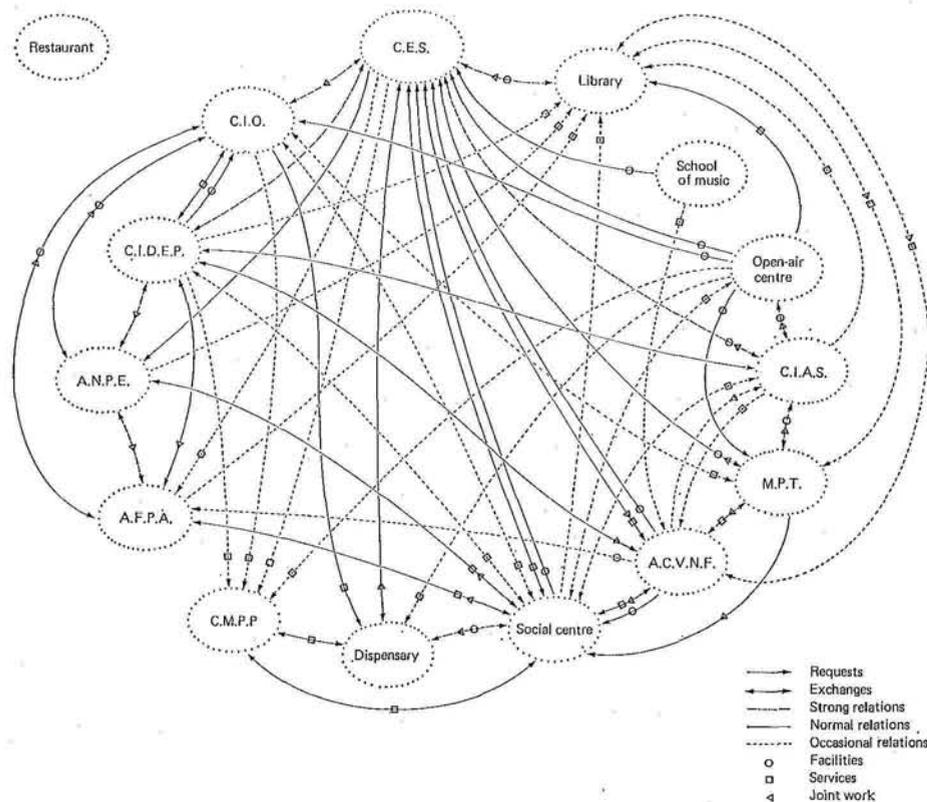


FIG. 63. Relationships between different establishments in the educational and cultural centre at Istres, France. Source: Henri Peronne, 'The Istres Educative and Cultural Centre' (paper presented at the UIA Seminar on the Integration of Educational and Community Facilities, Athens, Greece, October 1976, p. 9).

power to administer the monies of both public schools and parks and recreation through a combined budget [4, p. 77].

In general, any approach must take into account the fact that long-standing traditions of sectoral operation and decision-making cannot be overcome in a 'once and for all' fashion. Flexibility and continuity seem to be the two most essential ingredients for success. Sometimes those responsible at the local level may have to act as animators, stimulating, explaining and initiating new activities; in other instances, they may have to take firm decisions and push them through. This demands an organizational framework which has enough autonomy to ensure effective and rapid functioning and encourages innovation and experiments.

Whether separate institutional structures outside the existing frameworks of other educational and social services agencies need to be created or will prove to be a hindrance seems a critical question which must be posed and answered for each local situation separately. A positive supportive stance at national and regional levels of administrative decision-making is a necessary precondition for the functioning of integrated or co-ordinated facilities and services.

Developing countries : change as a matter of kind and quantitative proportion

Improved services at lower costs

In contrast to industrialized countries, the improvement of services through co-ordinated plans in developing countries cannot be realized on a wider scale if it requires additional funds. The question of facilities and how much should be spent on capital investments is therefore of increasing relevance. Closer links between school and community provide an answer in contributing capital and running costs through site, labour and materials. The most advanced models of co-ordinated facilities, however, are of limited relevance in this respect. For instance, the capital costs for extending the Tanzanian community education centres to the whole country would amount to roughly U.S.\$350 million in capital costs [19] in addition to substantial local contributions. This demonstrates the difficulty of testing developmental alternatives with foreign assistance, which can only be extended to a small number of demonstration projects. Even experimental projects or processes must yield economically

transferable results, otherwise they will remain individual examples which are of relatively small significance.

If we examine the programmes and facilities which have been analysed in the preceding chapters in terms of their financial feasibility, two main recommendations stand out in remarkable uniformity: the use of local materials, contributions and self-help measures to build schools and community centres; and the link between education and production to finance running costs [19, p. 207].

The barriers to more economic solutions, however, should not be underestimated. In addition to administrative centralization and traditionally trained teachers, the existence of out-of-date rules and regulations for building low-density settlement patterns and the school's function as a status symbol create obstacles to introducing innovations.

Many contracting procedures excludes community contributions which do not meet established standards,

building specifications are prescribed in manuals and regulations issued by the central authority. These specifications are mainly urban-oriented with regard to the materials to be used. Moreover, the specifications tend to ignore the restrictions on imported materials and the probable foreign exchange shortage facing the particular country. Often the rigidity of the specifications creates much tension between officials supervising their implementation and the contractors responsible for construction, resulting frequently in unnecessary delays [20].

The lack of technical know-how needed to construct the building designed by the education department architects may make the employment of a construction agent necessary. This requires money which the community may not have available.

Financial management poses difficulties for local parent or co-operative organizations since they have limited experience and no established expenditure-control mechanisms.

If schools are built with government aid:

... many designers have had great disappointments because of the lack of maintenance they could detect in their buildings when after some time they inspect their completed projects. It is a common tendency to blame the users for the poor state of the buildings. Many of these complaints, however, are caused by an unrealistic project approach, and therefore at least as much the designer's own failure. Capital and current expenditure are usually two separate votes and it very seldom occurs that adequate funds are made available for maintenance of buildings [19, p. 197].

The absence of long-range plans for facilities to grow along with the needs of the community also creates

problems. The unco-ordinated mix of old and new buildings, each constructed with different materials, space sizes and construction techniques not only presents difficulties in terms of management, supervision and maintenance, but may also reduce the possibilities of co-ordination with other services and institutions.

Another political issue of serious consequence for co-operative action is the inadequate structure of land tenure, which may render any attempt to introduce modern agricultural methods and to transform the school into a centre for agricultural development useless.

In cases where self-help has been practised for a number of years, a general tendency to move from local capital formation through voluntary labour towards the collection of money can be observed. In Kenya, for instance, John and Jean Anderson found that:

Despite the elaborate pattern of self-help and development committees the general drift within harambee has been to move away from grass roots involvement in thinking, discussing and planning to the manipulation of the committees by officials who see harambee effort very much in the objective forms which the colonialists used. Thus education officials have not in general negotiated with secondary school committees over the best way to use local resources. They have merely laid down requirements often using out of date building designs, thereby restricting any hope of innovation and emphasising the importance of raising money. Nowhere to our knowledge has an official architect looked into the use of local materials in harambee schools in Kenya. True, many committees have been successful in raising money and are rightly proud of their schools, certainly the government secondary school programme has been speeded and shaped towards a spread of smaller locally based schools by the harambee movement. But it is sad to reflect that in effect the movement has gradually become an extra, perhaps less painful, form of tax collection. Consequently it has lost much of the original prospect of new forms of capital formation, innovative use of local technology and increased confidence amongst the local people to think for themselves and hence to negotiate sensitively for their future [21].

Among the range of options to solve these problems, each country has to establish its own course of action. A number of general trends can however be observed: first, the solutions to the facilities problems are closely linked to general rural development strategies. Where the traditions of self-reliance or mutual help are integrated into a comprehensive system of planned development, there is a possibility of achieving substantial improvements.

In Panama for instance, a new rural development strategy included the following measures:

organizing the *campesinos* (farmers) for joint political and economic action; settling groups of poor squatters stably on land acquired by the Government from private estates through direct expropriation or for non-payment of taxes; channelling public resources and services preferentially to *campesino* groups organized for collective farming; establishing publicly-owned agro-industrial complexes to be turned over gradually to *campesino* control; and giving priority to rural social infrastructure of direct benefit to the rural poor, specially facilities for health and education [22].

Without additional funds, the co-ordinated planning of development programmes at the national level has transformed nearly half of the rural schools into centres for production and community activity. Based on the concept of nuclearization, the facilities and production solution in every community is different, built entirely by the community and based on local tradition, resources and materials. Without imposing one model from above, the rest of the schools will follow the general principles of the *ciclo basico y general* after an interim period of consolidation and evaluation.

Secondly, given the need for more classrooms in most developing countries and the potential of self-help to create new capital as well as personal bonds between the project and the user, and in addition to promote social integration and co-operation, there seems no realistic alternative strategy to self-help construction to achieve any substantial improvement in rural areas (Fig. 64).

Decentralized guidance units (proposed earlier) may ensure the intelligent use of resources and improvement of local techniques. Their proximity to the village would make it possible to assess each area on its own merits and to avoid standard all-embracing policies.

Thirdly, sharing facilities and equipment, upgrading, and reusing existing, vacant, or substandard facilities must be included within any cost-reducing measures. This can minimize the costs of facilities for both school and community and provide spaces which would otherwise not be available.

In the Philippines, the introduction of one or two more high-school classes has been possible by maximizing the use of existing educational facilities in the *barrio* (village) elementary schools.

This was done by making use of the rooms, equipment and facilities when not in use by the elementary pupils. For example, when a fourth-grade class is out, during a 40-

minute period of practical arts (for the boys) and home economics (for the girls), their room is used by a first class in mathematics or social studies. In the next period, the fifth-grade class is out, and their room is occupied by the same first-year class in science or English. This principle goes for science equipment, tools for the shop and garden and the home economics kitchen and facilities, which are used by the high school classes when they are idle [23].

Likewise, the common effort to provide and share technical and social infrastructure often creates a first economically feasible step towards rural development.

Fourthly, the link between education and production has greatly enhanced the chances for covering capital and running costs, of supporting the costs of education and of introducing more meaningful learning.

In the *barrio* high schools:

... the students, as part of their vocational training, engage in money-making projects, such as raising pigs, chickens, cattle or vegetables and fruits, in the schoolyard and/or at home, their income from which is used to pay their tuition fees, book rentals and other school expenses. On



FIG. 64. Self-help construction in China. New classroom block being built by the building brigade of the street committee with the help of teachers and pupils—Nanking, November 1975.

their part, the parents—as part of their continuing education—are assisted by government extension workers in improving the productivity of their home lots and farms. Thus, by better selection of seeds, better weeding and irrigation, converting garbage into compost fertilizer and using it, etc., they may raise the yield of rice by five or more cavans per hectare on their farms. The extra income will be sufficient to pay the tuition fees of one boy or girl in the high school a year. In this way, the people themselves pay teachers' salaries and other school expenses [23, p. VIII 3].

The large number of pig-raising, horticultural and crafts projects which can be found in self-sufficient community schools all over the world (Figs. 65(a) and (b) and 66) are proof of the enormous success of the concept.

Development generalists and social change agents

The recurrent costs of the school in most developing countries are causing many more problems than capital investments. In order to decrease the expenditure on salaries—often consuming between 75 and 95 per cent of the available resources for education—the use of inexpensive community learning resources has become a must.

Change here is a matter of kind and quantitative proportions: teachers are expected to assume entrepreneurial and political leadership, prepare students for employment and help to set up employment opportunities in the community.¹ At the same time, ways must be found to increase teacher/student ratios perhaps to as much as 1:200 [24].

Evidently the training of teachers needs to cover areas other than the traditional school subjects if they are intended to become effective motivators in rural development. Various strategies have been suggested. Some advocate that rural science should be a compulsory subject in the training for all teachers [25].

They see the solution in giving the teachers a solid base in rural science and first aid, hygiene and midwifery, equipping him with extension materials, and informing him of the administrative set-up of the country, especially at the sub-district and divisional levels (in order to assist the village community in their

1. The weight of teachers' salaries and the inadequacy of their function in developing countries has created a whole field of research and literature on its own. In this context, only some of the most relevant—maybe obvious—facts relating to the reduction of cost in the first place and the new role of the teacher in respect of closer links between school and community will be examined.

Building community schools

dealings with the administration). Essentially, however, the teacher's core role remains unchanged:

We do not advocate turning the teacher into a village leader, an 'animateur'. To make this a part of his expected professional behaviour would not only overtax his working capacity but also lead to conflicts with the existing village/community leadership group. Knowing that community members do approach the teacher for help we think it necessary to equip him for this informal part of his role, and this the more so for service in remote areas where he/she is bound to be the only outside agent in the community during most of the time. Making teachers fit for this additional role, which they would have to assume intermittently only, will also help raise their standing among the villagers, because they would now have something valued by the community [25, p. 155].

In similar vein, other communities' needs may be more closely related to the education of women and girls and to courses which relate to health, hygiene, nutrition, food preparation, child care and first aid [26].



FIG. 65. (a) Horticultural project in Oued Akrench (Morocco) [Photo: H. Bouchta]; (b) Horticultural project in Rizal (Philippines) [Photo: H. Noguchi].

The proposal for 'Curriculum Development for the Preparation of Community School Teachers' in Thailand states that the existing training curriculum does not lend itself to preparing effective community schoolteachers for Thailand and suggests adjustments through teaching content and supplementary organized activities for both pre-service and in-service training programmes.

Subjects should consist of

general basic subjects—namely principles of community development, operation of cooperatives, rural sociology, economics, political science, population education, social psychology, Thai studies, agricultural extensions, health and nutritional cares, roles of leaderships, arts and music, handicrafts, home making, ecology, etc.

Professional subjects—namely principles of community schools, non-formal education, basic educational research, educational innovations and technology, community studies practice teaching, educational problems of communities, educational guidance, education extension, educational psychology, etc. [27].

In contrast to this group, which would turn the teacher into a development generalist emphasizing the additional role component and formalizing it, the other school of thought maintains that a school teacher's way of thinking may be too rigidly determined by his formal activities in the classroom and that he would be unable to bring into play the flexibility and imaginative improvisation required for out-of-school activities [20, p. 16].



FIG. 66. A carpentry class product providing simple technology for local needs, here a maize threshing machine [Photo: O. Obwa].

This group assumes that other types of *animateurs* or 'change agents' are needed. Their activity would need to be closely related with the gradual improvement and development of the community and they might therefore be recruited from the local strata of craftsmen, organizers or other professionals and para-professionals.

A further case for the employment of local resource can be made on the grounds that not enough teachers will be available in most developing countries to fill the number of change agent jobs required in rural areas nor would it be possible to pay the salaries required for full professionals.

Bennett, in this proposal for the development of local school and development centres, suggests that:

Four or five people would be employed in each center as 'teachers' or 'agents of change' and the particular skills that these people would have would be determined on the basis of the priority problems. For example, in one locality there might be an agricultural worker, a cooperative organizer, a nutritionalist and health adviser, a fisheries worker, and a family planning mobilizer; whilst in another locality there might be a veterinarian, a medical assistant, two literacy workers, and a family planning mobilizer. Even if the titles of the personnel are the same in different localities they might have slightly different fields of interest and functions since as much as possible of the training given to these people would be designed to equip them for solving specific priority problems in a particular locality.

As it generally proves very difficult in any country to get products of secondary and higher education to remain in rural areas, and if they do it is not usually by choice (and thus they are unlikely to be motivated) at least half the staff of each center should be chosen from existing progressive elements within the community. This is also likely to encourage greater community involvement in the center than if all the employees were outsiders. These people, once chosen, would be given one or two years practical training in one of the most important problem areas identified for that particular locality [28].

Bennett also suggests that the training given to the 'agents of change' would be intentionally quite low (similar to what has been said above relating to the *promotores bilingues* in Guatemala) in order not to widen the gap between the conceptual framework of the agents and the people they are supposed to be helping. In addition to the fact that their salaries could be lower, it might prevent them from using their training as a way into elite positions in the modern sector [28, p. 15].

A third school of thought holds that the so-called 'fully fledged' teacher of a school system, within an ideally homogeneous teaching force (in which teachers with lesser qualifications are considered inferior substitutes) rapidly loses his importance. His core role

changes to that of a change agent and development worker. Although the absolute number of educators with university degrees will probably not decrease, they will be supported by a teaching force which will be highly diversified, geared to the felt needs and resources of the locality and thus provide for a higher 'output' than the traditional system.

Bizot has pointed out that

the poorly trained teachers of the past, with little if any mobility and the most limited career prospects, are being replaced by well-trained men and women whose social function is valued at its real worth by themselves and by the community, whose careers offer a variety of possibilities and who benefit from all the advantages of communication with other teachers [29].

It may be argued that all three 'schools of thought' must be examined in relation to the existing patterns of education and school community involvement in each country. In some cases the first view (held for example by Bergmann and Bude) may seem revolutionary; in other cases the course of events may have overtaken a somewhat cautious attitude towards adaptations already. In Honduras, for instance, trained and untrained teachers act as change agents although in this activity they are not explicitly supported by the government. They initiate local agricultural and village improvement projects and often pay initial investments out of their own pockets (in the hope that they will be compensated through the sale of the products later on).

Every month all the teachers who belong to one *nucleo* meet in alternating schools to discuss their projects and experiences and to receive criticism and help from the community.

In 1971, in Peru, eighteen teachers influenced by and committed to the ideas of Freire and Illich established a community school in Villa el Salvador, a squatter settlement outside Lima. Living among the people whom they serve, education has become an instrument of intellectual and practical community development (Fig. 67). The school is run in co-operation with the parents' committee and actively supports co-operative production projects. The sewing class for instance is run one of the mothers and is given contract work from the community (similarly to the joinery and automotive workshops).

In Panama, one of the important by products of the *Escuelas de Producción* is the creation of a new type of educator 'who ought to be increasingly different from the present teacher to the extent he will be able to shift "clienteles" and functions from the classroom to the production sector' [22, p. 20].

In co-operation with other teachers, experts and community members, interactions other than basic teaching/learning will take place:

The relevance of 'what is learned' to the world surrounding the school conditions the programme. The teacher, with the help of agents of other ministries or State Agencies (Agriculture, Health, Community Development, Electricity, etc.) must 'compose' a programme of studies and work which is a response to felt needs but also a means of developing new attitudes and behaviour patterns. The latter are obtained through both production activities and a revised curriculum for the 9 grades which limits subject matters to three areas: Science, Humanities and Technology. The third, which depends on local conditions, can be Agriculture, Industry, Commerce, Handicraft, Tourism or Fishing. It is the axis around which revolve the two other areas [22, p. 8].

Whether special agents will have to be trained, existing teacher training modified, or whether both coexist and co-operate, the essential point is that people involved in rural education and community development are increasingly different in their attitudes, activities and skill training from the teachers in the past. On their capability, inventiveness and motivation will depend whether in the future the rural school can function as a centre for development or whether it will remain an isolated island for a few of the more privileged.

In contrast to industrialized countries, where teachers are rarely innovators and the need for change



FIG. 67. Puppet-making.

is less pressing, teachers in developing countries are faced every day with the inadequacy of the traditional system. Huberman has pointed out that:

Most personality inventories in North American and European countries depict teachers as restrained and deferent, lacking in social boldness, anxious to please, more passive and less competitive than professionals in other jobs. There is evidence that this portrait is not exact in many developing countries [30].

Administrative structure and self-reliance

The need for administrative structures is closely linked to the question of scale. In smaller rural settlements, an 'administrative structure' of closer links between school and community might consist of an informal meeting between the village head, the teacher and the parents, who come together as frequently as the need arises. In larger settlements, the establishment of various committees which deal with essential issues of, for example, education, health, welfare, culture, security and production usually presents no problem. Their effectiveness, however, is closely related to their resources and their power to direct the course of local development. Therefore, the wider issues of decision-making, e.g. local autonomy versus national authority, decentralization versus centralization, radical versus incremental change, are the more critical ones.

As long as indigenous innovations remain individual islands of co-ordination in the national sea of traditional schools, administrative structures will be shaped by the leading local personalities. National governmental policies may be well advised to ensure that these local departures from established practice receive the necessary administrative and financial support as some of the most genuine adaptations to local needs and as pilot projects of wider significance. The implementation of a comprehensive national plan linking school and community, however, cannot be built on the availability of the kind of pioneering leadership on which micro-innovations depend.

It seems as if a minimum of national planning and a maximum of autonomy at local level is needed to close the gap between planning and implementation. Apter has specified three factors of particular relevance for the transition from the initiation to the first phases of realization: a clear set of values, norms and priorities to create the necessary coherence between local and national institutional settings; a supporting network of roles in which mutual contingencies and obligations are functionally valid; and

the appropriate behaviour and motivation to fulfil the tasks needed.

The model which comes closest to this ideal is the Chinese.

Not only is every aspect of social organization defined ideologically. Roles are given functions. Performance standards make sense. Socialization is an educative process, through the group examination of normative, structural and behavioural contradictions, and, if this fails, supported by selective coercion. The result is a drastically altered behaviour. The rural communes throughout the country are a far cry from the age-old dependency and helplessness of the Chinese peasant [31].

Along a scale from radical to incremental change, the United Republic of Tanzania and Panama provide two interesting intermediate examples for ideological change from above and communal organization and autonomy below.¹ [37].

In the United Republic of Tanzania popular participation in the planning, design and implementation of the community education centres was an integral part of the programme. But the extent to which this participation and autonomy was desirable and necessary was never precisely established. The lack of clear priorities in this respect, the reliance on outside experts [32], a facilities design from above and finally the hierarchical structure of the national education pyramid [33], and decision-making structure have caused considerable conflicts in the implementation and running of the centres. These difficulties are discussed openly even in official documents:

All planning matters are decided by the Tanu, the U.W.T. and the village committee. Initiative seems, until the time of visit, mainly to originate from above: the district authorities or local civil servants. Communications from the lower strata of the population to the leadership seem to be limited, which, among others, explained the existence of the establishment-oriented priorities the village has set and the lack of vigorous participation in the collective activities [34].

Panama on the other hand has left the working out of precise detail to local groups and clearly strengthened local autonomy. The national 'minimum' of planning was concentrated on establishing developmental priorities in terms of research and planning of agricultural and industrial production in each region and providing the necessary preconditions for authentic and realistic improvements in rural areas: first, a redistribution of land; second, the necessary equipment and technical know-how in terms of personnel; and third, administrative guidance at the regional and

national level geared to support local initiative and autonomy.

Each of the 67 schools has of course its own specific combination of classroom and field activities, but in the main it may be said that the very success of this enterprise has conditioned the substance and quality of the Educational Reform. The population around the school is directly involved in its programme through the *Comité de Apoyo* (Supporting Committee) which is made up of representatives of the territory (*Corregimientos*), of the Community Council, of parents, teachers, students, local governments, military and church authorities, etc. The community administers, finances and supervises the school with the advice of Ministry of Education representatives [22, p. 8].

Panama, of all the industrialized and developing countries studied in this context, has probably come closest to establishing what has been defined as 'a national umbrella to protect local grass roots action'. Protection however, is only one ingredient needed for growth. If one sticks to the same metaphor, growth also needs water and fertilizer, which have been provided in the form of redistributed land, necessary equipment and trained personnel. As long as these essential elements are lacking, any national plan for co-ordinated development can only be tinkering with local hopes and aspirations for improvement. However, if these elements are present, community organization will respond to community needs in an organic way and management structures will be created according to traditional patterns and new demands:

the necessity for the community to respond to the demands of the school brings about the creation of new entities such as the Education Supporting Committee or the Education Committee of the Community Council. This, in the case of Coclecito, has had a multiplier effect whereby Health Committees and Production Committees were

1. Apter (op. cit.) points out that: 'There are very few successful examples of a mixed-model strategy. Perhaps the Israeli Kibbutz comes closest. Certainly it holds something of a record for longevity, surviving not only leadership transition but also generational change. The ideological cement remains fairly powerful, although perhaps less so now than in the past. A pioneer ideology of socialism and nationalism embodied in egalitarian roles produced a mutually responsible communal behaviour. Norms were highly internalized, socialization extremely successful, and new functions were grafted on to institutional roles. The pioneering spirit is perhaps gone today although it has been replaced by the need for national survival. Clearly, however, in terms of a total way of life, the Kibbutz has proved to be both economically productive and satisfying as a way of living for many. What is lacking is the national network of mutually reinforcing roles. Perhaps doomed if Israeli society becomes more strenuously capitalist, urban, and industrial.'

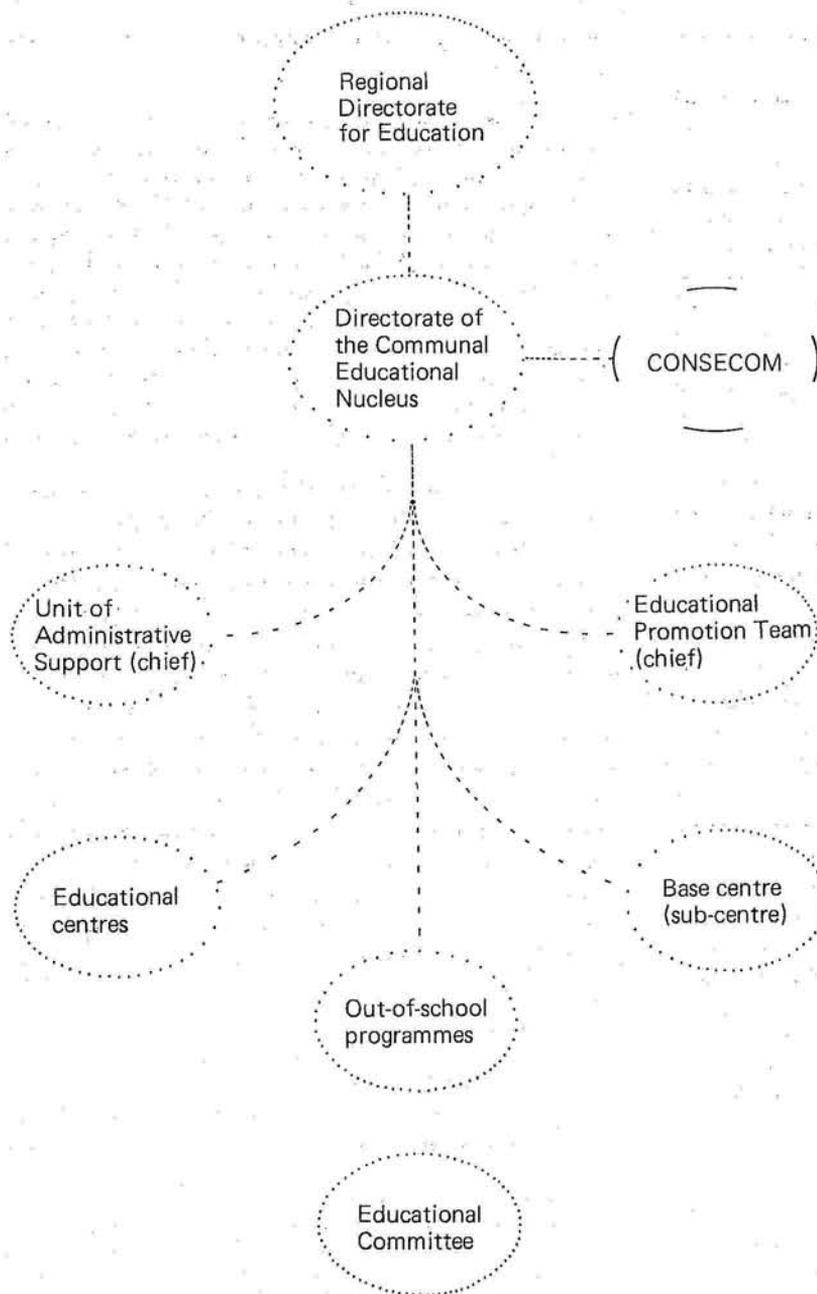


FIG. 68. Organization of the Nucleo Educativo Comunal, Peru. At the heart of the nucleus is the *centro base*; it encompasses, in addition to the NEC directorate, a local education advisory board, the Consejo Educativo Comunal or CONSECOM, an administrative unit and an educational promotion team. The choice of the director is made on the basis of a list of candidates proposed by CONSECOM. His primary task is to stimulate communal participation and to help bring about the overall integration which is one of the chief aims of nuclearization. Of primary importance in this respect is the right of CONSECOM to set up educational committees (*comites de acción educativa*) which represent a further step towards decentralization and participation at the 'grass-roots' level.

A fundamental task undertaken by the educational promotion team (Equipo de Promoción Educativa) is the preparation of an 'educational map' and a 'situational diagnosis' which together establish the characteristics of the nucleus and furnish the data required for an analysis of current conditions. The 'participatory survey' in which it is joined by various community representatives serves not only to assemble the necessary data but also to 'conscientize' the population.

Source: Judithe Bizot, *Educational Reform in Peru*, p. 33, Paris, Unesco/IBE, 1975 (a study prepared for the International Educational Reporting Service) (Experiments and Innovations in Education, No. 16).

subsequently set up. The school prompts the community to establish organic structures locally and thus gradually link itself with national structures, thus enabling an organization-to-organization dialogue to take place in an institutionalized national community. . .

The school no longer looks to the Ministry for its 'mission'. It behooves the community, duly organized, to participate directly and actively both at the local and national levels—in the shaping of the life (structure, functions, programme) of the school. In so doing, the community learns to exercise the same rights and obligations in other domains, gradually merging the local 'School Project' with the national project [22, p. 13-14].

Half-hearted measures, in respect of providing the local level with the necessary autonomy, directly prevent any national plans from becoming a truly dynamic factor in development [35]. Thus, Bizot has pointed out that the inadequate community participation and co-operation of the educational sector with local co-operatives and enterprises in Peru could have been prevented if the education and community centres in rural areas had enjoyed a greater measure of autonomy:

Their programmes are still largely dictated and controlled by the zonal office, answerable to the regional office which, in turn, is answerable to the Ministry of Education in Lima, far removed from the problems and needs peculiar to each nucleus. The NEC directors are uniquely placed to see what must be done in their own districts but their ability to take effective action is circumscribed by directives handed down from above. What would seem to be required is not merely theoretical 'encouragement' of imagination and flexibility but actual training courses to stimulate these qualities in the man on the spot [29, p. 57].

On the other hand, it has been pointed out that in urban or rural areas the implementation of 819 fully functioning *nucleos educativos comunales* (community education centres) in Peru has created a fair degree of decentralization [29, p. 34; 36] (see Fig. 68).

Political ideologies differ concerning support for decentralization. Yugoslavia provides an interesting example in terms of constitutional provisions for decentralized self-management:

Under the terms of the constitution of the Socialist Federal Republic of Yugoslavia and other laws, the school is an independent, self-managing community of working people whose activity is considered as being of 'special interest for the society'. The whole organization of work and life of the community school is based on self-management; not only the members of the school collective and pupils, but also the representatives of the local community, take part in the management of the school, so confirming the special social interest of the school's work.

The organization of work and self-management in the school provide for direct decision-making by the whole staff (the working community of the school) on essential questions relating to the activities and functions of the school, with personal and collective responsibility for all decisions made by them and an obligation to stand by general acts and decisions they have made. The teaching and other staff of the school also implement self-management through their elected representatives on the School Council [37].

Whether new or existing administrative structures can be used for implementing co-ordinated programmes depends largely on established patterns for introducing innovations in each country. In some cases, a new superstructure responsible for the permanent process of co-ordination may be needed (Colombia, Peru); in others, existing administrative machineries may be given new tasks and roles (Kenya, Indonesia, Honduras Mexico, Panama).

In general, it seems preferable to use the established machineries as far as possible.¹

However, the departmentalization of governmental activities may be such that attempts at universal coverage based on the use of the present system is doomed to failure.

In order to avoid the duplication of efforts and to identify major problems in rural areas on a national scale, the establishment of a new superstructure may be necessary. This 'superstructure', however, would not necessarily have to be a centralized one (which might soon become a bureaucratic monster and as inflexible as the old system, ruled by an urban élite and open to effective pressures from the modern sector). It might most suitably be decentralized and perform a regional

1. '[For the Kawangware project in Kenya it has been proposed that] the Nairobi Provincial Administration should bring various agencies together in a co-operative effort to initiate the proposed multi-service community centre and the community education network. The administrative structure for the proposed project will use the existing system through the Divisional Development Committee for management and implementation'—Bruce Creager, 'A Multi-service Community Centre in Kenya: the Needs and Problems of Communities in Transition from Rural to Urbanized Settlements', *Buildings for School and Community Use: Five Case Studies*, Paris, Unesco, 1977 (Educational Studies and Documents No. 26).

Similarly, a seminar on 'rural youth and out-of-school education' in Asia states that in order to include larger sections of rural youths in out-of-school educational activities the use of existing organizations and, where necessary, a transformation and expansion of existing systems seem preferable to the establishment of a new machinery: Unesco Regional Office for Education in Asia, *Rural Youth . . .*, op. cit., p. 15.

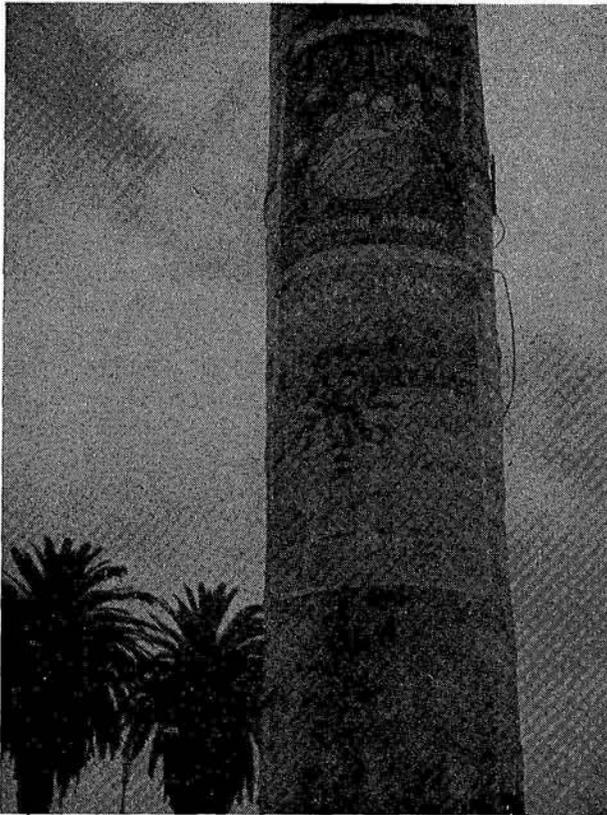


FIG. 69. Posters on walls and trees to support the need for 'analysis and participation' (Peru).



FIG. 70. Local market people in Barranco (Peru) with one of the promoters in their restaurant in front of a poster advertising out-of-school educational programmes.

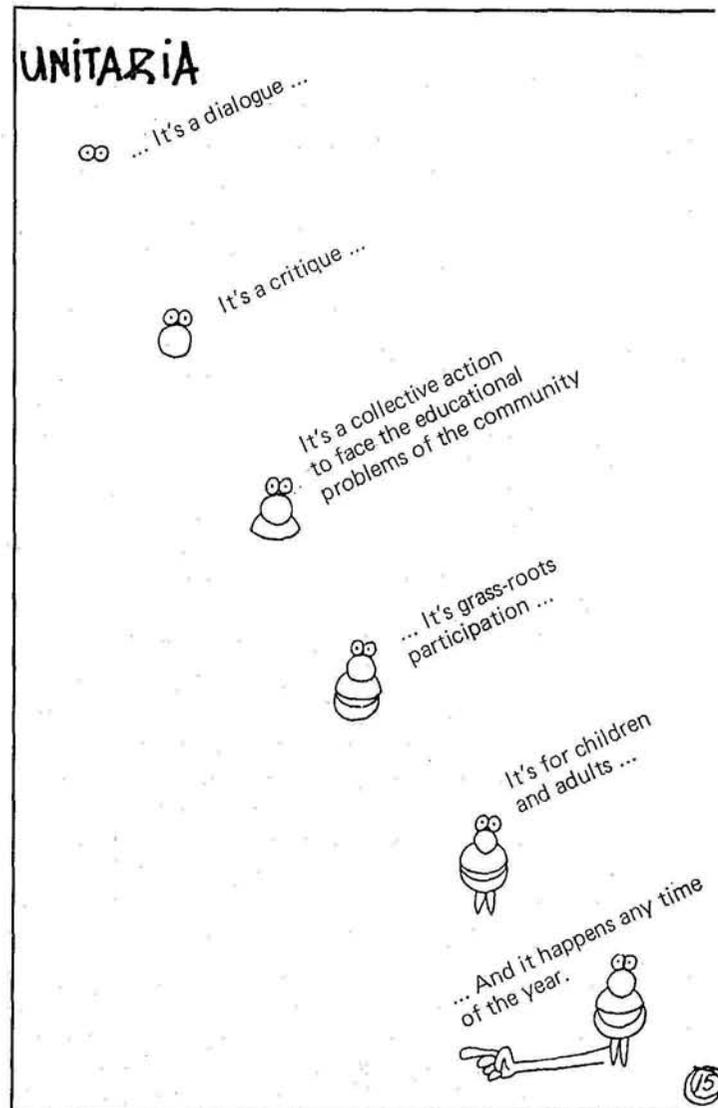


FIG. 71. Animation and marketing of participatory opportunities in Peru: comic-strip techniques are employed to explain the reasons for popular participation in educational matters.

supervisory and guidance function as near as possible to local needs and problems. As a mediator between central and local level, this level could be changed with the dissemination of technical know-how, the distribution of national and international aid and the training and selection of local promoters or change agents.¹

Among the practical problems of co-ordination, some of the most frequent are related to *animation* and 'marketing', i.e. getting people involved, especially those who need help most. Some examples from Peru (Figs. 69, 70, 71) show how comic strips and posters have been used to stimulate participation.

In view of the limited energy of the staff, students and public, it may often be wiser at first to help people to do better what they already want to do rather than what they most need and may not want to do.

In general, the following principles seem of particular relevance in processes aimed at self-reliance: the substantial use of local traditions for public decision-making and project initiation; the participation of local people from the start, i.e. community surveys and the establishment of needs and priorities; the choice of initial actions in view of early success in building up a relationship of trust between administration and users; particular efforts at keeping the lines of communication wide open and making administrators accessible; stress on close contacts with local formal and informal power structures; and development of an institutional framework and committee structure which clearly represents all parties.

Shifting emphases and responsibilities with increasing complexity

The origin of most co-ordinated programmes has been the hope for a more economical solution to the facilities and services problem besetting urban and rural communities in different parts of the world. In the course of just over a decade, since the first comprehensive programmes were initiated, human and social factors have become more central.

Co-ordination, one might say, has been liberated from the need to quantify its advantages. Savings are expected to occur, not mainly in terms of cash benefits or shorter distances and better communication between various agencies but in terms of social costs. They are expected to provide a better fit between user needs and services:

Community education looks to substitute a constructive force for a destructive force in socially deprived districts. The energy is there; one sees it tragically in all manifesta-

tions of violence, vandalism, crime, emotional outbursts, and so forth. It is an energy that must be recharged positively, and education can assist validly in the process. It was right that, a hundred years ago, public education should have placed its emphasis on literary and numerary skills. Now it is social skills that are lacking [38].

A shift in emphasis can be noted from efficiency and achievement to process and more organic growth, and in this context the community school assumes a more important function and role. As a social investment rather than a capital investment, the school is changing its role from a central agent for the success or failure of the individual to a central agent for the success or failure of the community.

The involvement of the user in the initial decision-making design and ongoing governance of co-ordinated projects serves not only to increase the identification between user and institution and to shape the institution to user needs, but also as a learning process for communal action. It marks at the same time one of the most radical departures from established practices.

The necessity of ensuring the continuous participation of the user in the operation derives from the inherent behavioural patterns of middle-level bureaucratic structures.

While top-level administrators and people at the local level may have similar sentiments concerning the advantages of co-ordination, the continuous reconciliation of conflicting demands is a burden carried mainly by the bureaucrat, the administrator, teacher or headmaster involved in the daily operation of co-ordinated services and facilities. This is a responsibility which, in addition to technical know-how and administrative skills, requires a degree of personal initiative and motivation seldom to be found at the middle civil-service level. It is therefore small wonder that where there is no regular provision for user input and control, established practices of sectoral decision-making and operation soon begin to take over and

1. In Africa, Latin America and Asia similar statements can be found: 'While the structure of the system of educational administration usually reflects the form of the political administration in each country, it seems that, whatever form the political administration may take, some decentralization or devolution of administrative power is inescapable if facilities are to be provided in the rural areas. This is especially the case where education is to be organized on the principle of using the environment for teaching and learning... If this were to be achieved, peoples' participation in their own and in their children's education would be an easy matter.'—Minda C. Sutaria, Felice M. Guiang and Ben V. Morales, *Learning Centres for the Philippines*, p. 186, Bangkok, Unesco Regional Office for Education in Asia, 1976 (BKB/76/RHRT/695-550).

the most advanced facilities and programmes are doomed to failure.

In general, recent trends show a remarkable international similarity in the redistribution of power within the above limits from macro towards intermediate and micro levels of decision-making; towards an increase of power at the intermediate or regional levels which may coincide with cultural and ethnically homogeneous groups; and towards an increase of autonomy and self-confidence at the local level.

As planning, implementation and operation have become more complicated, it may also seem reasonable to shift some of the responsibility. In general, there are no safe predictions any more as to how and where

the money for co-ordinated projects will be acquired, what kinds of physical structures and organizational links will need to be established, who are the people who will use them and who are the people who will run them. New opportunities and conflicts seem to grow evenly at the start, and failure as well as success must be accepted as an integral part of the innovation.

Whatever shape or structure educational facilities may take in the future, it seems as if the concept linking them more closely to community needs and other services and programmes will be increasingly useful in industrialized and developing countries alike in helping to transform education in desirable directions.

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