

LAT
32428
5145



**FROM VISIONS TO DEVELOPMENT:
A Learning Resource Center-Based
Community Education Systems Model**

**Interim Report Submitted to the Development Resources Bureau
for Latin America and the Caribbean, USAID/Washington
Under Grant Agreement No. AID/1A-G-1169**

*This Report Forms the Basic Research Information
Necessary for the LRC-BCES Conceptual Framework*

**Prepared by San Jose State University
San Jose, California
July 1978**

Preface

The Development Resources Bureau for Latin America and the Caribbean of the United States Agency for International Development commissioned, in October 1976, the San José State University School of Education to develop a conceptual model of Learning Resource Center-Based Community Education Systems. This is the first major report on the model.

An earlier version of the model was closely examined in 1977 at the Bogotá Conference by some 25 nonformal education planners and field representatives from five countries in Latin America. Subsequently, it has been studied and critiqued by the Human Resources Division Office of USAID, other USAID professional staff, and numerous organizations and individual experts who have cooperated in the study. The present version has been revised considerably to incorporate various suggestions received during this process. A final version of the model, complete with a Multi-media Presentation Kit, six Instructional Training Modules, and accompanying training materials will be ready for distribution through Latin American USAID/Education offices in the spring of 1979.

Full responsibility for the conceptual design of the model rests, of course, with the principal authors and San José State University. But we wish to acknowledge and express our deep gratitude for the many valuable contributions made to this study by others.

Throughout the design and development of the project, San José State University has received generous cooperation from authorities in USAID; the Organization of American States; and from educational leaders in selected Central and South American countries where field tests and consultations were realized.

We are indebted also to several cooperating research institutions, in particular the Development Services Bureau of USAID; OAS's Department of Education and Research; the Academy for Educational Development; World Education Incorporated; and SWRL Educational Research and Development.

We are especially grateful to those organizational units and competent individuals from several Latin American countries who worked with our project team at different times in different ways throughout the life of the project.

The study has been principally funded by USAID/Washington, but resource contributions have also been made by San José State University, by regional USAID missions, and Latin American governments. Of particular significance has been the support and intellectual contributions given to the project staff by the Human Resources Development and the Development Services Bureaus of USAID. We are grateful to their very able staff members, not only for their help and support, but especially for their continued insistence that we work toward making the model express itself through the functional representation of the real, everyday lives and experiences of the rural Latin American. It has been toward this expression that we have struggled most. Yet it is this very expression which gives the model both its validity and its richness: validity in the sense that it accurately portrays the needs and educational potentialities of rural Latin America; richness in the sense that it suggests that, in the final analysis, the center of all resources lies not in things or places, but in the hearts, minds and bodies of individuals--especially those individuals who may someday in some way or another form the core of a community-based learning resource center program.

The principal author of this report, in addition to the undersigned, was Harbans S. Bholra. Contributing authors who wrote major sections were Luvern Cunningham, James Brown, W. B. Feild, Harold Hailer, and Phil Blair. Victor Berzins provided an editorial review of the report, and Dean Risco prepared the illustrations. (The names and areas of contribution to all those who assisted in the project as a whole are located in Appendix A.)

Gene Lamb
Project Director

CONTENTS

	<u>Page</u>
Preface	i
CHAPTER I: FRAMEWORK OF THE LRC-BCES MODEL	
Background	I-1
LRC-BCES Project Outcomes	I-2
Definition of Terms	I-2
CHAPTER II: CONCEPTUALIZING THE LRC-BCES MODEL: NATIONAL VISIONS, EDUCATIONAL THEORY, COMMUNITY EDUCATION, AND THE RATIONALE FOR LEARNING RESOURCE CENTERS	
National Visions	II-1
Educational Theory	II-3
Community Education	II-5
National Visions, Community Education and Learning Resource Centers	II-6
CHAPTER III: METHODOLOGIES FOR ACTION	
The Planning Function: Getting at the Local Community Realities	III-3
The Design Function: Searching for New Roles, New Systems	III-6
The Development Function: Creating New Methodologies for Action	III-9
The Emergent Policy Arena and Possible Strategies	III-16
CHAPTER IV: A SYSTEMATIC APPROACH TO ORGANIZING LRC-BCES PROGRAMS	
The LRC-BCES Client	IV-3
The Client and Client Groupings	IV-6
Program Needs by Client Groupings	IV-7
The Typology of Program Settings or Delivery Systems	IV-10
1. First Level--Community Learner Groups	IV-12
2. Second Level--Community Learning Resources	IV-16

	<u>Page</u>
3. Third Level--District Learning Resource Centers	IV-18
4. Fourth Level--National Learning Resource Education Systems	IV-20
Instructional Technology and the Materials and Methods of Instruction	IV-27
Step 1: Establishing Goals	IV-28
Step 2: Determining Subject Content	IV-29
Step 3: Determining the Status of Learners	IV-29
Step 4: Selecting Teaching/Learning Modes	IV-34
Step 5: Selecting Types and Schedules of Learning Experiences	IV-35
Step 6: Selecting and Assigning Personnel	IV-39
Step 7: Selecting Learning Materials and Equipment	IV-40
Step 8: Choosing Adequate Physical Facilities	IV-47
Step 9, 10, 11: Implementation, Evaluation, and Improvement of the Plan	IV-48
The LRC-BCES As A Synergistic Interface Among the Camposino, the Program, and the Media: The Impact Model	IV-49

CHAPTER V: GUIDELINES FOR ADMINISTRATION AND GOVERNANCE OF
THE LRC-BCES

Linking the LRC-BCES Network Together: Administrative Organization	V-1
Administrative Governance	V-4
The Fund for the National Learning System	V-6
Supervision	V-10
Supervision at the National Level	V-15
Supervision at the District Level	V-17
Supervision at the Community Level	V-18
Evaluation	V-19
Criteria and Key Questions	V-19
Data Gathering	V-20
Indicators Against Which to Weigh Data	V-20
Recommendations	V-24

	<u>Page</u>
CHAPTER VI: PERSONNEL NEEDS AND STAFF DEVELOPMENT	
Nonformal Education's Instructional Needs	VI-1
LRC-BCES Special Training Needs	VI-4
Other LRC-BCES Training Instruments	VI-6
CHAPTER VII: FACILITIES PLANNING	
Level 1: Learner Groups	VII-2
Level 2: Community Learning Resource Centers	VII-4
Level 3: District Learning Resource Centers	VII-11
Level 4: National Learning Resource Centers	VII-16
Other Considerations in Establishing Centers	VII-22
CHAPTER VIII: STRATEGIES FOR IMPLEMENTING THE LRC-BCES MODEL	
Contact-Presentation	VIII-1
Baseline Planning	VIII-2
Modification-Promotion	VIII-4
Phase I--The Issues Seminars	VIII-5
Phase II--The KIVA Seminars	VIII-10
Adoption-Implementation	VIII-13
CHAPTER IX: ECONOMIC ANALYSIS OF THE LRC-BCES MODEL	
Methodology for Studying Learning Resource Center Economic Feasibility	IX-2
Some Considerations in Economic Analysis of LRCs	IX-4
Other Factors Suggesting the Economic Feasibility of the Concept	IX-7
References	R-1
Appendix A: List of Persons Who Have Contributed to the LRC-BCES Project	A-1
Appendix B: Rural Development Projects in Latin America.	B-1

Chapter I

FRAMEWORK OF THE LRC-BCES MODEL

Background I-1
LRC-BCES Project Outcomes. 1-2
Definition of Terms. I-2

Chapter

FRAMEWORK OF THE LRC-BCES MODEL

Background

In October 1976 the Human Resources Development Division Office of the Development Resources Bureau for Latin America and the Caribbean of the United States Agency of International Development contracted with San José State University to develop a "conceptual model" of a comprehensive and integrated community education system for rural Latin America: a system which would focus on nonformal education activities and that could evolve from and functionally utilize community-based "centers" for learning, where, conceivably, a multiplicity of community education programs could be affected. The orientation was toward development of new forms of community education. Emphasis was placed on the efficient and effective organization of learning resources. There was encouragement for creative conceptualizing and the development of a general model that would be applicable to the education needs of all communities.

The contractual mandate was essentially to take the Learning Resource Center-Based Community Education System concept and apply it to the formulation of new strategies for community education. The hope was that a more effective educational design for meeting the ever increasing needs of the poor in Latin America would evolve. The commitment was that San José State University would systematically study the broad parameters of nonformal education as they might apply to communities across the wide cultural spectrum of the Latin American geopolitical base and subsequently interface with contemporary forms of educational thought as expressed in the literature on learning resource centers. The product was to be a written conceptual model that would analyze the community environment as it would reflect both the needs and realities of the rural poor and that would effectively integrate these needs and realities with new organizational structures for learning as closely related to the needs of the individual as possible.

LRC-BCES Project Outcomes

The present conceptual paper is but one component (albeit critical) of the LRC-BCES project. None of the components alone is able to adequately project the totality of the LRC-BCES concept. But, as an integrated package or system, it provides nations with the conceptual framework and procedural strategies for successfully installing a total LRC-BCES model in community environments possessing unique characteristics.

Table i-1 lists and describes each of the LRC-BCES project components as they might be used in Latin American communities. The total integrated package is comprehensive and modular, thus permitting flexibility in use.

Definition of Terms

The problem area which this project addresses--development education--is one which has a rather special vocabulary in the education planning literature. Although a few new terms are developed as the model unfolds, the writers have tried to use terms and concepts that have evolved recently in this field and which are generally well understood by both field and administrative personnel in Latin America. To assist in this effort, however, the following list of terms is presented to clarify and guide major trends of thought.

Formal Education. Coombs (1974) views formal education as the typical highly structured, chronologically graded, sanctioned through certification, institutionalized education system(s), public and private, spanning lower primary school and the upper reaches of the university.

Nonformal Education. Nonformal education in this report refers to all educational activity which is organized and systematically carried out outside the framework of the formal system to provide selected types of learning to particular subgroups in the population, adults as well as children. This definition includes, for example,

Table I-1

Integral Components of the LRC-BCES Project

<u>Component</u>	<u>Description</u>
1. <u>From Visions to Development: A Learning Resource Center-Based Community Education Systems Model</u>	A concept paper which develops the base for the LRC-BCES model and relates it to the community education and planning needs of the poor majority in Latin America.
2. Multimedia Presentation	A multimedia presentation which consists of a presenter's manual, a series of four slide/tape presentations, and promotional wall charts. It explains LRC-BCES model development for the project and enables any educational leader to work with this model in helping educational personnel to (1) assess needs for their local area and (2) determine a plan of action that will meet these needs. The presentation provides guidelines, specific methodology and required materials for conducting a local conference or workshop at which local leaders can begin developing a program in their area.
3. A Series of Six Training Modules	The project staff selected six areas of professional competency which it believed were basic to the development and implementation of an LRC-BCES program. These modules are packaged as two-day workshop formats and are designed to be used by community or district level education leaders in working with key personnel in their LRC programs. (A description of these modules is given in the Concept Paper.)
4. <u>Media In the LRC-BCES Program</u>	Prepared by James Brown, a specialist in instructional technology, this report makes two major contributions to the study: (1) it provides a summary of the literature and experiences of nonformal community education activities involving specific uses of media for various educational/informational uses; and (2) it presents findings and gives accommodations for media utilization techniques and procedures having special application to the LRC-BCES model. (A more descriptive discussion of this report is presented in the Concept Paper.)
5. <u>Resource Inventory for Learning Resource Center-Based Community Education Systems for Latin America</u>	Working under a major sub-contract of the project, Ofiesh Associates have developed a preliminary design for searching, inventorying and cataloging resource materials that could become resources for learning in a learning resource center.

community development programs with educational purposes such as literacy campaigns, health and nutrition programs, housing, sanitation, recreation projects, agriculture extension, youth clubs, women's clubs, and the like.

Informal Education. Informal education as used herein refers to the lifelong process by which every person acquires and accumulates knowledge, skills, attitudes and insights from daily experiences and exposure to the environment--in the home, at work, at play; from the attitudes and influences of family and friends; from travel, reading books and newspapers; or by listening to the radio or viewing films on television. Generally, informal education is unorganized and unsystematic, yet it accounts for the largest proportion of any person's total lifetime learning--including that of even a highly "schooled" person (Coombs, 1974).

Instructional Technology and/or Systems for Learning or Education: Used interchangeably throughout this report are the concepts of instructional technology, learning systems, and community education systems. These have as their essential feature a systems orientation. That is, they bring order, design, and integration to the common meanings of words such as technology, learning resource center-based community education, learning systems, etc.

In one of the major components of this project, Media in the LRC-BCES Program, James Brown (1977) develops a comprehensive definition of instructional technology which has the quality to cover a broad referent beyond the traditional notion of both instruction and/or technology. This quality permits us to "frame" a number of different terms within the framework of instructional technology, using its systematic orientation as a qualitative rather than strict definitional factor. The Association for Educational Communications and Technology defines "system" and "system approach" as:

System--the structure or organization of an orderly whole, clearly showing the interrelationships of the parts of each other and to the whole itself. Or, the process which synthesizes and interrelates the components of a process within a conceptual framework, insuring continuous, orderly, and effective progress toward a stated goal.

System Approach--A complex plan or strategy which logically accounts for and relates in an orderly fashion: goals, behavior, instrumentation, and resources for the purpose of removing or reducing problems associated with the training or education of learners. (pp. 175-176)

Chapter II

CONCEPTUALIZING THE LRC-BCES MODEL: NATIONAL VISIONS,
EDUCATIONAL THEORY, COMMUNITY EDUCATION, AND THE RATIONALE
FOR LEARNING RESOURCE CENTERS

National Visions II-1
Educational Theory II-3
Community Education. II-5
National Visions, Community Education and
Learning Resource Centers. II-6

Chapter II

CONCEPTUALIZING THE LRC-BCES MODEL: NATIONAL VISIONS,
EDUCATIONAL THEORY, COMMUNITY EDUCATION, AND THE RATIONALE
FOR LEARNING RESOURCE CENTERS

The purpose of this chapter is to conceptualize and subsequently adapt the essential ingredients of the LRC-BCES model as it relates to the following contextual considerations:

- long term development goals and visions held by developing Third World countries
- nature of extant community education programs that presently form the "educational" infrastructure of rural communities in Latin America
- perceived development education needs

This "installation" analysis will reflect the appropriate underlying educational LRC theoretical model which includes in its contextuality not only the educational design, but also the important environmental characteristics inherent throughout all communities. Too, the learning resource center concept will be viewed as one alternative solution educational planners can study and communities can use to achieve goals consistent with the visions of the nation.

National Visions

The visions nations develop for themselves are essential for the development of a national spirit, a sense of direction, and a focus for energy. However developed, national visions are offered by the leadership of a nation to the people and invite them into positive social action. These visions are typically enshrined in preambles to constitutions, party manifestos, legislative actions, policy statements, planning documents, edicts, and decrees. But the achievement of national visions is dependent as much upon individuals, families, and communities as upon leadership, since visions are not self-actualizing. In the final analysis, only the efforts of the people will turn national visions into local realities, national goals into community development.

Visions of national development are somewhat different for each society. For example, the national visions of Cuba, Brazil, Tanzania, Peru, South Africa, Honduras, China, and India differ from one another in many respects. However, there is a commonality in the national visions of the countries of the Third World; in 1976, 115 countries gathered in Geneva for the ILO World Conference of Employment, Income Distribution, and Social Progress. They agreed that the goals of integrated development must include: "Minimum requirements of a family for private consumption and drinking water, sanitation, public transportation, health, educational and cultural facilities." Similar statements and declarations have been made by Third World leaders and are in evidence in the policy documents of the following international organizations: United Nations Educational Scientific Cultural Organization, World Bank, United Nations International Development Organization, United Nations Food and Agricultural Organization, World Health Organization, The German Foundation for International Development, United States Agency for International Development, Organization of American States, Peace Corps, International Development Bank, and others.

Typically, the visions of Third World nations today--especially in regard to the rural poor--include:

1. More production from the fields so the farmers can have more to eat and sell and the nation can use the surpluses.
2. More equitable distribution of the wealth produced from the fields so the producers can have a greater share and the removal of rural-urban development imbalances through more equitable government expenditures in rural areas.
3. Better health for the rural poor through nutrition education; the supply of nutrients to those who cannot produce them; education in preventive medicine and family education so the poor can make decisions about the size of their families.
4. Better environment in the rural areas, i.e., an environment that is aesthetically attractive, ecologically sound and economically stable.
5. Access to education and culture through schools; community education centers; learning resource centers, radio, TV and other media; songs and dances; crafts; theatre and film.

6. Improved skills for the rural poor in agriculture, raising cattle and other livestock, and decisionmaking for managerial and political outcomes.
7. Appropriate technology and employment for the rural areas. The technology must be labor intensive and regionally supportable and must create employment for the rural poor within the rural areas.
8. More dynamic community organization within rural areas to move communities towards self-governance and more cooperative organizations.
9. Greater citizen participation in local politics and thereby in national politics through participation in all aspects of socioeconomic and political decisionmaking.

Achievement of the above national goals or visions depends upon the capability of the rural poor to develop and sustain the infrastructure required to manage such complex economic and human resource networks. Such visions are not impossible, but neither will achievement result from concept papers or model building and noted examples of demonstration projects. Application of the concepts and model through properly managed, systematic involvement of communities must be the planned next step.

Educational Theory

It would be paradoxical to suggest one prescriptive formula for organizing learning resources in Latin America when local initiative and participation are the heart of the matter. Neither the philosophy of community development nor the methodology of instructional technology permits an authoritative singular prescription. Yet the alternative to an authoritative prescription is not benign neglect. Policy makers and planners of nonformal education and media specialists in these countries need not be abandoned nor left to their own devices. The professional community of educators must provide opportunities for the decisionmakers and practitioners in these countries to share new visions, accept new challenges, and engage in mutual learning in the exciting enterprise called community education for community action. Thus, it is possible to develop a conceptual model that effectively relates to the necessary ingredients and qualities for bringing about educational change. This model can be the integrative focus for the analysis and program design.

To provide some of these opportunities, the model conceptualized here is, in one sense, prescriptive. But, it is also flexible in that it creates essentially a conceptual orientation rather than a "physical design" to the problem of organizing learning resources for new education systems.

This conceptualization, like all conceptualizations, is grounded in a world view; in other words, it has a paradigmatic context.

- As human beings we must participate in our individual and national destinies. This is part of the definition of being human.
- National destinies and visions must include development as a worthy goal for all nations to pursue.

At one level education is the transmitter of knowledge and skills; at another it is individual growth, fulfillment, and consciousness raising. In both aspects, education plays a pivotal role in development and modernization.

School and university education do not exhaust the possibilities for education in different societies to bring about development. Out-of-school education must be provided to individual farmers, workers, and housewives, as well as to groups in rural and urban areas. The case for community education, in turn, can be sustained by the following:

- Knowledge is an important input needed by farmers to grow individually and to grow more, and by workers to produce more and fulfill their personal potentialities.
- This knowledge is needed now. A whole generation of adults must not be condemned while we wait for graduates or elementary and secondary schools to mature into adulthood and responsibility.
- We cannot send the adults, the new clients of education, to regular schools. Knowledge must be delivered to them where they are, nonformally in informal settings.
- Education is a good investment. On the basis of justice alone, educational resources can be recommended to adult populations living in poverty. Educational goods should be more justly distributed through community education.

- Both the means and ends of community education and community action must be developed by participation. Ideas must not be imposed by governments, but communities must be exposed to new ideas. Though leadership must envision, the people must examine, question, adapt, and translate national visions into communal and personal terms.

Community Education

The Community Educator's Domain

National visions often lead to a multiplicity of programs at the community level, including:

Agricultural Extension	Rural Planning and Architecture
Horticulture Training	Land Management
Cattle Farming	Conservation Education
Poultry Farming	Arts and Crafts
Pisciculture	Puppetry
Rabbit Farming	Radio Forums
Gardening	Song and Dance Clubs
Afforestation	Literacy Training
Farm Management and Marketing	Management Education
Water Resources Management	Civic Education
Irrigation Development	Political Education
Road and Other Construction	Vocational Training
Childcare	Employment Programs for Men, Women and Youth
Nutrition Education	Cooperative Education
Family Planning	Discussion Groups
Preventive Health Care	Voter Education
Cooking and Preserving	Trade Union Education
Hand and Needle Crafts	
Environmental Education	

While some of the programs listed above are clearly educational, such as literacy teaching, management education, civic and voter education, discussion groups, radio forums and recreation, programs such as family planning, agricultural extension, or cooperatives education often are specializations not ordinarily within the domain of generalists, which too often community educators are expected to be. That is, physicists, engineers, architects, doctors, ecologists, ship-builders, pilots, agriculturists, agronomists, geologists, mineralogists, artists, poets, economists, statisticians, lawyers, legislators, social workers as well as educators are required to implement these programs.

Community Educator's Role

The community educator, we suggest, can be most effective by performing preeminently educational roles. His/her important role is to serve as the community-level figure who brings about the interface between specialists and services. He/she is the key designer of the procedures needed to access goods and services. The community educator is an enabler, a facilitator, a catalyst, a person that effectively makes the difference when the bottom line is drawn on community participation and goods and services offered. He may teach general awareness, often called conscientization. He may teach problem-solving and participation skills. Too, he may play the important role of the integrator. He may fill in the missing gaps, and meet all the residual needs to which specialists are not attending. And, he may, of course, provide literacy training and conduct discussion forums when needed. Finally, he may become the link between the community and the total educational resources of the society.

After all, the responsibility of the community educator is education. The achievement of national development is heavily dependent upon individual and community educational growth--that must be the focus of the educator. The community educator's domain is simultaneously narrow--the teaching of individuals, and comprehensive--reflecting the extraordinarily diverse opportunities and settings where learning can and does take place. A community educator, at whatever level of responsibility, must have a clear notion of and commitment to the vision toward which his or her nation is working. Only with understanding of national direction can the community educator then locate ways for community education to support and enhance the achievement of the national vision.

National Visions, Community Education, and Learning Resource Centers

There has been no lack in the world of national aspirations for development and hopes for the participation of the peoples themselves in development efforts. But governments have not known how to transform these aspirations into real actions. The failure of the traditional,

formal schooling systems to contribute to development has been too often documented. Unfortunately, a recourse to nonformal education systems has not solved all problems, either. The problems of needs assessments, curriculum design, and the delivery of instruction have been most challenging, to say the least. Emile G. McAnany (1973), a leading figure in nonformal education, succinctly describes what Third World nations typically struggle with:

These people suffer from poor nutrition and health, lack of basic education and (indulge in) a passivity of fatalism . . . to make their life more bearable. Most governments want . . . this to change and for these millions of people to 'modernize,' become more productive, eat better, get a basic education, produce fewer children, have better health. Some governments add to this litany of good wishes that people should also participate in their own development, have control over their lives, maintain a sense of their own cultural identity, and still share in the other benefits of modern life. But few (if any) countries seem to know how all this is to be done. (p. 11)

As numerous approaches to solving the development problems and educational needs of nations and people have emerged since World War II, development planners have wished that the burden of community education could be carried by a mosaic of learning resources, organized and delivered in ways that could blend the best of both the nonformal and formal education worlds. An ideal model for organizing learning resources in community action would relate to assessing community learning needs, determining community readiness for receiving the program and implementing the program with continuous evaluation for the instructional processes used, organizations designed, costs incurred and benefits received.

The Learning Resource Center-Based Community Education System Model presented here is designed to address just these types of needs. Specifically, the LRC-BCES assumes:

1. That a network of learning resource centers, broadly designed in both scope and character, could serve as the backbone of community education;

2. That an effective system of education and extended learning services to the community could be built on the basis of learning materials available in the learning resource centers.
3. That the individual citizen at the rural village level, given the proper program, the proper resources, and adequate training, can become an active participant and significant resource in his/her personal community education program.

Chapter III

METHODOLOGIES FOR ACTION

The Planning Function: Getting at the Local Community Realities	III-3
The Design Function: Searching for New Roles, New Systems.	III-6
The Development Function: Creating New Methodologies for Action.	III-9
The Emergent Policy Arena and Possible Strategies	III-16

Chapter III
METHODOLOGIES FOR ACTION

To implement any theory-based design, there are several sequential stages that must occur. During the past decade much has occurred to move "educational technology" from a primitive status to an increasingly differentiated technology capable of integrating visions, realities, educational characteristics, and organizational characteristics in accomplishing social objectives (Baker & Elam, 1978). While the educational development literature reflects many unique characteristics as represented by diverse models intended for use in various environments, at least two dimensions emerge as being of common importance:

1. From a management perspective the complexity of any useful program development enterprise requires a level of effort that goes well beyond the capacity of one person, or even a few, to realistically perform. It requires a strong multidisciplinary staff working cooperatively, with client representatives.
2. Defining the program development cycle in terms of specified functions (e.g., planning, design) promotes sequenced but not linear attention to each program component.

The nature of the project, coupled with the increased complexity of the human resources requirements during development, requires careful definition and coordination of the flow of activity. The functional stages cut across each project component to contribute in a planned manner to the overall integrity of the project.

Likewise, the methodological questions in the organization and use of learning resource centers embedded in community education systems are varied and occur in different contexts and represent different functions. At one level, methodological questions translate as planning questions:

III-2

- What is the methodology for assessing and establishing the role of learning resource centers in a program of community education?
- How are new instructional roles to be invented that will make effective use of learning resource centers within communities?
- What kinds of sites and settings might be necessary for the utilization of learning resource centers?
- Which other methodological questions (with planning content) relate to the need for reconciling national visions with local community needs and to the critical questions of choice between mass and intensive strategies in regard to the choice of client groups within society?

At another level, methodological questions must deal with the issues of assessing the learning needs of communities, understanding and developing community motivation, choosing techniques and achieving participation. At yet another level, the selection of media and related instructional technology must be handled.

Finally, methodological concerns must relate to learning styles of the clients (learners) and to the desired changes in their attitudes and actions.

Normally, the rhetoric used to describe national visions is at a level of abstraction or generality that obscures its relevance to the realities of community life. The national visions must be perceived more as general policy or goal statements with accommodation at the community level achieved through collaborative participation and continuous negotiation. Participation should involve the close examination of where the community is in terms of its initial ability to move toward the national vision. The intent is not to accept or reject the vision; but rather to determine what specific steps forward a given community can realistically take without upsetting its social-psychological ecology. The choices of programs, program formats, and implementation strategies should be consistent with the national vision and still reflect the community's capability and desires.

The Planning Function: Getting at the Local Community Realities

In most countries, extensive preparation is required if national visions and aspirations are to be actualized at the community level. There are three related tasks that must be completed:

1. Validation of nationally determined needs in community settings;
2. Identification of local needs as perceived by individual communities;
3. Development and integration of needs profiles through a process of needs negotiations.

If we are serious about citizen participation in the design of national destinies, and if we want to make it possible for national visions to be endorsed, then national visions must be reflected in every community of the society, each time community actions are planned. This endorsement is both a philosophic stance and a way of going about community education for community action. As a philosophy and management stance it promotes decentralization of needs identification and yet retains the centralized management capabilities required in developing countries.

At the operational level in Latin America the process of achieving local community endorsement of national visions calls for studying the world of the rural villager and his/her family in each community and with the help of the citizens of the village. The rural villager must become the focus of all community education in Latin America.

It is impossible to raise methodological questions at one level in isolation from questions at other levels. In the following, methodological issues at all levels--from planning, to institutional, to the individual--have been studied and analyzed.

1. Defining Situation-Specific Programs by Needs Negotiation

Community education must relate to the local needs and realities of communities. National visions are not enough. National visions must be translated into action statements that are sensitive to the realities at the community level.

In the preceding chapter, we sketched typical national visions of the countries of the Third World. Also, we indicated the types of program contexts, contents and format into which those visions must be translated at the community level. At first glance, it may seem impossible to make any generalizations about the particular realities of local communities spread over rural Latin America. Each community in the world is, after all, a unique social reality; however, they share a "culture of silence," often suffer from exploitative or distorted social and economic organization, political marginality, lack of health, education and cultural facilities, and are plagued by an absence of hope or the lack of means to implement aspirations that might have been kindled.

The integration of national visions and local realities is thus a process of translation, negotiation, mediation, and especially accommodation. The near spiritual uplift of national visions come face-to-face with the limitations to their achievement that exist at the community level. A necessary interaction must take place involving persons who understand the long range meaning of national visions and local leaders who understand local circumstances. Over time, national visions are tempered by the practical constraints of local communities and local aspirations are elevated as a consequence.

It is quite difficult to set down exact formulae for studying the real world of the rural individual; however, some ideas can be proposed:

- Develop an oral history of the community by talking to older residents. These conversations may be taped (audio only or videotape, if available) with the subjects' permission and should become part of the learning resources at the community level to be used by the community's youth. Inversely, a "future history" of the community could be developed by talking to the youth in the community.
- Survey the existing social institutions in the community; their past, present, and potential roles.

- Prepare a socio-economic census of the community and analyze especially occupations. (A lot can be found out by simply interviewing the local priest, the mid-wife and other persons in helping positions.)

2. Developing Profiles of Felt Needs at the Community Level

Profiles of community needs should be developed in regard to the needs of the community as perceived by:

1. farmers;
2. women;
3. children and youth;
4. development workers;
5. local government officials;
6. shopkeepers and other small business persons.

As far as possible, each of the above groups must speak on its own behalf. Such groups must be instructed in the mechanics of needs assessment because they must become the "researchers" of their own needs.

3. Developing National and Local Integrated Needs Profiles Through Needs Negotiation

Nationally determined needs, and the multiple profiles of felt needs generated within the community, must be integrated into an agenda for action through a process of needs negotiation. Negotiation often suggests an adversary format but should not be seen as unsuitable to the learning resources based community education perspective.

Collective bargaining as practiced in industrial settings may have something to contribute to the concept within educational settings of needs negotiation. Budget allocations must also become subject to negotiation, if we are serious about community control. The adversary model of negotiation that uses the format of two sets of advocates arguing for different positions does illuminate issues, uncover new alternatives, and results in appropriate decisions that have undergone prior community discussion.

The Design Function: Searching for New Roles, New Systems

The integrative general model of learning resources in community education (Figure III-1) is based on the following propositions:

- The development process must involve the integration of national developmental visions with local community realities. As national needs are invented they are integrated in terms of the realities and needs of each local community
- As community educators, our domain is education; thus, our approach to the integration of national visions and local community realities must involve instructional actions such as motivating individual adults, motivating communities, designing curricula, and producing instructional materials and media.
- Systematic and continuous instruction must be provided for such an integration of national developmental visions and local community realities to take place. Our task must include organizational actions such as developing organizational mechanisms, designing new roles, developing job descriptions, staffing and coordination.
- The two areas of organizational actions and instructional actions must themselves be integrated for a synergistic approach to the use of learning resources for community based education to achieve community action.
- The overlap of the two areas of organization and instruction makes it necessary to devise special strategies in the use of learning resources centers for community based education for community action.
- Such strategies for community education for community action may involve inventing new roles (such as para professionals, field workers, community educators, and cultural missionaries) or new structures and systems of action (such as cooperatives, development committees, and learning resource centers).

The relationship among these propositions is presented in Figure III-1.

The model illustrates two levels of phenomena--national and community--being integrated by two overlapping systems of instructional actions and organizational actions. The assumption is that community education, while it must serve local community needs, must at the same time contribute to the actualization of centrally-promoted national

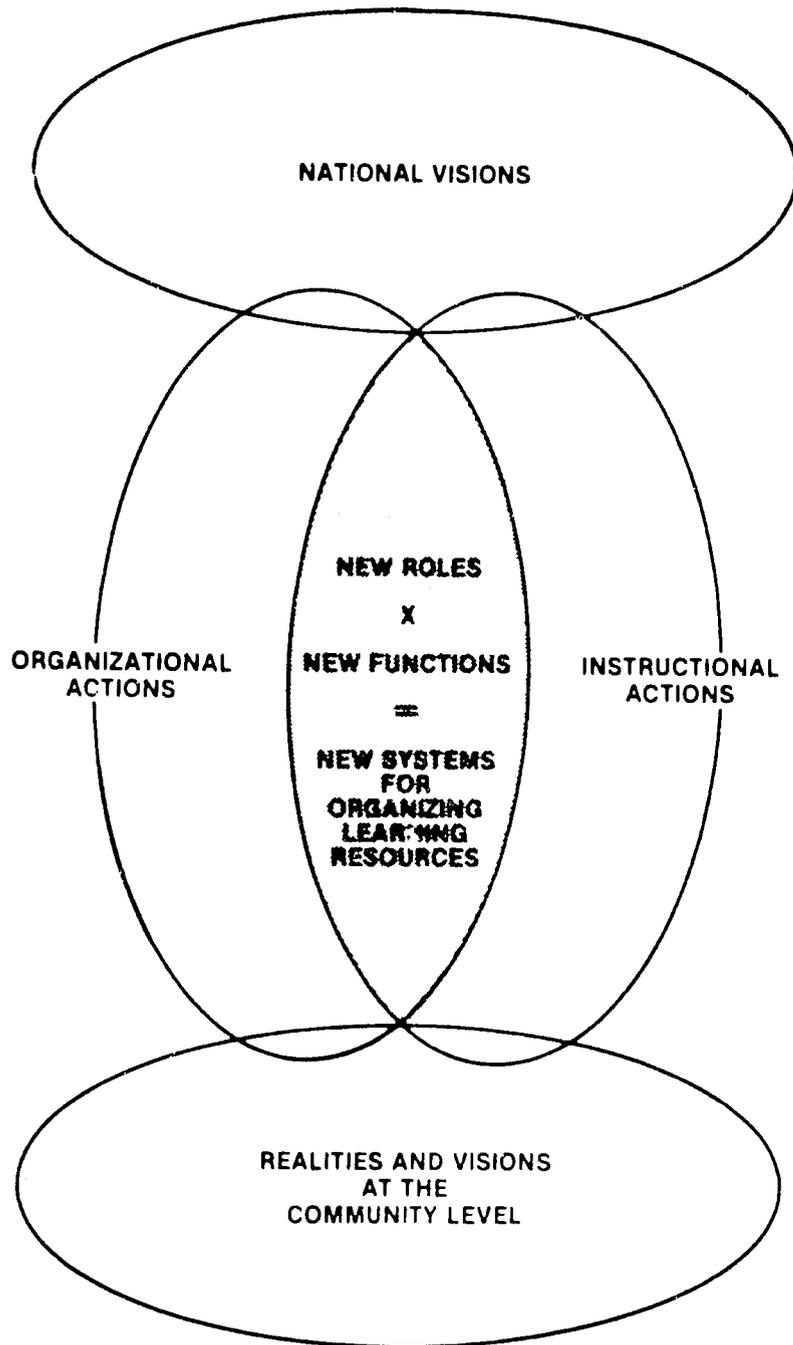


Figure III-1. An integrative general model of learning resources in community education.

visions. Such integration between two levels of phenomena, we suggest, can be achieved by perpetually reappraising the national vision in terms of the realities and needs of each local community in the nation.

The areas of instructional and organizational actions each incorporates a variety of concerns. These two action systems must be integrated because community based education involves, essentially, an organization for a new distribution of public instruction among the various age and sex groups, social classes, and communities.

In the overlap of the two action systems of instruction and organization, a policy arena emerges where inventive solutions must be sought for using learning resources to promote community education for community action. These resources will have to be both material and non-material and will involve both instructional materials and instructors. The organization of a new distribution of education among communities may also involve the creation of new roles and new organizational forms.

Various situation-specific means and ends calculations should be developed in this policy arena; all such means and ends calculations need not necessarily involve the establishment of learning resource centers, however. Yet, the policy arena must address the need for new roles and new systems for organizing learning resources if rural villages in Latin America are to be able to reach modest development goals and implement new visions for community action.

Inasmuch as media and materials can become the multipliers of trained teachers and technicians (in such short supply in developing countries), it might often be preferable to establish learning resource centers to bring new knowledge and skills to unskilled communities waiting to be helped. The use of learning resource centers would, of course, present us with a dilemma. While prepackaged materials can help multiply the teacher and the technician, the very fact that some materials and not others are available in a center may sometimes determine the content of the community education program for a

particular community. Such materials may be used simply because they are there. They may fill the empty hours of those who come to view them but these materials might have nothing to do with the real and urgent needs of the community. The community education program may thus end up fostering inert ideas and teaching useless skills--leading to no community actions.

Let us now make some brief and general comments on other elements of the integrative general model of learning resources for community education which lead to community actions.

The Development Function: Creating New Methodologies for Action

To implement national visions, commitments must be followed by actions. Let us deal with the instructional actions first.

Implementing the Vision: The Development of a New Instructional Dictum

Instructional actions ideally involve mutual learning by the community and the community educators. The dictum that best informs a community educator's methodological stance is:

1. Achieving voluntary participation of adult and young learners in problem solving settings;
2. Stimulating individual responsibility for learning and discovery;
3. Developing skills for search and use of information.
 - The voluntary nature of learning and action on the part of adults should not be compromised. The community educator will, of course, stimulate, energize, and articulate motivational structures. He must not, however, topple the delicate balance between eliciting voluntary participation and imposing on adults and youth the requirement to participate.
 - Participation is the soul of community education for action. We have discussed previously how participative strategies can be used in developing content and format.

The same kind of participative approaches can be used in regard to developing participative learning methodologies. How to learn, search and act should all be participatively decided.

- Learning in community education programs should take place within problem-solving settings. Clearly, it is important that adults and youth in the community see a problematic situation, experience the problem in personal terms--how to feed the child; how to find a job; how to stop cocaine smoking--and see the problem solved.
- Once each individual adult sees the community problem in personal terms, he or she should take personal responsibility for learning. Adults should consider their learning a necessary part of the solution to the specific problem being faced and, sometimes, as the solution to problem-solving generally. This will mean that learning which has immediate application is given priority.
- While adult learners in a community education program may at times decide to receive a lecture or see a demonstration, whenever possible, learning should be a matter of discovery. Correlations, connections, and causes in the social as well as in the material world should be discovered by each individual. The community educator acts as a fellow-learner providing support at the moment of discovery. (An excellent example of learning by discovery is provided by the gaming and simulation exercises used in the USAID/University of Massachusetts project in Ecuador which showed impressive results in helping the campesinos discover the structures and the rules of the political and economic game.) (See Appendix B)
- Learning to search for information needed to solve a problem must be an important part of the method of community education. Adult learners must learn about the sources of information--people, books, tapes, films and institutions--that help bring those information resources to the community. They should be able to consult these sources independently when they need them.
- Learning the skills needed to handle information critically and more effectively is also part of the method of community education. This might mean acquiring the skills of literacy and numeracy, or at another time, learning to evaluate messages received in print or over the media.

The Needs of the Community Educator: Empathy, Perceptiveness. It takes two to consummate a teaching-learning transaction. A community educator will have to be more than analytical; he must be empathetic and perceptive to be able to achieve community education for community actions.

1. To be empathetic is to stand in other people's shoes; to merge oneself in the identity of another; to have a view of the world while standing in the inner, private space of another. Empathy involves a vicarious experience of the feelings, volitions, and ideas of another.
2. To be perceptive means to be a sharp, observing, discerning individual who is also capable of sympathetic understanding and insight.

We have developed methods whereby we can clarify our own values, and improve our analytical skills. Now let us examine the community educator's own agenda for learning and individual growth.

Instructional Materials for Community Education. The learner's own experience should be the most widely used instructional material. The learner uses the artifacts of his own culture and establishes new relationships with the products and processes surrounding him in his everyday life. Much of what surrounds the learner will have to be framed into instructional materials. Specimens have to be collected and perhaps mounted, exhibits designed and processes brought to a stop for study. There will be drawing, photographing, taping, filming, video-taping, listening, viewing, projecting.

Participative production of instructional materials within the learning situation provides immense dividends. With the push-button operational features introduced into most instructional equipment such as cameras, projectors, and recorders, their handling can be taught literally to anyone who cares to listen and carry out simple instructions. But the local production of a polaroid picture, or a tape recording of a traditional song and dance festival, or a video-taping of a discussion

group can result in remarkable instructional achievements. Also such local production of instructional materials removes the mystery out of such technical equipment and contributes to the scientific literacy of adults and youth in the community.

As we discussed before, community based education for community action ultimately has to be a marriage of the national vision and community perspective, or felt needs of communities, and of needs identified by national leaders. It should follow that while a part of the instructional material will be locally produced--even participatively with adult learners--some will come from the outside (ready-made) in the form of radio and television services, films, trade books, and national newspapers. There may also be national libraries and national media centers that store books, tapes, slide sets, and various other packages of materials. These packages can be designed to enable a community to adapt the package to its own special circumstances.

Folk media presents to the community educator a framework for participation and learning already familiar to local people. Too, most of these media are quite versatile and can carry a large burden of instruction and development communication. (Puppetry is one folk medium that can be used in both education and development.)

Program Strategies that Lead to Action. We have referred to the need for voluntary participative actions for a successful community based education for community action program.

What is the community educator's role in such participation? We indicated in Chapter II that the community educator must stimulate and catalyze. He must identify motivational structures to make sure that voluntary participation is elicited from adult learners in the community. The identification of motivational structures will have to be based on a detailed analysis of the community.

1. Community analysis. An analysis of the community will be based on a set of questions such as the following:
 - What is the political makeup of the community?
 - What is the community's economic-occupational configuration? In other words, what kinds of economic incentives exist or can be created?
 - What is the social composition of the community? Who has high status? Who can accord status to those who do not have high status? What kinds of peer group pressures might be at work?
 - What is the typical personality configuration of the people to be served?
2. Survey of institutional and material resources. As part of the community analysis, the community educator should make a survey of the local traditions and secular institutions existing in the community and of the resources, especially the human resources, that are available.
3. The intensive versus mass strategies. The community may have large needs; however, the resources available for use may be insufficient. In such circumstances, intensive and selective strategies have to be used. A specific group of people may be given attention instead of distributing services equally among everybody in the community, as has been done in UNESCO's functional literacy programs. When this is done, the trade-offs should be clearly stated and brought to the notice of the community. There is the final say on what strategic choice to make.

Generative Programming, Energizing Foci. The community educator should provide assistance to the community in developing generative programming. Generative programming may be defined as that combination of program choice and sequence whereby the program: (1) begins to relate to the immediate, felt needs of the community, and (2) is followed naturally by other programs and projects--not forced, but organic--and actualized without loss of momentum and dissipation of motivation.

The community educator should enable the community to plan and organize its efforts around energizing foci, such as:

Clean water is life. Our kids must have milk. Let's bring our sons back from the city. Our fields are our gold mines. Let the village lead the city. Women are half of humankind. We can have a say in the way our fate unfolds. Let's grow hope, let's make fate.

Depending upon the situation in different communities, a community educator may invent new metaphors involving local people in the process to be used in energizing community action for a long period of time.

Self-Evaluation for Self-Learning and Participative Evaluation for Program Planning. If we are serious about participative planning and learning in our community education programs, we must emphasize participative evaluation for program planning and self-evaluation of individual learning.

Participative evaluation in program planning means a collective statement of objectives, choice of indicators, criteria of success and failure, choice of methods, and even design of instruments of observation, collection, and analysis of data.

Self-evaluation means that the individual participant in the community is given the opportunity to engage in self-evaluation. He asks himself what he has learned and how much he has profited. He is the judge of whether it could have been better or different.

It is important, however, to conduct some outside evaluation as well. Sometimes judging the nature and scope of the impact of community education on the community can be done better by outsiders. But a community educator must insist that such an evaluation be done according to the objectives which have emerged within the community. It must be a goal-free evaluation--not one appraised against objectives defined elsewhere.

Implementing the Vision: The Development of New Organizational Actions

The implementation of the national vision within local communities must involve organizational actions, such as electing development committees and establishing cooperatives. These organizational actions have two objectives: (1) Local initiatives must be generated, sustained, and enabled to come to fruition; and (2) national resources must be deployed to enhance the aspirations, skills, and material goods at the community level.

Aspects of Organization Actions. Those working in the area of community education must understand the nature of the challenge involved in the organization of community education. To promote community education at a national level, a national learning system must be built. This national component must not, however, become so institutionalized that it preempts or squelches all local initiatives. In other words, a national organization for community education must be an enabling organization rather than an organization for management and control. Such an organization has to reflect and embody the national vision and provide a sense of direction. "A sense of direction" doesn't mean a dogmatic, prefabricated, arbitrary national future. It should be possible in the process of promoting local initiatives, to redefine and reinvent the national direction itself. Thus, the purpose of such a national organization is to promote and enhance local participation, local initiatives, and local actions. Therein lies the challenge of organizing community based education for community action.

What does a dialectic between centralized assistance and local initiative mean? Minimally, it means that the central organization provides the local communities with resources they do not have. Those resources should enable local communities to form into groups to define their immediate needs. The central organization should help them acquire the skills to do that, i.e., it should enable people to learn participation,

economic productivity, management, and evaluation. The national organization will assist with evaluative functions of some sort; it will also perform distributive functions to deploy resources where they are needed, and build what is sometimes called "the heavy industry of nonformal education." It is important for the central system to carry out research and development and build the infrastructure between and among community groups, organizations, and agencies.

Organizational Action Assisting the Community Educator. A community educator cannot and should not do everything by himself. He need not do his own research and his own production of materials. He should, however, let researchers and developers know his problems. The community educator need not personally conduct all the skills-training for the community, though he must know who can provide such training. He should be able to call upon appropriate people, be aware of the resources available in terms of radio broadcasts, books published, library materials and tape sources, and know how to obtain them for use.

The Emergent Policy Arena and Possible Strategies

Education and Change Orientation: The Individual vs. Community

Which should come first--the education of the individual or structural changes in the community and in the society? This is a perpetual dilemma and cannot be resolved unilaterally.

Instructional Processes vs. Instructional Products

Is community education for community action an instructional process unique to the life of each community, to be invented afresh in each community using instructional materials produced in the community? Or is community education best served by an emphasis on instructional products prepared in advance and delivered to the community? These questions are also perpetual and require continuing review.

Delivery Systems of Instruction

Finally, the delivery systems of instruction to the community can vary from the establishment of learning resource center-based community education, to cultural missions, to mobile vans carrying instructors and the tools of their trade.

Latin America does indeed offer a range of possibilities. Many more designs can, of course, be invented by planners trying to develop situation-specific solutions for handling organizational and instructional questions at the same time. It is useful to analyze other Latin American experiences in terms of their organizational and instructional solutions to learn how each program has blended the three dimensions of individual community, process-product, and delivery of instruction.

It is not possible to include descriptions and evaluations of other Latin American programs within the present report; however, the following should be examined for their relevancy:

- Peru's Centrales De Servicio (Educational Service Centers)
- Colombia's Unitary School Program
- Bolivia's Warisata (Huarizaca)
- Brazil's Movimento De Educacao Promocional De Espirito Santo (MEPES); That is, The Family School Movement
- Ecuador's Servicio Nacional De Recursos Didacticos
- El Salvador's Capacitacion Laboral Educacion Basica
- Colombia's Promocion Profesional Popular-Rural of SENA
- Mexico's Cultural Missions
- Colombia's Ciudadela De Los Ninos
- Colombia's Accion Cultural Popular (ACPO)
- Honduras Consejo De Coordinacion De Desarrollo (CONCORDE)

The list above includes programs of community education attached to schools, programs of expanding interest in the community, and programs with substantial scope such as CONCORDE in Honduras.

Chapter IV

A SYSTEMATIC APPROACH TO ORGANIZING LRC-BCES PROGRAMS

The LRC-BCES Client	IV-3
The Client and Client Groupings	IV-6
Program Needs by Client Groupings	IV-7
The Typology of Program Settings or Delivery Systems	IV-10
1. First Level--Community Learner Groups	IV-12
2. Second Level--Community Learning Resources	IV-16
3. Third Level--District Learning Resource Centers	IV-18
4. Fourth Level--National Learning Resource Education Systems	IV-20
Instructional Technology and the Materials and Methods of Instruction	IV-27
Step 1: Establishing Goals	IV-28
Step 2: Determining Subject Content	IV-29
Step 3: Determining the Status of Learners	IV-29
Step 4: Selecting Teaching/Learning Modes	IV-34
Step 5: Selecting Types and Schedules of Learning Experiences	IV-35
Step 6: Selecting and Assigning Personnel	IV-39
Step 7: Selecting Learning Materials and Equipment	IV-40
Step 8: Choosing Adequate Physical Facilities	IV-47
Step 9, 10, 11: Implementation, Evaluation, and Improvement of the Plan	IV-48
The LRC-BCES As A Synergistic Interface the Campesino, the Program, and the Media: The Impact	IV-49

Chapter IV

A SYSTEMATIC APPROACH TO ORGANIZING
LRC-BCES PROGRAMS

Using the educational theory and methodological foundations developed in Chapters II and III, we can now begin to construct the LRC-BCES Impact Model. We call this the Impact Model because in the perceptual sense it functionally brings together all the basic ingredients of an adequate community learning resource education system--from the broad macro level where society itself marshals its resources, to the smallest or micro level where the individual stands alone as the center of learning resources. In Chapter IV, we try to systematically build the model in such a way that community education planners can study the three major components of the Impact Model, analyze the interrelationships among various elements within each, and then visualize the system in its integrated and multidimensional form.

As the process of building the Impact Model is initiated, we begin by studying the clients of the system both as individuals and as members of social units, namely the family and community. We use their real life experiential setting as the context of analysis and reflect it against a framework of development needs and alternative educational programs.

Next, we look at the range of learning resource center-based community education program options that are available; we array these options along a continuum of organizational settings--very centralized to highly decentralized. Thus, the most appropriate program is matched with the population level and the social institutional base seemingly most adequate for the specific problem and context within which it is developed.

Thirdly, we study the problem associated with organizing and delivering learning resources; here media and instructional technology considerations are emphasized. We try to appreciate the fact that nations and communities will come to the media discussion with different experiences and tendencies toward accepting technology now available to learning systems. For this reason, we provide an extensive analysis of the role and function of instructional technology and suggest guidelines for its utilization in LRC-BCES planning.

At the end of Chapter IV we try to bring the above three components--the client, the organizational settings and instructional technology--together in a perceptual format that illustrates the integral and dynamic nature of the complex and comprehensive learning system: the Impact Model. As the model unfolds, and a more analytical concept of the LRC-BCES begins to develop, new visions for reaching the poor majority in Latin America through new educational designs begin to emerge.

The LRC-BCES. The Learning Resources Center-Based Community Education System is an institutional concept; that is, it is grounded in the development literature of institution building, and it is designed to achieve a broad range of educational objectives specified by the communities. The Learning Resource Center (institutional program) will normally accomplish this through provision of direct educational services or through enabling support for other community institutions and/or organizations that currently provide educational services.

The LRC-BCES model is multi-faceted both in concept and execution. Each facet is important in its own right, but the facets collectively are even more significant. It is an example of the whole being more than the sum of its parts. Its saliency is in the integration of its two parts:

- Consider First the Learning Resource Center. The Learning Resource Center in large measure constitutes a catalytic

influence--a stimulus, a mechanism for helping the community develop its educative capacity, and to invent new approaches to learning. It is a way to release the energies of the community and direct them constructively. It is a tool for ensuring that existing forms of formal and nonformal education contribute constructively and non-competitively to community education objectives. It is a means, not an end, and its form can be as varied as the communities where it might be installed.

- Consider Secondly the Community Educational System. The Community is simultaneously the place where the education of people is to occur and the spirit which binds it together. The word community provides vitality. Individual growth produces community strength. The term "based" is the keystone; it is the reassuring word in the title Learning Resource Center-Based Community Education System. It embeds the learning activity and ensures against the advancement of educational ideas too removed from the learner to have meaning.

The LRC-BCES Client

Descriptive data found in development literature, country sector reports, and in the serious writings of Latin American scholars and observers are a constant reminder that the congregation of wealth, education, social services and institutional resources exists essentially in the capitals and large provincial cities of Latin America. And, even though these urban areas are, as are urban areas throughout the world, fraught with complex social and economic problems, we know that they have within their institutional framework the basic resources to bring about change and development. In the rural areas of Latin America, however, we know that the social development institutional base is extremely limited and that these people represent the most destitute and are furthest removed from the sources of relief.

Past national education reform efforts aimed at integration and relief of the environmental conditions affecting the rural poor have been, for the most part, ineffective. Thus the need for a learning resource

model that is community-based and aimed at solving the problems of the poor majority in the rural areas. This, then, is the rationale for the conceptual orientation of the LRC-BCES model. And, it is to these people--the farmers, the rural women, the children, who for a variety of reasons are denied the educational opportunities offered the more privileged social/political groups of Latin Americans--that this model addresses itself.

There is much in the contemporary literature to support this rationale. The late E. F. Schumacher (1973), in his thought-provoking book, Small is Beautiful: Economics as if People Mattered, builds a strong rationale for developing a grass roots approach to program orientation in nonformal education. By presenting an intellectual argument that tries to combine the best from modern technology with the age old Buddhist thought as they relate to the possibilities of improving one's quality of life, Schumacher gives us a new perspective on development for Third World countries. Development planners have labeled this perspective, "economics for permanence."

There is universal agreement that a fundamental source of wealth is human labour. Now, the modern economist has been brought up to consider labour or work as little more than a necessary evil. From the point of view of the employer, it is in any case simply an item of cost, to be reduced to a minimum if it cannot be eliminated altogether, say, by automation. From the point of view of the workman, it is a disutility; to work is to make a sacrifice of one's leisure and comfort, and wages are a kind of compensation for the sacrifice. Hence the ideal from the point of view of the employer is to have output from employees, and the ideal from the point of view of the employee is to have income without employment. . . . The Buddhist point of view takes the function of work to be at least threefold, to give a man a chance to utilise and develop his faculties; to enable him to overcome his ego-centeredness by joining other people in a common task, and to bring forth the goods and services needed for a becoming existence (pp. 54-55).

Furthermore, Schumacher's theory draws heavily from Gandhi's economic thought, which, for all its lack of professional sophistication

(or perhaps for that very reason), was nonetheless the product of a wise soul, one which shrewdly insisted on moderation, preservation and gradualism. Gandhi's economic thought started (and finished) with people; their need for strong morale and their desire to be self-determining. He makes us ever more aware of this when he states: "Poor countries slip and are pushed into the adoption of production methods and consumption standards which destroy the possibilities of self-reliance and self-help. The results are unintentional neocolonialism and hopelessness" (p. 6).

Finally, this orientation is consistent with the prevailing patterns of thought toward rural development in Third World Countries worldwide. For example, the United Nations Economic and Social Council, in its Conference Report to the Executive Board in 1974, noted that the ultimate goal of rural development is to improve the quality of rural life in all its dimensions and for all rural people, and that the following are among the basic requisites for improving the quality of life--for the individual, the family, and the community--in rural areas:

Improving the welfare of infants and children, including their physical, psychological, and social development, by such measures as improved pre-natal and post-natal care, nutrition, health protection, and by various forms of entertainment, recreation and social activities appropriate to their age.

Improving the physical and mental health and household amenities of entire families, through, for example, improved sanitation, nutrition, health care, advance in family planning, and home improvements.

Improving family resources and their management--for example, by adopting spare-time productive activities such as cottage industry work and side crops; conserving land; constructing and maintaining farm equipment and facilities; better handling of credit debts, and savings; improved family budgeting and better informed, balancing family size and resources.

Improving basic community facilities through community action, such as construction or improving community water supplies, roads and drains, schools, community centers, recreation areas and so forth.

Strengthening the institutions, processes, and leadership base for local self-government, self-help, and political expression-- for example, by establishing or strengthening local councils, youth and women's organizations, cooperatives, or similar societies (including self-run organizations through which small subsistence farmers and landless laborers can collaborate and be given a voice) and by leadership training in various fields.

Improving community cultural, educational, and recreational activities, including sports and social activities for young people, multi-purpose community reading and learning centers, creating of local newspapers and bulletins, restoration of traditional art forms, entertainment, and ceremonies, marketplace film showings and demonstrations; organized visits to interesting places.

Improving social and economic justice and mobility within the community, including improvement in the roles and status of girls and women--for example, by broadening learning opportunities of many kinds of girls and women and other neglected sub-groups; expanding and diversifying the leadership structure of the community; creating special organizations and activities for girls and women; standardizing and recording land titles and contracts; and improving the system of local law enforcement and justice.(pp. 86-88)

Thus we have focused on the rural individual family and community as primary client(s) for the LRC-BCES. More importantly, as the Impact Model develops, we will see that the individual is not only a user of the system, but in the final analysis, when given the appropriate environment and opportunity, can become the richest resource from which education programs can evolve.

The Client and Client Groupings

The client of the LRC-BCES is the village citizen who is representative of the rural poor throughout Latin America, irrespective of sex, age, and occupation. Since the individual does not live in a cultural vacuum, integration of client with the LRC-BCES system includes systematic attention to the social and cultural environment of the village as well as that of the client's country. Full understanding of the embedding context is essential to successfully installing the organizational component of the model. It means essentially that the client must be viewed as at least three-

dimensional, each having implications for program organization, and each having an integral relationship with the life experience and expectations of the rural individual. Figure IV-2 illustrates the three perspectives and indicates the program implication at their most immediate level.

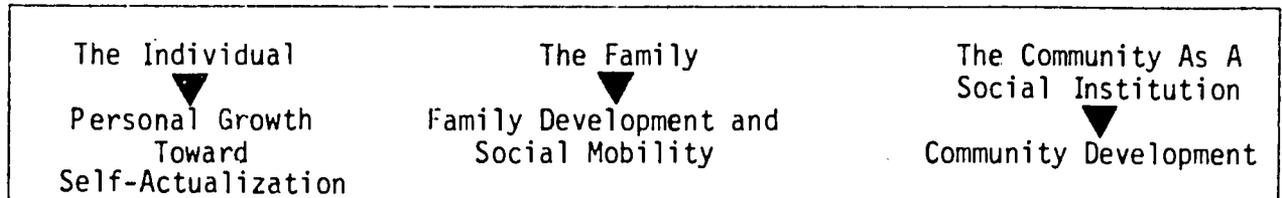


Figure IV-1. The client perspectives and their general program orientations.

The three client dimensions imply the general parameters of the LRC-Based Community Education Systems at any given point of impact and provide a thematic orientation for developing a curriculum base for addressing the special learning needs of the groups and of the individuals:

1. The Individual--Need for personal growth, the acquisition of personal and subsistence skills and self-actualization.
2. The Family--Needs for family life skills, social development and means for improving their pattern of cultural assimilation.
3. The Community--Needs for skills, organization, and economic development, and basic resources to provide communal needs implicit with and congruent to the skills and attitudes derived from the satisfaction of individual and family needs.

Program Needs by Client Groupings

Figure IV-2 indicates the organization and distribution of major learning needs for the three client perspectives. Here we see that the needs of these groups are both basic and extensive and represent a broad range of "educational" and training areas.

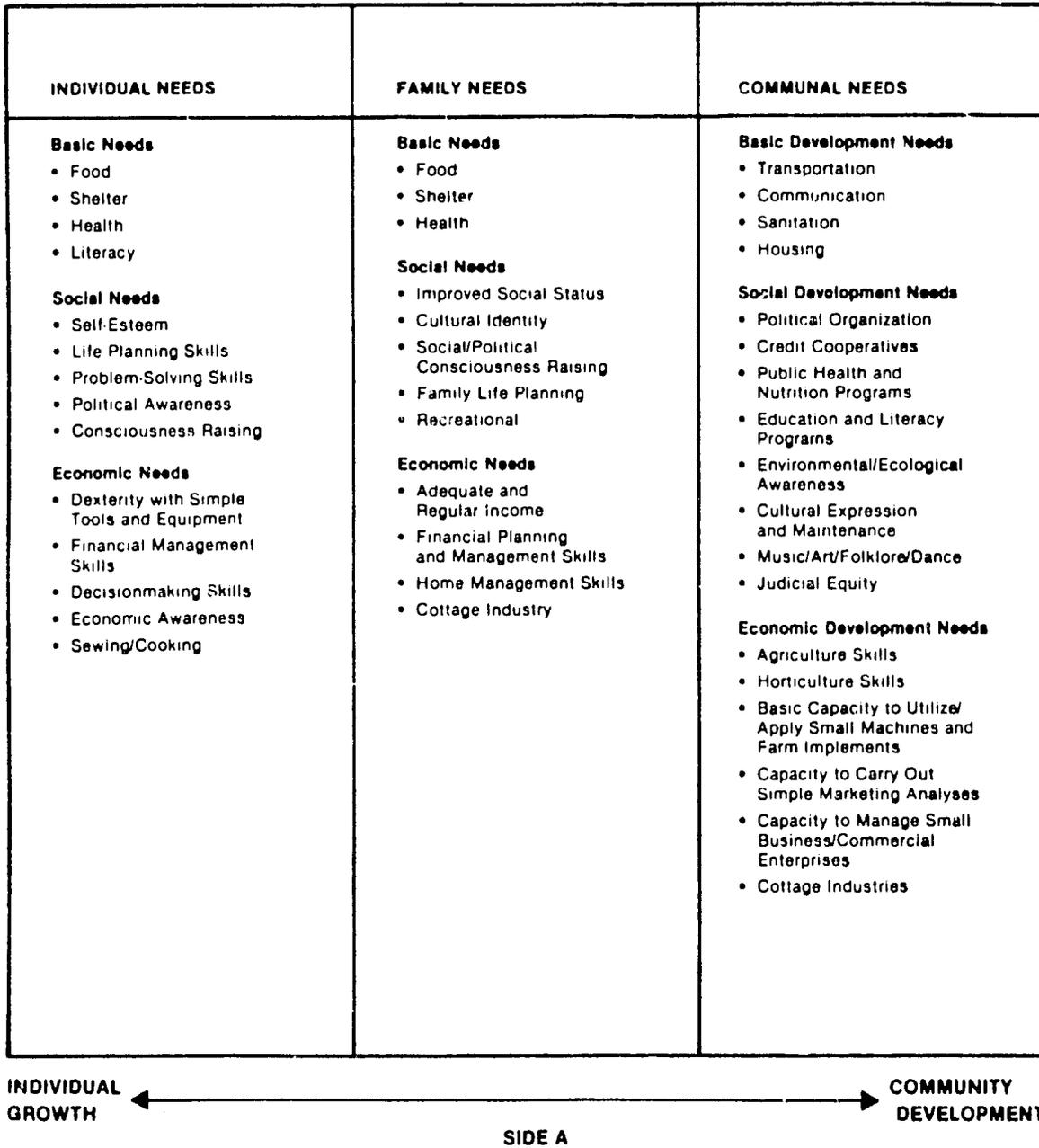


Figure IV-2. Basic, social, and economic needs of the individual, family, and the community in rural Latin America.

Individual development and self-actualization. The purpose of any education/training program is ultimately the self-improvement of the individual; that is, the individual must grow and change in the process of learning. This component of the LRC-BCES model accommodates for growth and change requirements which should occur at the individual level in rural Latin America. These are: The basic needs of food, shelter, health and functional literacy. The individual also has social and economic needs, as illustrated in Figure IV-2. Here we have emphasized the need for developing self-esteem, life planning and problem solving skills, and the ability to become an active community member through an improved political awareness and consciousness raising state of mind. Too, we believe that the individual has many basic economic needs translated into terms like dexterity with tools or equipment financial management, sewing, etc., so that he/she can work at basic repair or construction tasks and acquire the skills for good financial management, decisionmaking, and for self-employment in such cottage industry skills as sewing and cooking. This is only a beginning list; as community education programs expand and new participants get involved, the list will grow and reflect the new and unique needs of individuals from all aspects of the village community.

Family Development. As with most societies, the basic unit of social structure in rural Latin America is the family. This component of the model includes this unit as one of the basic elements of the program needs that the LRC-BCES must serve. Programs meeting the needs of rural Latin American families would emphasize those programs which serve to relate to the family's need for food, shelter, and to other family life planning activities such as economic planning and awareness, family health, nutrition and sanitation, healthy child-bearing and child-rearing practices. It would encourage programs that provide family recreational activities as well as enrich and increase family avocational interests.

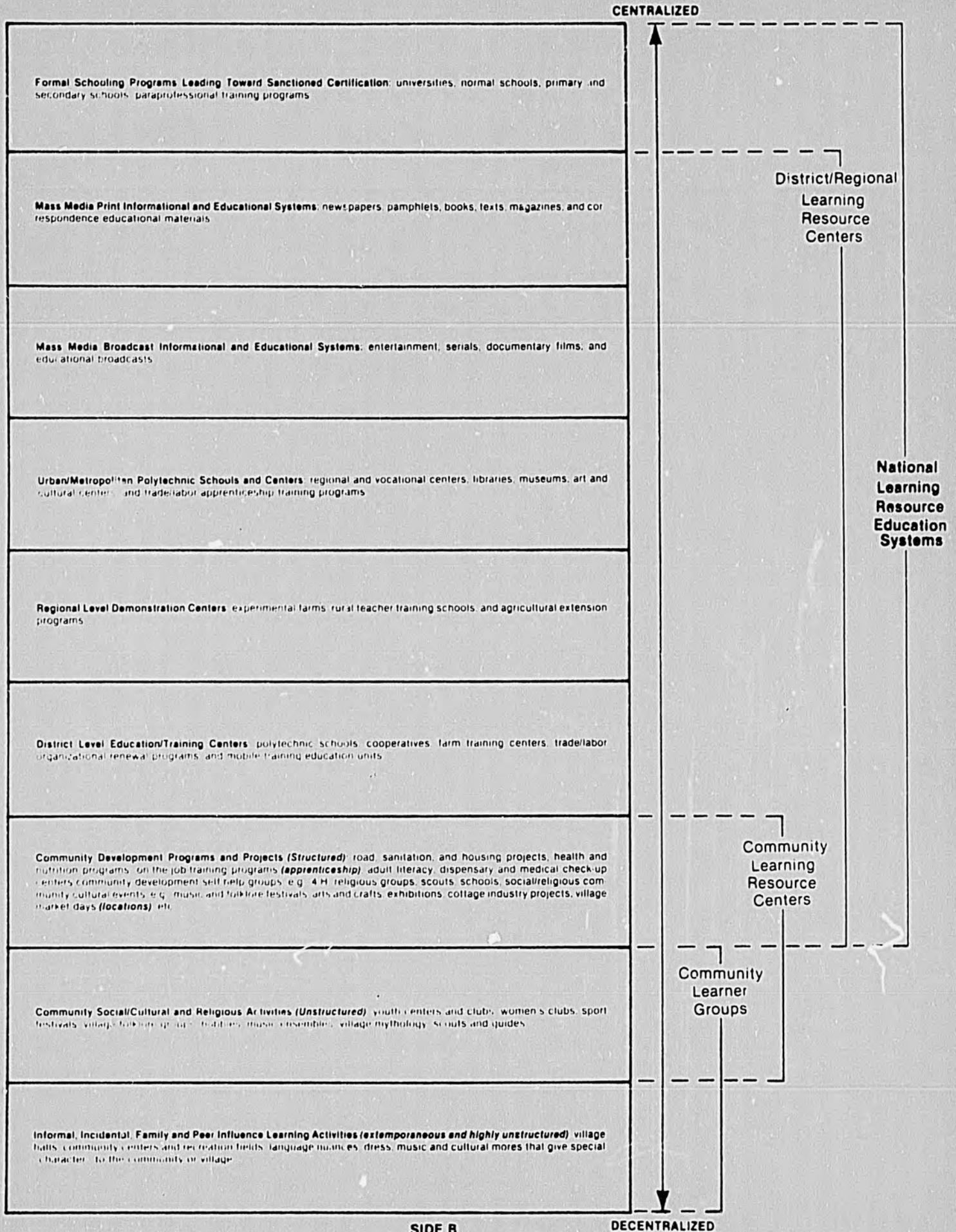
Community Development. The LRC-BCES, to achieve a community level institutional reputation for facilitating education programs that support the "economics for permanence" concept of development, must work toward solving some of the basic vocational and skill development needs of its community.

Basic community development needs throughout rural Latin America begin with the traditional needs of better transportation, communication, sanitation and housing facilities, and end with those kinds of commercial needs that reflect the necessity to build an economic base and social fabric that give the community its viability, its respect, its national identity. An LRC-BCES model that meets these needs would have a wide variety of program offerings; many of the programs would be geared at developing the human resource capacity to maintain and improve the social, cultural, political, and economic bases of the community. Others might be more specific in that they would meet the needs of special groups, special organizations or special problems.

In sum, we see that the first component of building the LRC-BCES Model is the development needs dimension of the rural individual, his/her family, and their community. It must be re-emphasized that although the categories of groupings, i.e., the individual, family and community, are basic to the needs dimension, the specific needs discussed here are merely illustrative. Each dimension would take on special characteristics of these groupings as they may be addressed in different communities.

The Typology of Program Settings or Delivery Systems

To meet the learning needs of the client groups, we must organize resources for learning in ways which will enable individuals and groups to participate in new learning experiences. A typology of organizational settings is shown in Figure IV-3, which illustrates the range of options available. For example, from the political dimension, the range is spread along a continuum that goes from highly decentralized, informal education settings to highly centralized, highly structured formal education systems.



SIDE B

DECENTRALIZED

Figure IV-3. An Illustrative Typology of Organizational Settings (LRC-BCES Forms and Delivery Systems)

Furthermore, this continuum has other subdivisions. From the geopolitical viewpoint, we have divided this component into four major divisions. In essence, these four levels correspond to the four major categories of learning resource center-based community education systems developed throughout this paper. These are: (a) the first level, or the Community Learner Group, (b) the second level, or the Community Learning Resource Centers (CLRC), (c) the third level, or the District/Regional Learning Resource Centers (DLRC), and (d) the fourth level, or the National Learning Resource Education Systems (NLRC).

These steps or levels established along the continuum are predicated on community size and on the correlative continuum of informal-formal schooling processes possible or extant at each level and which range from the individual and family group to the major university or central ministry of education.

1. First Level--Community Learner Groups

When we refer to learner groups we refer to the nuclei for learning actions in the first level communities. A learner group would typically belong to one community. Some of these learner groups would be groups of women, some would be groups of men, and some would be mixed. Peer-group interaction is the hallmark of these groups. Many of them would have overlapping memberships and would be led by local leadership. A community educator (or a person in an equivalent role) would provide the link between these groups and the learning resources of the closest community LRC, the district LRC, or materials and programs made available from a mobile LRC visiting these small learner groups in their communities.

The first level community is less than 2,500 men, women, and children. It is a community that for reasons of small size and/or problems of resources can not probably afford a separate community resource center of its own but would likely be serviced by a mobile LRC or utilize an existing school house or church for organizational purposes.

The LRC-BCES should be organized from the bottom up, with beginnings made in the most remote, underprivileged, and isolated communities.

- Communities should take most of the responsibility in defining objectives, organizing instruction, promoting motivation and action, and evaluating results. "Self-help brigades" or groups such as "Men/Women/Youth for a Better Tomorrow" should be created to inspire local initiative and responsibility. Peer-group interaction is a primary characteristic of the learning process.
- The community should be the primary setting for instruction, discussion, action, and evaluation. This may mean the establishment of discussion forums based on radio listening and other learning resources.
- Learning can take place using learning materials without a learning resources center building, but if such a center is constructed, local labor and local construction materials should be used.
- LRC-stimulated activities and programs should take advantage of what already exists, e.g., social organizations, instructional resources, communication patterns, and traditional media.
- The newer media and materials may be employed for individual family, or learner group instruction: radio, picture sets, and prepackaged instructional materials. If radio is not in the community, it is easily introduced. Radio requires no infrastructure of roads and railways; it is an excellent medium of community education. Production and delivery costs are sometimes as low as 2¢ per person per hour. Mounted pictures and photographs of 18" x 14" size can assist greatly in instruction. Such pictures do not require projectors, electricity, or batteries, and when mounted on strong cardboard, last a long time. Instructional kits that include pictures, models, specimens, and other materials are an obvious choice. If the realities of the situation permit, films may be used.
- Those who can read and write can become teachers, making it possible for the community to use written materials.
- The community should understand that all work done for community education locally has a part in the larger, national perspective. The realization that every effort, no matter how small, has a place in the national picture will provide an important sense of being a part of the achievement of a national vision.

No single approach or model will solve the problem of all countries. Institutional solutions will have to be evaluated and adapted to the realities of the individual region or country. These may involve the invention of new organizational mechanisms or the restructuring of existing organizations, plus the invention of new instructional or organizational roles to carry out "the new institutional purposes." Figure IV-4 illustrates the building blocks from which these new solutions can be built.*

These building blocks include formal governmental institutions of learning, informal education, the church, youth organizations, women's organizations, public health institutions, local governmental agencies, farm cooperatives, union apprenticeship and trade training elements, public broadcast and periodical communications, local self-help and cultural institutions and external sources of agricultural extension, journalism, radio, library services, etc. Also, local commerce and industry, the armed forces, international service clubs, NSIS services, peace corps and others may become building blocks--any available group, service, material or local phenomena may become a building block for the LRC at the local level.

Schools, union training programs, libraries, newspapers, and the USIS can develop and store materials, papers and other forms of written, visual, and audio information. They also offer resource people and facilities which local and other more remote communities can utilize for instruction.

Governmental agencies, the armed forces, peace corps, youth groups, women's organizations and international service clubs offer expertise

*Appendix B presents an analysis of the SRI Lanka Rural Development Societies, administered under the ministry of Public Administration, Local Government, Home Affairs and Justice. In this discussion, major attention is given to the more than 8,000 Rural Development Societies. These societies, which function at the village level, reflect many of the substantive characteristics of the Learner Group described above.

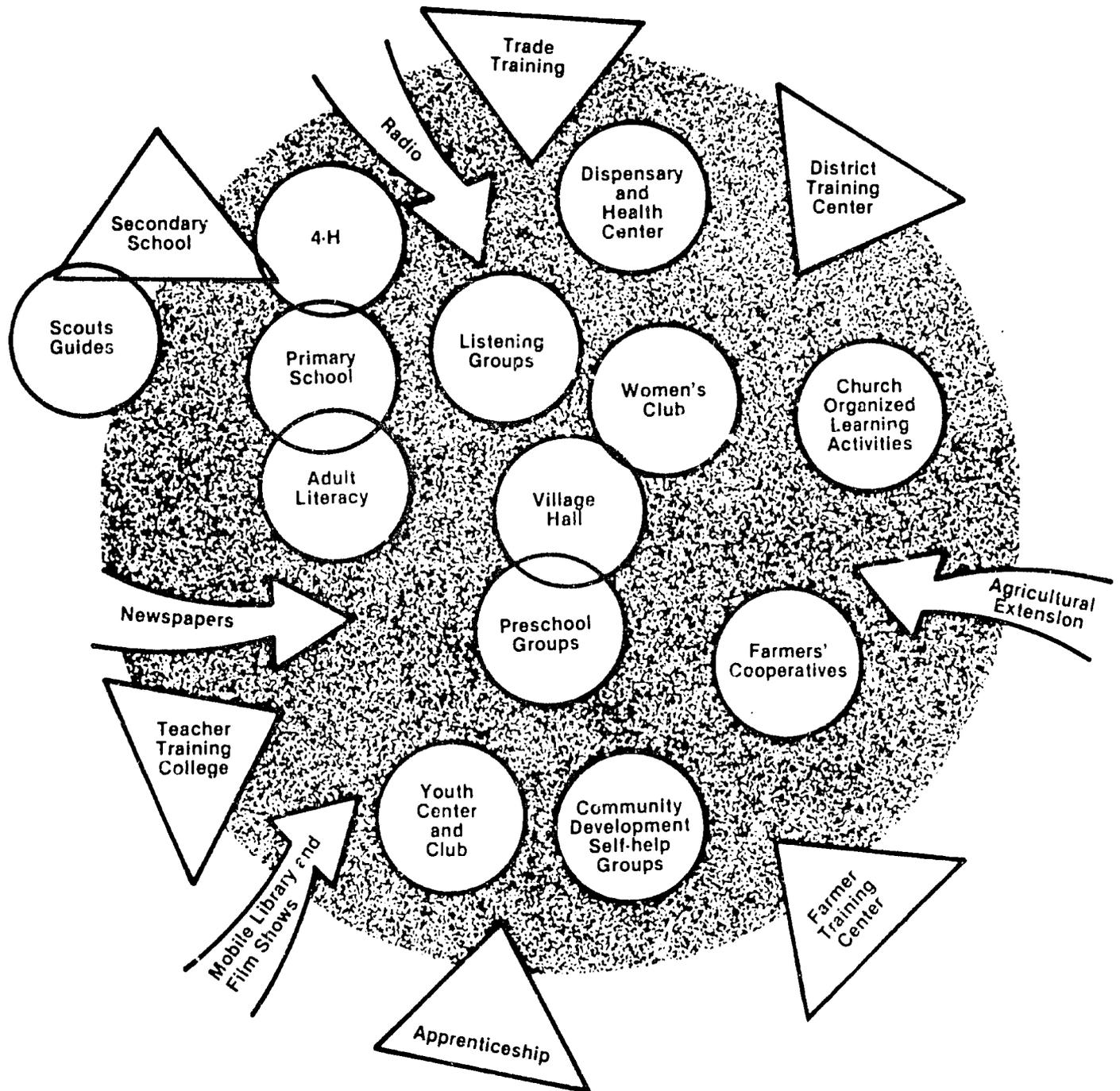


Figure IV-4. Village level informal learning and indigenous learning institutions. These constitute existing village-level building blocks for developing learner groups. Adapted from *Building New Educational Strategies to Serve Rural Children and Youth*, prepared by the International Council for Educational Development, for the United Nations Economic and Social Council, 1974, p. 191 (6-9A).

and manpower for the accomplishment of community development projects. In most cases this is their only reason for existing; focusing their combined talents should result in a responsive overture.

Industry, commerce, farm cooperatives, etc., have a vital stake in the market place--the blood of community economics. Frequently their financial and material resources can be tapped for organizing, sustaining, and completing projects which strengthen or expand the market.

Local self-help and cultural institutions, as well as artists, the church, respected leaders, and the elderly can provide a cultural matrix which supports local traditions, mores, customs, so as to attract support and minimize antagonisms or hostilities within the total community.

Many of these organizations, institutions, and potential resource individuals are now functioning in pursuit of special goals in ways which do not materially aid the community in its areas of greatest developmental need; or they are working along with minimal effects. Drawing them together focuses and complements their energies toward objectives which benefit community and member.

2. Second Level--Community Learning Resource Centers

A CLRC is visualized as being a multipurpose facility at a second level community that serves all the instructional, informational and recreational needs of a community. At this site there would be provisions for storage and utilization of instructional materials and equipment as well as for formal and informal gatherings. In some instances, services such as health, agriculture extension, rural credit and banking would also be provided to communities through such centers. Needless to say, the CLRC would be working at the community level through learner groups of men, women and youth organized around different learning or training interests.

Second level communities are those with from 2,500 to 5,000 people, with homes and farms so situated that a Community Learning Resources Center (CLRC) would be accessible to anyone who may wish to use it. In communities which are larger than 5,000 people, more than one CLRC may be necessary. Considerations in establishing CLRCs include:

- The development of public awareness and community understanding of the concept should begin first. A CLRC should not be forced upon the community from the outside but should grow from locally identified needs within the community.
- The choice of location, the facilities necessary, the relative contributions of government and local peoples, the construction and long term maintenance of the center, should be discussed within the community.
- If a location for the center is available, a building might be constructed. The building should be ecologically congruent with the environment. Local materials, as far as possible, and local labor should be used.
- The choice of learning methodologies and of media should be consistent with existing cultural realities and learning needs. Though the local, formal educational system may form the core of teaching-learning, any of the newer media available should be incorporated where feasible. These are radio, tape recordings, polaroid cameras, hand-held TV cameras with facilities for video-tape recording, rural newspapers, libraries of books and specimens.
- The CLRC should not be allowed to become elitist in terms of its programs or its media technologies. For a CLRC to become contemptuous of the people it serves would be tragic. A successful CLRC is a "common man's university," one that ultimately fulfills all the instructional needs of the community.
- A CLRC must be community-centered, but not community-bound. It should not be self-contained in relation to the total network of learning resource centers nor as isolated from the total learning society of the country.
- The CLRC may borrow materials from the national network of learning resources centers and depend heavily on the production and training services of the District Learning Resources Centers (DLRC) to be described below. The relationship between these centers at the three levels ought to be reciprocal.
- No single prescription will be good for all communities in Latin America. Local policy makers and their aides will be operating within their own socio-political, economic, and institutional realities and will have to design their own situation-specific solutions in regard to CLRCs.

- Perhaps the solutions invented by local policy making groups will not include establishing a CLRC. Different kinds of teaching/learning philosophies may not lead to the choice of an institutional form. But if a CLRC is chosen, it is likely that the organizational and instructional decisions developed for learning resource center-based community education programs also will differ from region to region and country to country.*

3. Third Level--District Learning Resource Centers**

With learning resource center-based community education systems at the levels represented by first and second level communities, back-stopping and support needs become apparent. For example, there is the need for leadership at the community level to be provided by suitably trained and sympathetic outsiders; the need for materials preparation, such as radio broadcasts, to be used in discussion forums; picture sets on the themes of agriculture, health, nutrition and family planning; kits of various kinds; folders, leaflets and in-trunk libraries for circulation in and among communities; and the need for the training of local leadership cadres.

*In Appendix B, we present two scenarios of a typical CLRC as we envision it to be in prototype form. These scenarios, although projective in nature, strive to translate the theoretical foundations presented here into real lifelike programs as they could be in rural village Latin America. Also in this Appendix, we present examples of actual ongoing nonformal education programs which illustrate many of the characteristics of the CLRC.

**A significant amount of attention was given to the selected designation of District over Regional as an intermediate LRC institution. Naturally, different nations possess different connotations for these words, so the distinction may be moot anyway. However, the thinking behind the selection deserves attention. The important point is that the backup center must be able to service effectively the CLRCs and the Learner Groups. So, its geographic location is most important. Secondly, we recognized that in reality, an institution of this nature because of its important functions, must be located in major geopolitical areas where adequate facilities and communication resources are available and where skilled manpower can be secured readily. Since the concept of district implies a geographic and geopolitical center logistically closer to the distant rural villages than region does, we opted for the term district. Realistically, this backup system may not be able to get to the "district" levels initially simply because the major transportation and communication geopolitical units may be regionally located.

Thus, the typical DLRC would function around the following three program objectives:

- The organization of learning resource center-based community education programs at the field level;
- The production and procurement of learning resource materials;
- The training of local level leadership cadres, community advisory groups and CLRC staff.

We are not suggesting that a DLRC must be established in each case to begin initiatives in community education, but rather that they evolve as needs for more extensive backup support emerging from established programs within first and second level communities.

Consistent with the needs and objectives cited above, we conceive of the DLRC materials production program to fit the following pattern:

- Radio broadcasts. Radio broadcasts could be the most important production activity of the DLRC. The transmission facilities may be owned by the DLRC or be made available to it for part of the day. (Nearly all, if not all nations provide some free access to non-commercial broadcast bands for educational purposes.)
Tapes of select programs should be prepared for repeated use and made available to users outside the broadcast area, as well as for use within the service area communities, when cheap tape recorders become available.
- The DLRC should also prepare folders, leaflets, or booklets to accompany these tapes and to be distributed widely. These can be read by literates living within these communities to friends and neighbors not able to read.
- Picture sets. To communicate information that requires pictorial presentation, the DLRCs should produce picture sets of photographs and graphics that go with the radio broadcast or which can be used independently in community level discussion forums for learning and assisting in the making of decisions on various aspects of agriculture, health, and nutrition.
- Learning kits. Some learning may require more than pictures and graphics. Actual specimens and other realia may be necessary. For this reason, the DLRC should prepare simple learning kits for use in the first level communities. These kits should be assembled in boxes made of hard plastic so that they can be transported over large distances without damage. Games, simulation materials and simple puzzles or craft materials have proved highly successful in this medium.

- Tin trunk book libraries. The DLRC also should function as the headquarters for a network of mobile tin trunk libraries of books, maps, picture sets, etc. These libraries may be nothing more than 30-50 units of materials housed in a tin trunk which can be left in communities for two to three months. New books should be regularly brought to the library and old unusable ones removed. The tin trunk library would move systematically from community to community, preceded by simple promotional materials and activities designed by the DLRC, orchestrated by the DLRC and first level community learner groups.
- Training materials. The DLRC should prepare training materials to be used by its community leaders in the training of cadres in the field. These training materials can be in the form of tapes, slides, and exercises that trainees can use to learn and evaluate their performance.

In Appendix B the project staff has collated a number of program descriptions or worldwide projects/programs which tend to play out the role of organizational actions described above for the DLRCs.

4. Fourth Level--National Learning Resource Education Systems

We move now to the upper end of the continuum--to the national level. The national learning resource center is the central planning and organizational development component of the national LRC network. As the national leadership and integrative organizational unit, the NLRC is the place where policy and planning occur. It must also be the system's fiscal development agency, providing responsible leadership for generating and distributing monies essential to program development throughout LRCs network.

We conceive of the national program as a concentration of production facilities and mass media programs, especially print and broadcast, which provide services to other LRCs. The NLRC could be the national library where expensive and extensive materials are catalogued, housed, and loaned. It would have television and radio production capacity, printing presses, a lending library for rare and expensive books, encyclopedias, microfilm, videotapes, a correspondence education bureau, a research and evaluation unit, and a documentary film unit.

A national learning resource center-based community education system requires a country's resources to be harnessed in support of the various community education programs in the smaller towns and districts. Central planning is needed if any society is to achieve its national visions. A central organization with national resources at its command can supply support service as well as leadership to individual communities. At the national center, programs and materials can be produced to carry out the overall instructional strategy at the community and district levels, including the interpretation of national purposes to individual communities.

Obviously a National Learning Resource Center would be expected to give strength and direction to any country's hope for a successful community education program. The NLRC is, then, the top level.

A NLRC should produce materials and messages that serve the nation's purposes and those of the individual communities:

- A country's national heritage and the contributions of the various ethnic, community, and regional groups to the nation's cultural, economic, and social achievements should be brought to the attention of all peoples.
- General messages should seek to build a national educational identity, to create ethnic and racial harmony, and to teach economic, social, and scientific literacy.
- Messages with content of universal interest can be generated to stimulate and to assist with discussions of problems in specific, local settings and lead to the invention of solutions unique to the community or district.
- The facilities of NLRC can be made available to local groups to produce community-specific learning materials beyond what their own resources will permit.
- A division of labor can be developed between the NLRC and the community and district centers to produce multimedia instructional packages, with parts of these packages coming from the NLRC and other parts from the community or district.

The institutional arrangements for developing an overall strategy for a learning resource center-based community education system must include funding as well as provisions for its governance.

Provisions for funding and governing the learning society must be adequate for the establishment and promotion of all learning resource institutions in a country; for establishing general production and distribution policies; and, for the review of such policies on a continuous basis.

An NLRC may begin as a conglomerate containing the following instructional media elements:

- A materials unit to produce charts, posters, graphics, specimens, models and kits;
- Radio transmission with program production facilities;
- A documentary film unit;
- A unit for instructional films;
- Television production studies and transmission facilities;
- A textbook research unit for producing school books as well as books for newly literate adults coming out of literacy classes;
- A printing press with the capability to print books, multi-colored charts, posters, and other didactic materials;
- A lending library that can loan books, films, and tape recordings to all communities;
- A correspondence education bureau; and
- Storage and distribution.

From National Network to Separate Elements

As the communication needs of the country expand--become more clearly defined and urgent--as institutional experience is gained, and as more resources become available, elements of the NLRC may split and become separate entities (Figure IV-5). The radio element may become a separate public radio broadcasting system; a national documentation production unit is a possibility; television services may develop

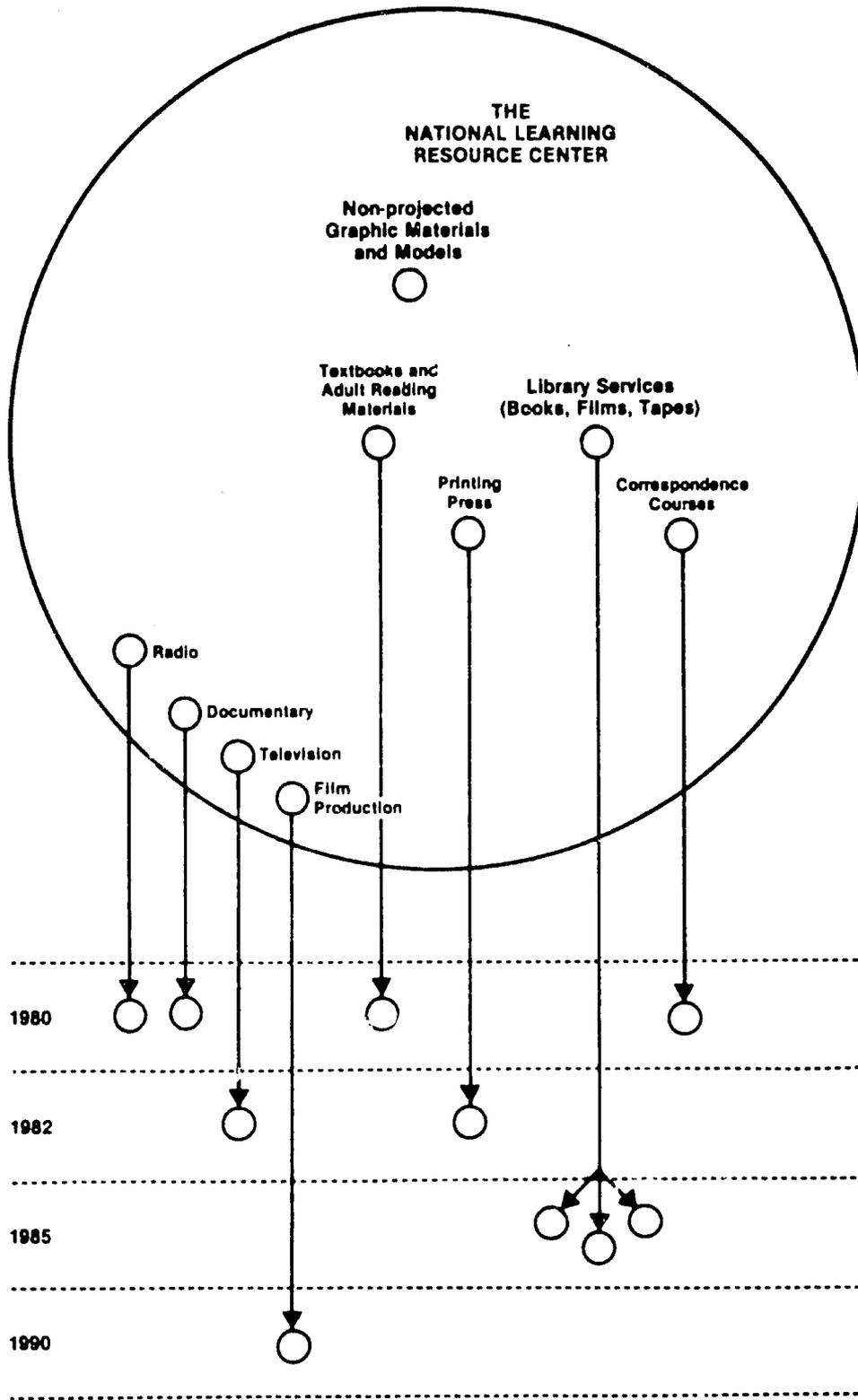


Figure IV-5. Elements of the NLRC

into a national television network; and in this way there may be created a textbook research center, a national library system, and a national film library.

A NLRC for community education can be most easily subverted by improper policies for the procurement and purchase of instructional materials. The easiest way to kill such a center is to import (either free or at great cost) a whole library of documentary and instructional films from the United States, Canada, or European countries.

While equipment will have to be imported, as will some materials such as raw stocks of film and paper, instructional materials should not be imported except in the most extraordinary circumstances. When such materials must be brought from other places or are received as gifts from outside governments, they should be adapted by editing, dubbing, or adding new sound tracks before they are released to communities with a different socioeconomic and cultural history. This means that practically all the material in and distributed by the NLRC will be produced within the country, by the community, district, and national learning resource centers.

The national integration, organization and distribution of locally developed instructional materials such as tapes, visuals, photos, films, etc., can also serve as an invaluable cultural arts documentation system.

Miscellaneous Level--Special Projects. In most developing countries, special projects and learning materials have been or are being designed to serve immediate community needs. Quite often these projects arise because leadership is necessary for crisis management or to demonstrate the national government's interest in a particular problem, region, ethnic group or social class. Sometimes such special projects are described as demonstration, pilot, or pretentiously labeled "experimental projects." They may have national

scope or be oriented to a region, district, or community. Unfortunately, most have been known to languish after the first flush of enthusiasm. The LRC-BCES Project Staff, recognizing that special projects must have a place in any country's model, has tried to set forth some basic guidelines for special project programming. The flourish-languish syndrome assumes regular government control and administration of the LRC-BCES, which is not recommended by this proposal, but which must be considered as a possible contingency.

Following are criteria for establishing special projects:

- Special projects should meet important and immediate needs of a community or region.
- These projects must be conceived in the system's perspectives that respond to a national vision, utilize national resources, possess structural implications for the short and long term. Decisions should be made at the time of planning to show how the project fits into a total national planning perspective, how the project will expand and in what phases, and how institutional arrangements will be handled.
- Special projects must play a generative role in the actualization of the ultimate national vision in regard to the learning resource center-based community education system. A special project could be the first step in a process of social/institutional development, resulting ultimately in a national network of Learning Resource Center-Based Community Education Systems dedicated to the achievement of a learning society.

Examples of special projects are easy to gather from the literature of community action in Latin America and elsewhere. Some have succeeded beyond expectations and others have failed, perhaps because their leaders did or did not anticipate the need for future planning as they worked intensively upon current implementation. Following are some cases:

<u>Learning Objectives</u>	<u>Major Clientele</u>	<u>Programs</u>
1. General Education (Literacy, numeracy, change motivation, development-orientation)	Rural youths and adults	ACPO in Colombia; Literacy Programs in Mali and Thailand; Arovodaya in Sri Lanka
2. General education plus occupational orientation and training (including elements of both farming and non farm occupations)	Early dropouts from formal schools, primary school leavers, youths in formal institutions	Cuba's Schools-in-the-Country-side; Jombang Project in Indonesia; Youth Camps and Youth Centers in Jamaica; village Polytechnics, Ntl. Youth Service, and Youth Centers in Kenya; COPs in Mali; Diyagala Boy's Town in Sri Lanka; prevocational courses in Sri Lanka secondary schools; Rural Education Centers in Upper Volta
3. Improvement of family life (health, nutrition, home economics, family planning, etc.)	Rural adults, Women and girls.	ACPO in Columbia; Women's Organizations in Kenya, Mali, and Sri Lanka; Literacy and family life program in Thailand; Sarvodaya Movement in Sri Lanka.
4. Training in farming and allied sideline production	Youths and adults in rural families rural out-of-schools youths	PACCA in Afghanistan, SENA-PPP-R in Colombia, ORD programs in Korea, Jombang Project in Indonesia
5. Training in rural non-farm skills	School leavers and other adolescents, rural adults employed in nonfarm occupations	SENA-PPP-R in Colombia; mobile skill training and cottage industries Projects in India; Vocational Improvement Centers in Nigeria; Mobile Trade Training School in Thailand
6. Training for small entrepreneurship and management	Workers and owners of nonfarm enterprises, unemployed educated adults	Rural Industries Project and Entrepreneurship Training Programs in India; Vocational Improvement Centers in Nigeria
7. Training for village level leaders, animators, and extension workers	Extension officers; new recruits for animation and extension work; Village youth and women leaders; cooperative officers; unemployed educated youth	CARs in Mali; Sarvodaya in Sri Lanka; National Youth Services in Sri Lanka; ORD and 4-H Programs in South Korea; IRRI Extension Training Program in Philippines; Tanzania's Cooperative Education Program

Instructional Technology and
the Materials and Methods of Instruction

The first section of this chapter focused on the needs of the individual, his family, and his community. The second section laid out a typology of organizational settings which established the parameters for types and sizes of LRC systems. These systems were divided into four major subdivisions: learner groups, community learning resource centers, district learning resource centers, and national learning resource education systems.

Now we turn our attention to the third and last major component of the Impact Model: the materials and methods of instruction available to the LRC-BCES. We have developed this component using a systematic approach to media utilization as it applies to the LRC-BCES.*

The methodology supporting the instructional technology approach is rather extensive and demanding. Essentially, it suggests four major areas of application, and eleven critical steps (Brown, 1977, p. 5):

1. Goals and Content. What goals are to be achieved? What content is to be studied?
 - Step 1: Establishing goals
 - Step 2: Determining subject content
2. Conditions. How, and under what conditions will participants seek to achieve goals?
 - Step 3: Determining the status of the learners
 - Step 4: Selecting teaching-learning modes
 - Step 5: Selecting types and schedules of learning experiences
3. Resources. What resources are required for necessary learning experiences?
 - Step 6: Selecting and assigning personnel
 - Step 7: Selecting learning materials and equipment
 - Step 8: Choosing adequate physical facilities

*Under separate contract, James W. Brown (1977), a consultant in instructional technology, prepared a major report entitled Media in the LRC-BCES Program. This report serves as the background for the material developed herein.

4. Outcomes. How well were goals achieved? What needs to be changed?

- Step 9: Implementing the instructional program
- Step 10: Evaluating the instructional program
- Step 11: Improving the instructional program after assessing the results of the evaluation.

Using this paradigm as the analytical screen for studying the goal and function of methods and materials for the LRC-BCES, the instructional technology component takes on special qualities with special interpretations.

Step 1: Establishing Goals

Earlier in the methodology chapter of this paper we discussed the process of needs negotiations as a key process in the community educator's task of developing programs that in fact reflect the real needs of the rural poor. In this process we suggested three needs negotiations tasks--validating nationally determined needs in community settings, developing profiles of felt needs, and developing integrated needs profiles through needs negotiations.

From these tasks, we suggested that the likely general goals for LRC-BCES audiences would incorporate the following kinds of development oriented programs.

More production from the fields so that farmers can have more to eat and sell and the nation can use the surplus.

More equitable distribution of the wealth produced from the fields so that the producers can have a greater share. Also, rural-urban development imbalances should be removed through more equitable government expenditures in rural areas.

Better health for the rural poor through nutrition education and the supply of nutrients where those cannot be produced by the rural populations themselves. Education in preventive medicine and family education so that the poor can make decisions about the size of their families.

Better environment in the rural areas that is aesthetic and ecologically sound and supportable.

Access to education and culture through schools, community education centers, learning resource centers; radio, TV, and other media; songs, dances, crafts, theatre, and film.

Improved skills for the rural poor in agriculture, cattle farming, and decisionmaking, in management and politics.

Appropriate technology and employment for the rural areas. The technology has to be labor intensive and regionally supportable and has to create employment for the rural poor within the rural areas.

More dynamic community organization within rural areas to move communities towards self-government and more cooperative organizations.

Greater participation in the local politics and thereby in the national politics through participation in all aspects of socio-economic and political decisionmaking. (Bhola, 1977, pp. 12-13.)

Step 2: Determining Subject Content

Selection of subject matter content requires in-depth study of the goals and objectives discussed above. Subject content is, of course, the most important element in the teaching/learning process, and it varies as needs, goals, and objectives vary. For the purpose of this project, Ofiesh Associates were asked to do a preliminary needs assessment in the area of determining the subject content areas that might be most relevant to the rural communities addressed by this model. This assessment elicited nine subject area categories which, we believe, are basic to the LRC-BCES model. We also used these nine subject areas in developing the Learning Resources Material Catalog. Table IV-1 lists the subject content areas.

Step 3: Determining the Status of Learners

The Systematic Approach of Instructional/Educational Technology posits a need to examine the prior status of learners with respect to three things: (1) the nature and possible influence of socio-psychological factors surrounding them, (2) the present deficiencies

Table IV-1

Subject Content Areas and Other Classification Categories of the Inventory of Instructional Reference Materials (Prepared for the San José University Project Under Special Contract by Ofiesh Associates, May, 1978).

HEALTH (Class 1)

Sanitation
 Body Care
 Dental Hygiene
 Mental Health
 Heart and Lung Dysfunction
 Miscellaneous Physical Dysfunction
 First Aid
 Paramedical
 Nursing
 Childbirth
 Infant Care
 Contraception/Sexual Functioning
 Family Relations
 Prevention (disease, poisoning, infection)
 Safety

HOME/PERSONAL (Class 2)

Energy Saving/Conversation
 Consumer Protection
 Food Preparation
 Nutrition
 Miscellaneous Homemaking Skills

AGRICULTURE/FORESTRY (Class 3)

Forestry
 Forestry Fire Prevention/Fighting
 Fertilizers
 Irrigation
 Pest Control
 Land Use/Crop Rotation
 Farm Tools & Equipment (Use)
 Erosion, Watershed Management

CROPS (Class 4)

Fruit and Citrus Trees
 Coffee
 Cotton
 Soy Beans
 Hay/Silage
 Tomatoes
 Miscellaneous Crops

ANIMAL PRODUCTS/HUSBANDRY (Class 5)

Dairy Products
 Cattle
 Sheep/Goats
 Hogs
 Poultry
 Fish/Seafood
 Horses/Mules
 Prevention/Sanitation
 Miscellaneous Farm Animals

CONSTRUCTION (Class 6)

Masonry
 Carpentry
 Plumbing
 Home Design/Architecture
 Landscaping
 Heating (Installation)
 Waste Disposal/Sewage
 Wells/Water Drilling
 Painting
 Roofing & Windows

TECHNICAL TRADE (Class 7)

Gasoline Engines/Motors*
 Motor Vehicles, General*
 Farm Equipment (Maintenance and Repair)
 Refrigeration Equipment*
 Tool Use/Care
 Safety

*General operation, maintenance and repair, NOT theory, design manufacture or construction.

ORGANIZATION & MANAGEMENT (Class 8)

Farm Management
 Co-op Management
 Leadership
 Small Business Management

Table IV-1 (Continued)

<u>EDUCATION (Class 9)</u>	
Teacher Training	Basic Concepts/Skills
Educational Systems Technology	Mathematics
Media/Communication	Catalogs of Instructional Materials
Nonformal Education	Second Language
Literacy	
<u>Miscellaneous Classification Categories</u>	
<u>COST RANGE</u>	<u>LANGUAGE</u>
1¢ to 50¢	English
51¢ to \$1.99	English & other language (bilingual)
\$2.00 to \$10.99	Spanish
\$11.00 to \$30.99	Spanish & other language (bilingual)
\$31.00 to \$75.99	
\$76.00 to \$150.99	
\$151.00 to \$250.99	
\$251.00 to \$400.99	<u>AUDIENCE</u>
\$401.00 on	Between 1 and 5 ages
Free	6 and 12
	13 and 16
	17 and 21
	6 and 17
<u>MEDIA</u>	6 and above
Broadcast Television	12 and above
Radio	18 and above
Individual Instruction	Teachers/Trainers
Teaching Device Required	
Group	
Videotape	<u>LOAN/RENTAL</u>
Cassette	Rent for free
Still Transparencies	Loan, no fee
Microfilm, Microfiche, etc.	
Filmstrip	
Film	<u>DOMAIN</u>
16mm Film	Public Domain
Prints (Photos, Charts, Illus.)	
Audio Tape	<u>SPONSOR</u>
Sound Track	U.S. Government
Optical	USAID
Audio Disc (Record)	
Self-contained book, pamphlet, notebook, etc.	
Script	
Teachers Manual	
Models, Specimens	
Games, Toys, Puzzles	

and strengths of their "before instruction" grasp of what is to be learned as it pertains to information (knowledge), attitudes and appreciations, and applicable performance skills, and (3) the styles, preferences, and habits of learners with respect to learning--either on their own or with the personal assistance of peer tutors or teachers in small, medium, and large groups.

Significant socio-psychological factors that deserve consideration in planning a Systematic Instructional Technology Approach to LRC-based for campesino learning are numerous. It seems reasonable to characterize the rural villager to whom the project is addressed as having many, if not all, of the following characteristics:

- Rural-based, poor farm workers or subsistence farmers and those who supply the labor for producing most of the food produced for the middle and upper classes; economically underprivileged; lacking in the skills of farm management
- Believers of a form of Catholicism whose religious practices and folk beliefs bear little resemblance to orthodox Catholicism; superstitious
- Verbally illiterate; with some aural and visual literacy, but special problems with much of the latter because of lack of experience with pictorial and graphic abstraction techniques and presentations
- Frequently in poor health; relying on folk medicine; without developed concepts of diseases and curing, which they regard as having both natural and supernatural elements; mistrusting scientific medicine
- Members of large, extended families
- Engaged for long hours principally in hand labor, with occasional assistance from animals; users of primitive tools, when available
- Generally without transportation other than "feet" and occasional animals
- Unacquainted with little beyond the immediate environment; likely to write off as unapplicable or impractical examples of life improvements drawn from other cultures

- Living in the countryside or near a pueblo of under 2,000 persons, in self-built primitive housing without running water, electricity, or sewage systems
- Unused to obtaining or communicating information in ways other than by word of mouth; without communication tools
- Without facilities in which to organize and carry out communication or information or information related activities
- Likely to be linguistically handicapped--speakers of native dialects, surrounded by others who speak only Spanish
- Needing to learn; willing to learn
- Growers of most of their own food, of limited variety, nutritive quality, and yield; barterers, in the village market, with very little selling for cash
- Likely to have a small battery-powered transistor radio, but no (or few) newspapers, magazines, or books. (Adapted, in part, from Hamilton, 1977.)

The on-going LRC-BCES program developed for this project envisions, in the first instance, that "before instruction" standings of learner participants will be estimated (as, for example, from records of previous learning performances, literacy statistics, or similar data). Sometimes, of course, such measurements will come, of necessity, through trial-and-error--as through assignments made, checks of suitability of the materials, or actual performance in activities, or assignments.

The learning styles, preferences, and habits of LRC-BCES patrons may be inferred in a number of ways. Given a free choice of several types of materials dealing with the same subject, for example, which of them seem to be used consistently more often than others? What ways of attempting to learn do patrons say interest them most? Which do they like best? Using simple tests, which may range from strictly oral questioning or problem situations involving three-dimensional materials or equipment, what observations can be made concerning the

verbal (print), aural (listening), and visual literacy levels of various LRC patrons? Or the verbal, aural, or visual performance skills level of each? Keeping records of such differences will provide future bases for evaluating results of the LRC-BCES program and for guiding individuals toward improved learning performance generally.

Step 4: Selecting Teaching/Learning Modes

Selection of teaching/learning modes in the Systematic Approach of Instructional Technology is a process which may be expected to require professional judgments of the comparative efficiency of three modal patterns--(1) one student, (2) small-or-medium-sized groups, and (3) large or very large groups. The chief purpose of making such judgments is to seek an optimum match of the instructional grouping mode with instructional objectives, the nature of the subject matter, and the preferences of students themselves with respect to such matters.

Each of the three teaching/learning modes may be described on the basis of arrangements and activities in which, using it, learners and teacher/guiders are able to engage:

- One student, working alone with access to a variety of teaching/learning resources and equipment, as well as to teaching/guiding personnel, from time to time, may achieve highly individualized learning outcomes. The learning resources especially suited to this mode may range from books (including textbooks and manuals, as well as those of an enrichment type) to motion pictures, audio tapes, or laboratory or on-the-job assignments.
- Small groups (two to ten, for example) or medium groups (ten to thirty, for example) permit varying amounts and kinds of intercommunication among and between members while at the same time they remain small enough to "keep the action going." Either may be used for varying amounts of face-to-face discussion and feedback activities; but they may also involve uses of mediated materials (films, flipcharts, audio tapes, and the like) in the study process. Individualization of study focus or method of study is possible in either, but to a lesser degree in the former than in the latter. Weekend or after-church workshops, offered to small groups, suggest the conducting of one-time or ongoing discussion groups (including radio or television forums), short-term classes, and independent

study learning sessions (using learning resource based modules, for example) in the local LRC.

- A large group might be one that is assembled in a lecture hall and comprised of 100 to several thousand persons; it might also be made up of several different groups (small or medium groups in groups, for example), separated into smaller groups in the same or nearby building and each viewing the same television program simultaneously. A very large group, on the other hand, might be made up of similar individuals (or families) viewing a television program distributed over a wide but local area, or perhaps even nationwide. Provision for viewer feedback throughout the area covered would no doubt be a precondition to any labeling such as congregation as a "very large group," however. (Adapted from Brown, Lewis, & Harcleroad, 1977, pp. 8-10.)

Step 5: Selecting Types and Schedules of Learning Experiences

In the context of nonformal education in rural Latin America, the selection and scheduling of suitable learning experiences may be expected to assume characteristics and dimensions that are responses to the situations in which these things occur.

Selection of learning experiences for specific programmatic purposes, for example, will require consideration, also, of the special advantages and limitations that various possible activities have with respect to certain instructional goals, to learning styles (or limitations or strengths) of certain students, to the subject matter involved, and to the sociological and physical aspects of the environment in which learning is expected to occur. Perhaps an especially significant concern here is that whatever learning activities are finally chosen, they ought to stress learner activity as opposed to passivity. In any case, however, just as in formal and informal education programs of developed countries, alternatives are many; in most instances, any one or more of several activities, if engaged in thoughtfully, may be expected to constitute viable learning experiences.

The range of possible experiences through which learning (defined broadly as behavioral change) may occur is emphasized by the following list of activities, for most of which various "media" (materials and possibly equipment) will be required:

"One-Way" Communication Types. Several learning activities may be characterized as essentially "one-way" types because they generally are (but, of course need not always be) either carried out alone or, at the least, without personal interchange with others of ideas and opinions concerning them:

Reading--chiefly printed verbal materials: books, newspapers, periodicals, charts and graphs with verbal content; handwritten materials; duplicated materials;

Listening--to a lecturer (who may be a peer or a professional or other person), or to an audio item (a cassette tape; a phonograph record; a radio broadcast); a folk singing presentation.

Watching and, generally, Hearing--sound or silent filmstrips (with presenter participation); video tapes; broadcast TV programs; flipchart presentations; puppet shows; scroll theater presentations; folk or other types of plays; a slide presentation, with live or recorded narration; demonstrations given by others;

Demonstrating, Showing--modeling performances; exhibiting results of experimental treatments of different plots of land; assembling, disassembling; repairing demonstrations.

"Two-Way" Interpersonal Communication Types. Several activities through which learning may occur are essentially "two-way" in character, involving interpersonal communication of various types:

Discussing, Conferring, Speaking, Reporting--in small or large groups;

Interviewing--neighbors (who may be LRC users); social agency personnel; priests; others;

Dramatizing--taking part in the preparation of a semi-spontaneous folk play organized around some logically significant theme (fly extermination, for example); writing original scripts; acting out the plays, in or out of costume;

Traveling; Taking Field Trips--sending individuals to nearby or central areas to observe, study, and to return and report;

Exchanging--letters, visits to homes in the same community, elsewhere in the country, or even abroad; items collected; products; audio tapes; still and motion pictures;

Singing and Dancing--in choral or folk dance groups; sometimes creating original songs and dances.

Creating Materials. Several types of learning experiences may be classified under the heading of "creating materials." Among them are the following:

Making Audio Recordings--of radio programs, original performances of an audio nature, spoken or read aloud selections, original dramatizations, documentary sounds, interviews, sometimes to accompany other materials (as a set of slides, a book, or other items).

Making Video Recording and Motion Pictures--of both planned and informal ("targets of opportunity") types; recording video programs; documentary productions (especially with portable video or motion picture camera/recorder units).

Still Photographing--with still cameras (including instant picture types); coordinated slide or slide/tape presentations; black-and-white picture sequences; documentary records.

Collecting--real specimens or objects from the local environment or elsewhere, such as classified insect collections, plants, other items; antique or historical items of value and interest.

Displaying--bulletin boards, sand table displays, three-dimensional model displays, dioramas, and the like--at the weekly market, for example.

Constructing--three-dimensional miniature or life-size models; a full-scale prototype of a special-purpose shed, for example.

Graphing, Charting, Mapping--converting local data to readable graphics; plotting locations and distributions on hand-made maps; visualizing flow processes.

Writing, Editing--reserved for a very few learners, perhaps, but nevertheless significant as learning experiences and perhaps as a means of creating valuable resources for use, locally, by others.

Reproducing--simple hectograph copies; silk screen prints; wood cuts; linoleum block prints; blueprints.

Other Types. Finally, there are a number of other activities through which learning may occur which do not lend themselves to classification under the preceding headings:

Manipulating--working models (of pumps, cow stanchions, windmills); engines; real machines; tools;

Experimenting--in a makeshift "laboratory"; in a special plot of land--with a test crop or using test fertilizers; boiling milk to kill bacteria and viewing effects under a microscope;

Completing Programmed Assignments--locally- or nationally- or regionally-produced printed or handmade programmed booklets or books; guided use (via booklets or audio tapes) of integrated learning kits or packages;

Working (On-the-Job) Apprenticing--performing real-life assignments under the guidance of a more expert tutor or supervisor;

Judging and Evaluating--best animal shows; home-produced ceramic and textile products; best fruits, grains, or tubers.

The scheduling of learning experiences is also of concern to individuals planning a Systematic Approach of Instructional Technology. There are several reasons for this. Perhaps a first reason is that, in real life, certain things occur before others and, to learn about them, the same sequence should be employed. Second, the learning of some things often depends upon prior learnings--learning to read in the technical sense, for example, before learning to read materials dealing with some recommended agricultural practice. But in the nonformal education programs envisioned in the LRC-BCES program, chief considerations with respect to the scheduling of learning experiences will no doubt relate most often to such matters as: (1) the times of the week, month, or year, as well as of the particular day, when members of the target audience can and will participate and when it would be most advantageous for them to do so; (2) the amount of learning that

may be expected to accrue with each learning session or activity, which is of obvious importance in deciding upon the number and length of sessions required; and (3) the redundancy and depth desired or required for learners to achieve the specified "satisfactory" level of competence or achievement with respect to the learning goal.

Step 6: Selecting and Assigning Personnel

Selecting and assigning personnel to manage and present aspects of the teaching/learning program assumes, with the Systematic Approach to Instructional Technology, a significantly important role.

In the more cost-conscious developed country situation, the goal with respect to personnel may simply be to assure least waste of funds and scarce expertness through employing a system that seeks to have well-qualified hired professionals do only professional work and less well-trained, but also paid, nonprofessionals and perhaps even some unpaid volunteers to do what is left to be done--all with optimum cost-effectiveness. One source comments on such efforts:

The development and production of a learning system require a team of specialists working full-time on the project. Experienced teachers, a subject matter specialist together with a psychologist or a teacher with special training in how children learn are all essential members of the team. Equally essential for the presentation of the system is at least one media expert who may be a graphic artist or someone with experience in radio or television. The selection of media specialists depends on the budget available for the production of the learning system, the nature of the subject, and the technical assistance likely to be available from educational broadcasting teams. The personal qualities of the team are important since they must be able to cooperate not only with one another but also with the schools trying out the material at the development stage. Furthermore, they must be willing to accept and act on criticism, severe at times, received from trial schools. (Educational Technology: The Design and Implementation of Learning Systems, 1971, p. 21.)

In contrast with what has just been described for developed countries, in the more labor-intensive nonformal educational programs

of rural developing countries such as those in parts of Latin America, the goal is likely to use as many qualified (or qualifiable) people as possible--each to his or her fullest capacity, and often as a learning experience itself, somewhat in the "each one teach one" tradition. This contradiction in the two types of countries seems acceptably justified on the basis of an evaluation of constraints operating in the two situations.

The range of sources for the selection of LRC-BCES personnel in the typical developing-country rural location may be expected to include some or all of the following:

- The LCR head--who may serve on a volunteer basis, or who may be trained at regional or national headquarters to assume the major role of animateur or monitor for the local program.
- Local skilled leaders--who are respected, capable in one or more special programmatic aspects, and perhaps skilled in discussion techniques, the operation of equipment, the weaving of cloth; priests; teachers; business persons; curanderos.
- Local "inexperts" who are quick to learn--who, though they may not now possess the learning or skills required to lead others, may easily be trained (by local experts, LRC personnel, or assignments for training purposes) to do so.
- Teaching teams--made up of suitable combinations of professionals, paraprofessionals, and even inexpert persons.
- "Outside" people--who may come to the village on regular or rare occasions or who, if invited, would do so--the itinerant health workers, others.

Step 7: Selecting Learning Materials and Equipment

Having determined goals and content of LRC-based instructional/educational programs, the status of the learners themselves, the appropriate types of learning experiences in which to engage learners, the appropriate teaching-learning modes in which to organize their experiences, and the roles to be played by different types of available personnel, we move to the next step in the Systematic Approach

of Instructional Technology--namely, the selection of learning materials and equipment.

The Key questions involved with this step are:

- What learning resources (materials and equipment) will be required to arrange and conduct the planned learning experiences?
- On what bases should they be selected?
- How should they be used?*

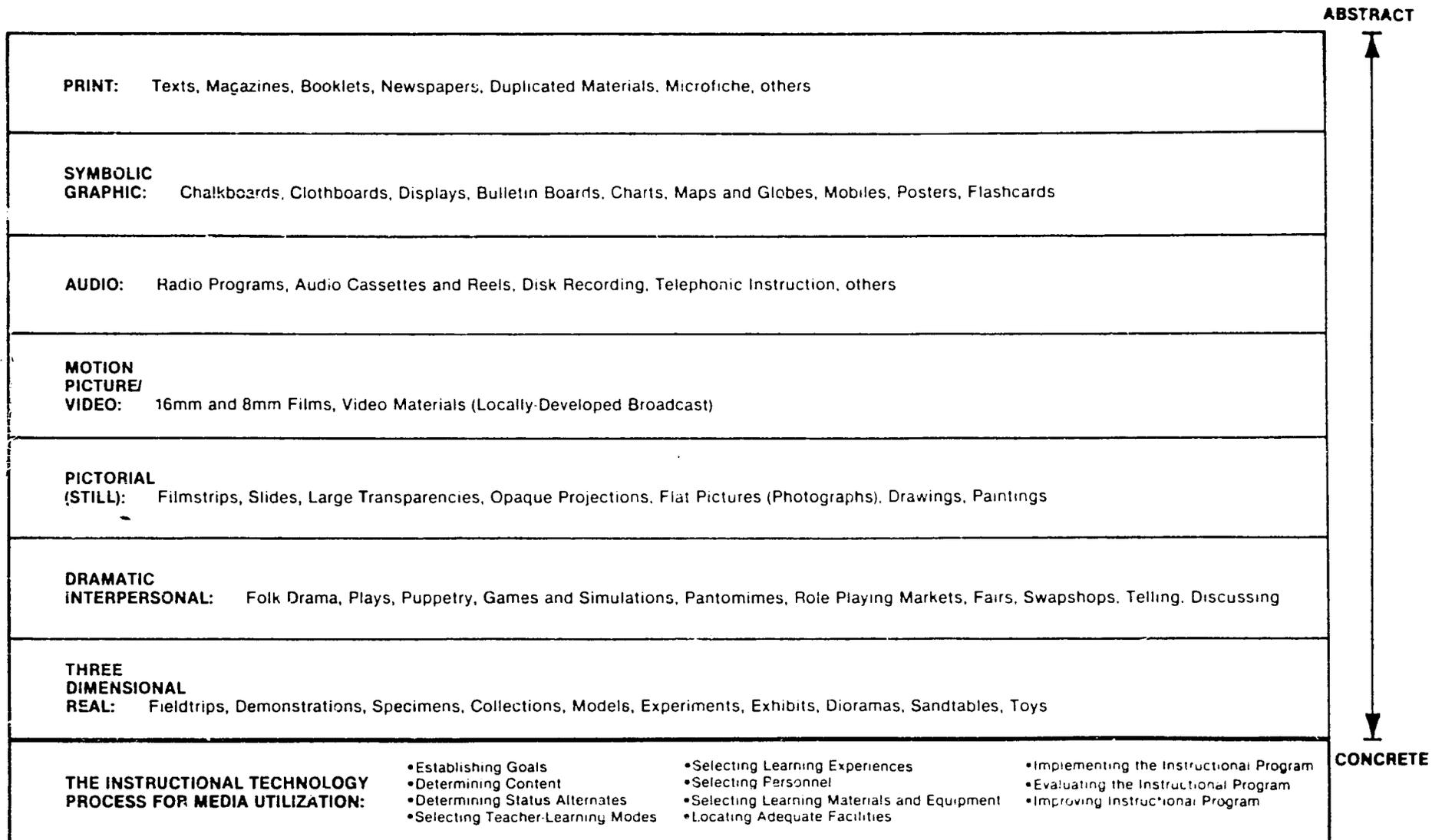
Here we deal only with the first two questions, namely, determining what materials and equipment will be required, and the bases for selecting them.

Figure IV-6 illustrates both the instructional technology system and the taxonomy of media that are available to the LRC-BCES planner. We have listed the media along a concrete to abstract continuum. The classification of media is as follows:

Print
 Motion Pictures/Video
 Audio
 Pictorial (still)
 Symbolic; Graphic
 Dramatic; Interpersonal
 Three-dimensional; Real

This visual analogy is one of several ways possible to show the progression of learning experiences from (a) the direct concrete or first-hand participation level through (b) the pictorial or graphic representation, and on to (c) the verbal abstract and symbolic expression levels.

*The third question, how should they be used, is dealt with thoroughly in Brown's report cited earlier. In this report, he strengthens the taxonomy with a careful analysis of strengths and limitations of the various media and gives examples of effective utilization practices in developing county situations.



IV-42

SIDE C

Figure IV-6. A taxonomy of media and the instructional technology system available to the LRC-BCES program.

This visual analogy is one of several ways possible to show the progression of learning experiences from (a) the direct concrete or first-hand participation level through (b) the pictorial or graphic representation, and on to (c) the verbal abstract and symbolic expression levels.

This three-fold arrangement of learning possibilities illustrates the three kinds of experiences found so important in the process of personalized communication. These are: active (direct experience), iconic (pictorial experience), and symbolic (highly abstract experience). In turn, each of these three levels involves certain characteristic types of learner involvement.

For instance, at the first or direct experience level, the level of doing, the client would actually tie a knot, plant seed, plow a field, spread fertilizer, sew up a suture, brush his teeth or build his family's sanitation facility. At the second level, the iconic level, the learner may study pictures or films or drawings, thus learning to tie knots through visual perception or modeling. He may do a number of imitations from film viewing, or model kinds of experiential events. His learning experience is thus built around those kinds of behaviors which he feels or visualizes or shares, not specifically through direct experience. In essence, he learns through "perceptual" experiences. Finally, at the third, or symbolic level, the rural peasant begins to read or listen to words. For instance, he may hear the word "knot" and then match the word to his mental image of the word known to him through his previous "real life" experience in tying a knot, or in seeing others do it.

The importance of this is that learning experiences vary according to the degree in which they involve the learner physically or in thought, and that the experience of learning-by-doing requires a good deal of concrete, direct, immediate, hands-on application in which full use

nearly all faculties are made: the muscles, the eyes, the hands, feet, ears, nose and others. When we merely observe something, however, the experience requires less physical or hands-on application than the experience of doing. And finally, at the symbolic experience level, virtually all the manifest physical action has been removed. Here the learner deals with the experience simply through thoughts or general ideas.

Schramm (1976) makes several points about this range of media:

Almost any medium can perform almost any instructional or informational function. . . . Every medium has its own ways to attract and hold attention, or to remind a student what he has previously learned, or to furnish examples, or explain concepts. This is not to say that one medium can't do a given task better than another. For example, films or television are better than still pictures or radio to show how an internal combustion engine works; radio or tapes are better than certain other media for oral language practice. . . . But other media have been used effectively for these same tasks--for example, the workings of an internal combustion engine can be shown by slides or diagrams, or even words, not only by films or television. . . . No . . . development worker can change from medium to medium as often as he would need in order to have his first choice of medium working for him at every second of his presentation. . . . What actually happens is a compromise. Less use is made of media; only one or two points are chosen to be illustrated. Or the medium is chosen that will illustrate as many points as possible--not ideally, but still effectively. Not the best solution, but the most feasible one. (pp. 11-12.)

Earlier in the same paper, Schramm summed up related findings of a group of communications experts who were meeting "ten years later" to consider criteria for selecting media systems. Said Schramm:

It seemed to matter less than we had thought which media were used--big or little, broadcast or visual or print. What did seem to matter was how they were used, and especially how they were built into an organization for

learning and action. This conclusion has been reinforced by a number of media-comparison experiments which have found more variance within and between the media--the meaning that the way a medium is used, the content, the strategy, often seems to make more difference than which medium is development in countries like China, where the organization of local groups for discussion and decision making has seemed to be perhaps the most influential part of a well-integrated communication system. (p. 5.)

Referring back to the list of possible learning activities which, conceivably, could be considered and perhaps used in organizing LRC-based learning experiences, one should be reminded of two things especially: (1) that the range of possibilities for learning activities is great, and (2) that media and, often, media equipment of various kinds will be, or could be, involved with each. Setting aside for the moment the fact that especially in developing countries there is surely to be some finite (and probably very low) amount of money to be used to buy the required learning resources and that in any event their availabilities will, of necessity, be far from ideal, one might still ask: What principles apply to the process of seeking an optimal match between media resources and other elements of programs developed in consonance with the plan for a Systematic Approach to Instructional Technology?

The following criteria with respect to materials are several (of many) that are proposed as one answer to this question. Materials selected should be:

- Pertinent to the subject studied and to the goals of that study, as well as suitably "fitted" to the nature of the content itself.
- Of such a nature that learners who use any item are able to actually experience what it is intended that they experience, without encountering barriers of speech (unfamiliar dialect, pronunciation), or meanings (unfamiliar words, expressions), of geography (inability to come to the learning experience because of distances involved), of sophistication in communication skills (media presentations in styles and formats with which users are unfamiliar); learning of complicated and expensive machinery (projectors, or recorders, for example, and perhaps operators of them, when such items are not in the realm of possibility for the locale of use); and others.

- Capable of being experienced (projected or heard, for example, which assumes power, darkening, viewing spaces) in the environment in which they will be used.
- Appropriate for use in the instruction/learning mode selected, such as television or radio programs for simultaneous-broadcast, super large group coverage, sound filmstrips for small groups, or print or audio cassette items for individual study.
- As simple as possible to obtain and use, which means, in many cases, without the necessity of an accompanying and often very expensive (and perhaps complicated or even unavailable piece of equipment being necessary in order to experience the medium at all).
- Capable of eliciting active participation rather than an inert, passive response to the learning experience (causing the learner to do something--more than sitting and listening or watching).
- Sufficiently narrow in treatment and content to provide an emphasis in areas of learning where media contributions are especially needed and appropriate.
- Both affordable and cost-effective, but not necessarily the least expensive of all media that could be provided for the purpose.
- Compatible with and supportive of any already-institutionalized, and functional, information access and dissemination systems administered within the country or area of the country involved.

The appraisal-selection process observed by Ofiesh Associates (1978) for the LRC-BCES Project involved application of six criteria which bear on many of the principles just cited:

- Appropriateness of the subject. Does the item fall into one of the established subject areas?
- Level. Is the item intended to be used by people on approximately the same level of ability as that of our proposed audience?
- Language. Is the item written or produced in the Spanish language or in a language normally spoken by a significant part of the target population? If not, how difficult would it be to produce a translated version of an item which is not already in an appropriate language?
- Cost. Is it likely that an LRC-BCES administration would be willing to pay the asking price for this item?

- Availability. Are there any distribution restrictions that would make it difficult for the LRC-BCES to obtain this item?
- Uniqueness. How many other items are available which could accomplish the same ends as this item?

This framework for selecting and utilizing media is embedded deeply in the simple life and environment in which the client lives and works. It emphasizes folk media and processes which involve the learner in creating or inventing his/her own learning materials.

Folk media implies the use of the village theater, puppet shows, story telling illustrated (with large drawing or projected slides) or non-illustrated and strictly "verbal," perhaps with traditional folk tales, folk festivals, balladeering, etc. The prerequisites to the use of the folk media are: (a) an understanding of the rural audiences, and (b) the use of these media to provide the rural people with recreation to attract their attention, and to ensure their participation in development activities. Since folk media have socio-cultural roots, their utilization should be related to local events, and their function in the local communication strategy should be properly assigned, (c) collaboration between the folk artists and the media producers is absolutely essential for the successful integration of folk media and mass media communication strategies for developmental purposes.

Step 8: Choosing Adequate Physical Facilities

The next stage of the Systematic Approach of Instructional Technology pertains to matters of choosing, or developing, and using physical facilities to fullest advantage. As usual, decisions at this level must take into account actions which have occurred in preceding stages, as well as of the model adopted for particular national, regional, or local LRC-BCES program.

Suffice it to say here that regardless of the exact nature of LRC-BCES model adopted, a number of physical facility guidelines will apply. Ideally, and insofar as possible and feasible, facilities in or available (outside) to the LRC-BCES program should accommodate:

- Processing of acquiring, treating, storing, and retrieving resources (materials, equipment, records of community or other resources, etc.) assigned to the LRC-BCES program.
- Multiple arrangements (and rearrangements) of learning spaces for individuals who use the LRC who may engage in learning activities as individuals, in small groups, and sometimes in large groups.
- Maintenance of the various types of equipment required for projecting or producing teaching/learning resources.
- Laboratory-type and workshop activities.
- The fact that considerable learning activity may occur in homes of LRC users--in family groups or in isolation; also, that many of the stimuli for learning will come from out-of-the-LRC locations: e.g., the demonstration agricultural plots in various sections of the countryside (which will require traveling to observe them).
- Networks of contacts and study arrangements, as feasible--such as organizing a scheme for routing materials, in sequence, to various users, utilizing Sunday church attendance or market days as the point/time opportunity for this purpose.
- Loans of media-related equipment and media for off-side users.
- Local media production and media-related creative activities (script writing, dramatization, model construction, and the like) geared to the aim of increasing the communication capabilities of individual participants and in creating genuinely useful resources of a local nature.
- The "taking out" of some learning experience resources, as with: (a) mobile units specially fitted with demonstration or test equipment, media equipment, and materials geared to special campaign purposes (fly elimination, family planning, improved agriculture, etc.); or (b) setting up special displays, puppet shows, demonstrations and the like in the village square, at the market place, in front of the local church, the community laundry facility, or elsewhere.

Steps 9, 10, 11: Implementation, Evaluation, and Improvement of the Plan

Implementation, evaluation, and improvement, which occur in the final stage of the Systematic Approach of Instructional/Educational Technology will be discussed briefly together. Experience gained from the operation of the LRC-BCES program should be a period of gathering data from which to make later evaluations of total program effectiveness

as well as of the working of its parts. Such data may serve as the basis for later evaluations related to such matters as:

- Obvious faults in prior estimates of learner interests and needs; of anticipated distributions of learner interests in LRC-related studies; and similar matters.
- Strengths and deficiencies in the LRC media resource (materials and equipment) collections and services.
- The extent and quality of community acceptance of and participation in the LRC-based community education/development program.
- Strengths and deficiencies of the LRC's and the community's physical facilities in which to offer the program that was planned to be offered.
- Strengths and deficiencies in the personnel staffing and utilization plan that had been adopted and the possible need to reassign, retrain, or replace certain staff members.
- The need for new learning opportunities and study offerings and for improving teaching/learning arrangements within the LRC.
- Costs and cost-effectiveness of the entire LRC program and its parts, leading to some judgments as to which parts should be eliminated or cut back, which should continue at present levels, and which should receive additional support.

The LRC-BCES as a Synergistic Interface Among the Campesino
the Program, and the Media: The Impact Model

In this chapter, Figures IV-2, IV-3, and IV-6 portrayed individual components of the LRC-BCES Impact Model. We now present these three components in Figure IV-7 as interconnected sides of a cube. Our purpose is to emphasize the conceptual fit among the components. Side A includes the three client groups and the educational objectives congenial to each. Side B is the typology of programs and organizational settings. Side C contains examples of instructional materials and media located along a continuum from abstract to concrete.

We have titled this figure, "The Learning Resource Center Forms the Synergistic Interface among the Individual, the Program and the Media" because we believe that there must be an interface or

where is the institution?

integral interrelationship among all three faces. To plan programs without the individual, or outside his personal, family or vocational needs would be ill-conceived. Likewise, to have some sort of reservoir of learning materials--reading materials, lectures, theatre, recreation, demonstrations, etc., without a planned program which brings these materials into the lives of the people in a meaningful and enriching way is wasteful and frustrating for all concerned.

That the interface is synergistic is even more convincing. Synergism comes from the Greek word synergos, which means working together. Developed further, it refers to the actions of two or more substances or organisms working together to achieve an effect not possible by one substance alone. In the figure, we suggest a united action among the individual and his social system with learning materials and program activities which, when effectively orchestrated, will produce a greater effect--a more functional learning environment--than the sum of the individual components alone.

We see the LRC as the catalyst, the enabler, the facilitator, the broker. It is the institutional form which integrates clients with learning needs, organizational structures for providing programs, and institutional materials and media. There is no predetermined set of programs for all communities. To the contrary, there should be as many programs as there are community needs. We believe that the typology of programs (Side B) incorporates the range of program options thought to be functional in Latin America today. We are impressed with the need for variety in instructional media and materials and expect the range of materials' options listed on Side C to be vital and necessary. We believe in differentiating the client groupings (Side A), given the diversity of learning needs of the campesino.

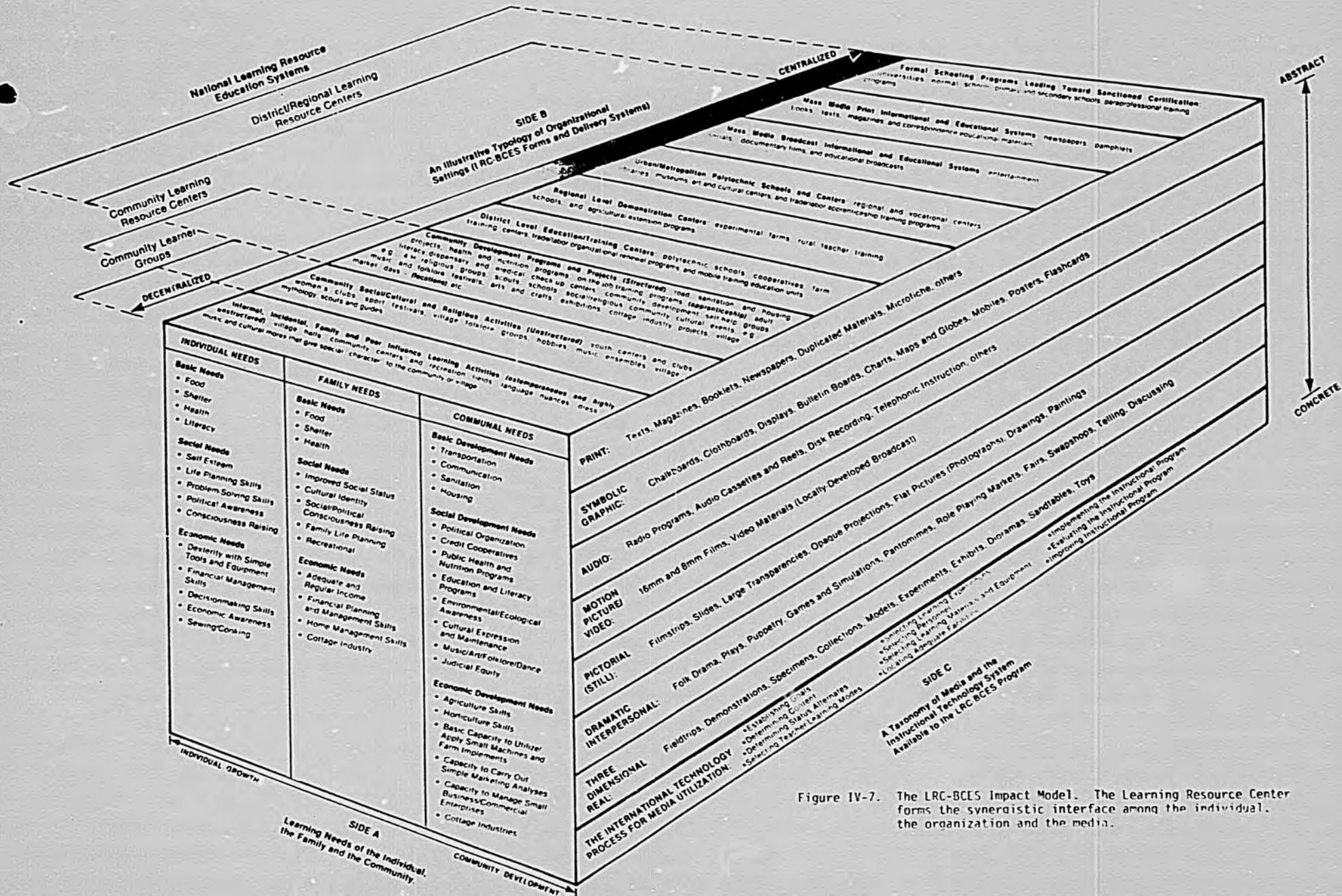


Figure IV-7. The LRC-BCES Impact Model. The Learning Resource Center forms the synergistic interface among the individual, the organization and the media.

Chapter V

GUIDELINES FOR ADMINISTRATION AND GOVERNANCE OF THE LRC-BCES

Linking the LRC-BCES Network Together: Administrative Organization	V-1
Administrative Governance.	V-4
The Fund for the National Learning System	V-6
Supervision.	V-10
Supervision at the National Level	V-15
Supervision at the District Level	V-17
Supervision at the Community Level.	V-18
Evaluation	V-19
Criteria and Key Questions.	V-19
Data Gathering.	V-20
Indicators Against Which to Weigh Data.	V-20
Recommendations	V-24

GUIDELINES FOR ADMINISTRATION AND GOVERNANCE OF THE LRC-BCES

Administering a national system of community education programs with a variety of community level LRCs is a complex task. There are a number of compound questions which planners must consider: How are the responsibility and authority for planning, decision making and implementation to be distributed among the different levels? Who should take what kinds of initiatives? From where do the enabling funds for the learning system come? How does the fund function? Who is accountable to whom and in what terms? Where should evaluation be centered, and who should do it and how? And who should monitor (supervise) the performance, progress, problems of the system as a whole? In their broadest sense, these questions fall under the rubric of administration and governance. In this chapter we deal with these questions and provide guidelines for which the administration and governance of the LRC-BCES system may be further considered.

Linking the LRC-BCES Network Together: Administrative Organization

Figure V-1 differentiates functions and activities among the local, intermediate and national levels. More importantly, it illustrates the systems nature of the model and focuses our attention on the individual LRC levels being supported and nourished by various backstopping "administrative/supervisory" services at higher levels. Among the backstopping services listed, several seem to need further elaboration:

- Staff Development--Within the system, and at all levels, there is need for training of professional and paraprofessional staff. (See Chapter VI for a more thorough discussion.)
- Knowledge Generating Services--Basic to all levels and programs is the subject matter or content of instruction that forms the meaning or purpose of the learning resource center activity. We see the intermediate and national levels playing strong roles here, but this is not to mean that within the raw fabric of the rural village itself there isn't a wealth of "education" and/or

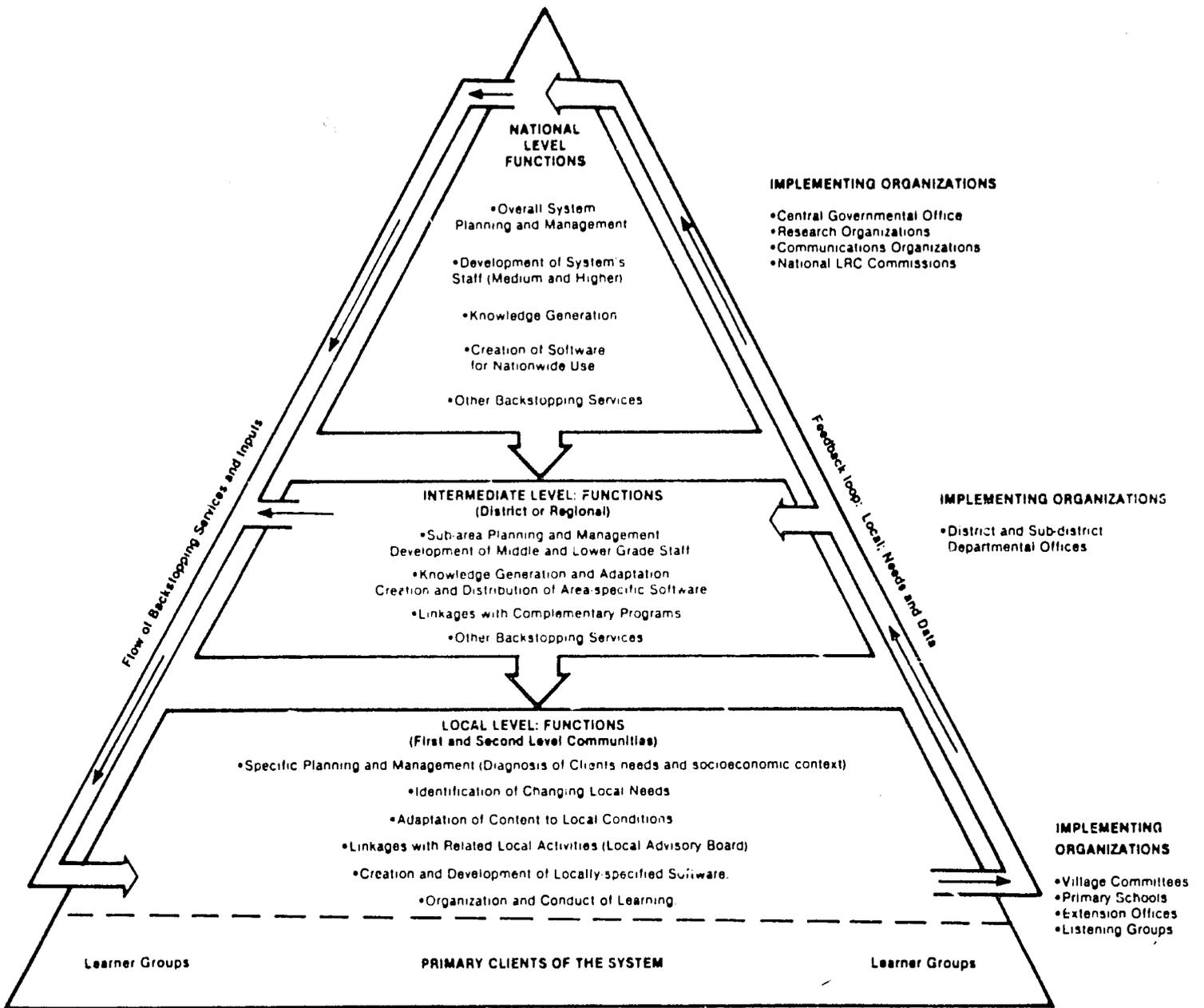


Figure V-1. The LRC-BCES network. Functions and activities among the local, intermediate, and national levels of the learning resource centers are shown.

experience from which new knowledge can be generated. To appreciate this, one only has to be reminded that Alex Haley's award winning novel Roots essentially had no content until the story system of Kunta Kinte unfolded from the hearts, lips, and minds of Juffure village elders.

- Software Production and Knowledge Transmission Services--Critical to every program throughout the system, and especially at the basic levels, the learner group and CLRC, where programs interact directly with the clients, materials are necessary to carry the message of instruction. For this reason, we believe that the LRC-BCES Network will have a strong capacity to produce and transmit a variety of instructional materials in a variety of modes, languages or formats.
- Other Technical Assistance Services--Spun throughout the network are a series of ancillary technical services which complement and extend the programming functions of the different levels. Services such as operations, research, planning and evaluation are necessary if local center programs are to be free to implement their educational activities. Basic to this notion is the assumption that first and second level programs will have little or limited capacity to carry out these functions, and that they should receive this kind of assistance from higher levels so that they can continue to improve their programs.
- Planning and Management--Strung out along all levels are the basic planning and management functions necessary to sustain the various LRC programs. Some of these activities may relate solely to housekeeping-like chores, others to more sophisticated functions such as personnel administration, curriculum development and programming.
- The Community Advisory Council: Linkages with Complementing Programs and Activities--Crucial to the LRC-BCES model is the voluntary participation of village level people who represent the variety of unique social and cultural characteristics of the community as a whole. We believe that each level of the LRC-BCES system should have an advisory board made up of a cross section of talent from the area served. This board can serve as the primary group for assisting in determining needs, programming, and planning. It can be instrumental in helping raise funds at the local and national levels, and can be influential in the selection of local staff.

Because of the planning and decisionmaking nature of the National Level Learning Resource Center, this body is likely to be responsible for policy development and systemwide authorization. At this level, we vision the membership to be more politically based and representative of the principal social and economic development units of the national government--the Ministries of Education, Health, Labor, Agriculture, Planning, International Relations, etc.

Administrative Governance

Institutions, however flexible and loosely designed, eventually regain some form of governance. So it is with the LRC-BCES institutional model. We have resisted spelling out the governance of LRC-BCES because of the variations in governance of existing formal and nonformal educational organizations in Latin American countries. There are, however, some general possibilities which can be explored regarding governance.

Decisions regarding the administration and governance of the LRC-BCES Network are within the province of each nation which adopts the model. With this in mind, and with respect to what typically exists now throughout Latin America regarding the organization of education systems, we suggest some governance options which Latin American nations may wish to consider:

- The ministerial option
- The multi-sectorial option
- The independent/collaborative option

The Ministerial Option. In the ministerial option, the LRC-BCES Network would become the responsibility of an existing government agency, either the ministry of education, agriculture, labor or health, or perhaps some other national community development service unit. Administration would likewise be determined by their ministry. Advantages inherent in this option are that it is clear where accountability resides; it would reduce the prospects of duplication of services; it would expedite the implementation of the model; and, it would build upon existing administrative capacity within the governmental unit. Disadvantages include the danger of the LRC-BCES becoming a low-priority interest within the ministry, and the LRC-BCES may not achieve as much creative development and adaptation as under another form of governance. The acquisition of resources may be more difficult if it is viewed as the extension of conventional approaches to education. Further, once the decision is made establishing one governmental unit over another in administering the system, the other unit may continue efforts to control those programs traditionally in their social service area.

The Multi-Sectorial Option. The multi-sectorial option is unique in the sense that it would be constructed on principles of representation, linkage, and multi-institutional responsibility. The key to this option is the development of a policy-making body comprised of representatives from existing formal and nonformal educational delivery systems. This policy-making body would be responsible for determining the administrative structure for its LRC-BCES Network, which may in fact be administered by one of the institutions represented on the policy group. The advantages of this option are that it would enhance the communication among existing institutions relative to meeting educational demands; and it would stimulate a critical mass of community interest and resources directed toward education. The disadvantages are that it would suffer the fate of a new institutional governance form, i.e., uncertainty, false starts and inefficiency; it may experience difficulties in obtaining and sustaining fiscal support; and it may be marked by such diversity that clear understandings of the learning resource center-based community education system may be difficult to achieve.

The Independent/Collaborative Option. The independent/collaborative option is somewhat similar to the multi-sectorial alternative. It would require the formation of a multi-sectorial policy group. But its administration would be responsible to the policy group, not to an existing agency or department of government. The advantages of this option include substantial independence and freedom regarding LRC-BCES development; the prospects of identifying the basic needs of the individual client, his family and his community; and the likelihood of inventing genuinely creative programs consistent with needs defined. The disadvantages could include difficulties in the acquisition of resources; the scarcity of trained human resources; the perception, if not the fact, of duplication of existing programs and services; and the travail that accompanies the establishment of an essentially new institutional form.

The Fund for the National Learning System

Depending upon the governance option selected, one or more methods of funding may emerge as most appropriate. Funding levels essentially determine the strength and capacity of all public programs. All other administrative mechanisms are finally subservient to this fact. Hopefully, the governance model selected and the symbiotic funding processes selected to overlay it will be compatible with and supportive to the energies promoted at the community levels.

Traditional funding within ministerial budgets contains some potential restrictions and inherent dangers: a general lack of sufficient funds for basic academic support in Latin America poses a political and institutionally "moral" restraint on the funding of so-called fringe programs. Unless the LRC-BCES program is considered basic education of equal rank and value with the academic program of elementary and secondary schools for children, its support under traditional governmental funding purposes will indeed constantly be in danger.

Possible funding from a variety of areas, including involved and prestigious organizations, can affect this perennial difficulty and provide a broader based community support for the equal rank and value referred to above.

It is proposed that a "Fund for the Learning Society" be established at the National Level in countries that are serious about implementing the LRC-BCES model. This Fund should be constituted as a not-for-profit, autonomous organization managed by a Board of Trustees and assisted by a Program Advisory Committee operating under the auspices of one of the governance options (or others) cited above. Additional specialized committees may be created when needed. A host country commitment to provide funds at a specified level for a specified time may be a condition for needed international development funds.

The Fund should receive, allocate, and disburse money to various institutions, groups, and individuals engaged in the production, distribution, and utilization of learning resources for community education throughout the system. Contributions to the Fund could come from national government sources, bilateral agencies and multi-lateral agencies. Charitable contributions could also be received from individuals, business, and commercial interests of quasi-public community service organizations. The Board of Trustees would allocate funds to eligible individuals, groups, and institutions on the advice of the Program Advisory Committee. Funds could be disbursed on the basis of one-time grants or on a long-term basis to sponsor and support separate or collaborative institutional units such as the documentary film unit, the puppet theatre or the rural library scheme.

Visibility. The Fund and announcements and actions associated with its programs will provide national visibility to the role of learning materials and resources in development and in the creation of a learning society.

Integration of Purpose and Effort at National Level. The Fund would enable educators and the development elite to have a synoptic view of the total learning resource needs of the society. This would lead to an integration of both the national purpose and the national effort in this area. Thus, the Fund could establish complementary institutions at the national, regional, district and local levels where needed. It could offer grants and contracts to voluntary agencies, groups and individuals to do specific tasks. With respect to the National Learning Resource Center organization and structure (Figure V-2), the Fund could make decisions about when a unit of the Center was ready to separate and to provide expanded services to the society.

Long-Term Perspective. The Fund, as a builder of institutions and by projecting plans to the next five, ten or twenty years in such areas as educational film production, national library system or TV network,

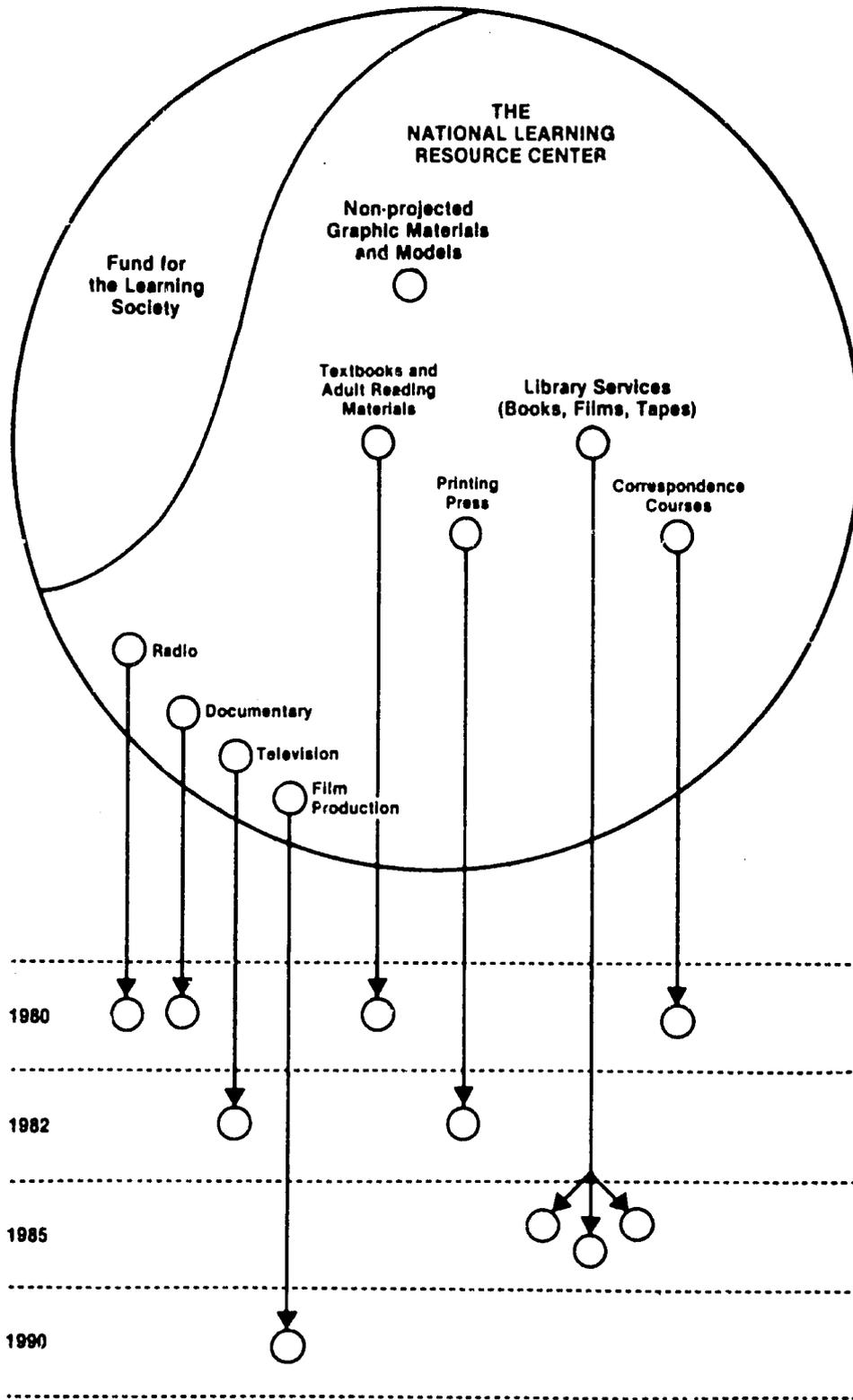


Figure V-2. Relationship of Fund for the National Learning System to the NLRC and its elements.

would establish a long-term perspective for policy makers and planners. Planning would thus rise above the transitory interests of bureaucrats in departments and ministries of governments.

Framework for Broad-Based Participation. The Program Advisory Committee for the Fund, which must include not only government officials but also non-governmental leadership in the nation, could provide the framework for broad-based participation in designing resources and institutional format for the learning society. Education, development, mass media, church, business and citizen groups could all be represented. Builders and technicians could also be associated with decisions requiring technical expertise.

Capabilities for Wide Response. The Fund for the learning society, being national and supra-institutional, could be capable of wide-band responses to learning resource needs of the society as they arise. The Fund could influence various sectors, and establish a variety of institutions at various levels from the local to the national. It could finance the National Center at the fourth level, a book distribution system in a region, equipment for a district LRC, construction of a community learning resource center, and an oral history project for a district learner group, all at the same time.

Immunity from Annual Budgetary Pressures. The Fund could also save the NLRC from undesirable budgetary pressures. The money that could not be spent during the year could be saved for the next year. On the other hand, money would be available from the Fund for the NLRC and other institutions to respond to their needs as they arise.

Staff and Policy Development. The "distance" of the Fund from the government could also enable the NLRC and other institutions in setting new governmental procedural guidelines unique to the Fund and its programs, and therefore not be subjected to the civil service codes on contracts, employment, promotion, travel and duty hours. New institutions that produce learning resources would need new rules and norms.

The establishment of the fund for the learning society cannot be left to wishful thinking nor to accidental developments. Its creation, functions, and accountability should be an assigned task for the issues seminars and the national seminars, described in Chapter VIII.

Supervision

Supervision is a process-maintenance effort: the communication between levels of administration and support and practitioner levels. The supervisor communicates administrative policy and process to the teacher-practitioner, evaluates the efforts of the practitioner with reference to administrative expectations, and then either assists the the practitioner with resolution of problems or communicates practitioner deficiencies and needs to the administrative level for material or process support.

The newness of the LRC-BCES system, its anticipated shake-down process and time and the differences in populations, programs and services which all exist among the four LRC levels requires an organizational arrangement which provides the kinds of supervision required by each level. The selection of an administrative-governance option from among those outlined in the previous section of this chapter will determine many supervision arrangements and the flow of the supervisory processes at the upper levels; however, the supervisory tasks which are evident in Figure V-1 determine the supervisory responsibilities which must be assumed for each LRC level. At the national level and at the district level, administrative/supervisory personnel would be responsible for such functions as (a) planning, (b) developing staff competencies, (c) generating knowledge, (d) creating printed materials and "software," (e) linking programs together, and (f) providing other support services. At the local level, some of the same functions would be the responsibilities of local-level staff--in addition to identifying local needs, adapting content to local conditions, and organizing and conducting educational programs. Such functions are

especially appropriate for supervisory activities related to the community learning resource centers.

Program purposes and illustrative curriculum-content areas also imply areas of supervisory responsibility. In the discussion on "learning needs" of communities and individuals, we suggested that educational activities in basic literacy, agriculture, health and nutrition, family-life planning, vocational skills, et cetera should be planned so that they contribute to "self-actualization and personal growth," "family and social development," and "community development." Clearly there would be need for persons well-prepared to provide leadership and assistance in the planning, development, implementation, and evaluation of programs in each of those program areas. Such persons would be supervisory-type personnel who could provide assistance and leadership as appropriate in terms of their qualifications and the circumstances that surround them.

In view of (a) the multiple functions to be carried out in different settings, and (b) the several organizational arrangements for administering the LRC project, decision-makers should consider a variety of ways to provide supervision.

Among possible strategies for supervision there exists a continuum of patterns which range from very informal to extremely structured. The very informal patterns were designed for organizations whose members were extremely well-oriented and impeccably skilled in the democratic process. The extremely structured patterns are a traditional hold-over from autocratic administrative practices which have been widely discredited among responsible organizational theorists. The former strategies are extremely inefficient among employees who lack very sophisticated foundations in democratic theory; the latter is wasteful of human-initiative resources.

We have avoided the extremes. The alternatives which follow are considered as potentially useful throughout Latin America for the establishment of supervision throughout the LRC-BCES network.

Supervision as an integral part of a line-and-staff organization. Persons holding "staff" positions would be experts in one or more aspects of education and they would have no authority or executive power assigned to them. Staff personnel (supervisors/consultants) would need to have a cooperative working relationship with personnel in "line" positions (administrators).

While administrators could provide direct assistance to teachers and other educational personnel, the supervisor in a line-and-staff type of organization would usually provide indirect assistance. For example, the supervisor could serve as a leader in preparing courses of study, in developing standards, in providing materials of instruction, and in training teachers, LRC facilitators, and other educational personnel. In a line-and-staff organization the administrative (line) positions could have responsibility for operating the educational program; the persons in staff (supervisory) positions could provide expert technical information and advice to administrators in line positions where officially delegated authority lies.

Staff (supervisory) positions may be categorized in several ways. Two broad categories are: (1) staff personnel in charge of service departments (e.g., testing and other kinds of evaluation, library/media-center specialists) and (2) staff personnel who are specialists in curriculum areas (e.g., mathematics, family-life education, agriculture). Although this organizational arrangement makes for clearly assigned duties and provides for a kind of specialization that offers expert consultants, there are inherent shortcomings in the line-and-staff type of organization. For example, cooperation between line personnel and staff personnel might be hindered by sharp delineation of responsibilities and by overspecialization. However, by softening

the rigidity of a line-and-staff organization and by assigning coordinate administrative/supervisory responsibilities to both administrators and supervisors, that weakness in a line-and-staff organization could be overcome.

Line-and-staff organization frequently referred to as a "professional supervisory team." The main purpose in forming a supervisory team would be to bring concerted action by persons having a combination of needed specialties; i.e., a coordinated effort to solve an educational problem and to provide expert leadership in forging ahead toward improved education. Since one objective of a supervisory team is to have such strong impact that desired change would be made, the kinds of diversified talents on the supervisory team would be crucial. Recognizing that the specialties needed in one educational situation (Learning Resource Center) could be different from the kinds of expertise needed at another LRC, the membership on a supervisory team would be flexible-- not a permanent assignment, not always consisting of full-time supervisors/consultants, and not limited to educators. Experience with nonformal education has brought out the fact that educational problems or supervisory needs might well require talents of persons from other public agencies; i.e., community civic organizations, the business field, or from the community at large.

Supervision as a "total delivery system." Going beyond the concept of teams and a line-and-staff organization for supervision, we can have a "total delivery system" for providing supervisory services. This concept stems from the philosophical view of education being a "community-wide enterprise." It calls for the involvement of all agencies of the community; and this implies the "direct and continuing involvement of lay people and community agencies in the definition and interpretation of the work to be accomplished," in this case, by the learning resource center. In such a shared decision-making arrangement, the supervisor would be very much involved, but his/her role would not be the same as it would in other administrative/supervisory patterns. Among other

things, the role in this approach would require superior knowledge and skills related to "organizational structure, value clarification, and a strong commitment to intense interpersonal relationships."

"Clinical supervision" as a supervisory strategy. Conceptualized as supervision through the interaction of peers and colleagues, "clinical supervision" is the opposite of unilateral action taken by a supervisor, and it is not aimed at the person who is supervised. In this approach, the supervisor must accept nearly all of the roles and responsibilities of the supervisor in his/her interaction with the clinical supervisor. "He (the supervisor) initiates action, proposes hypotheses, analyzes his own performance, shares responsibilities for devising supervisory strategies, and is equally responsible for the maintenance of morale in the supervisory processes." The basis for this concept of supervision, as Goldhammer (1969) has explained, is a belief in "individual human autonomy."

We are driven by images of teaching that enhance the learner's self-sufficiency and freedom to act; of supervision that facilitates such teaching and aims for a parallel condition in the teacher's own existence. . . . We value inquiry and analysis and examination and evaluation, especially when such activities of the mind are self-initiated and self-regulated. We believe that any supervision intended to facilitate such outcomes must be inherently humane. . . . The supervision we envisage is intended to increase the teacher's (facilitation) incentives and skills for self-supervision and for supervising their professional colleagues.
(p. 164)

Because clinical supervision is focused directly on improvement of the teaching-learning situation, it is distinct from the concept of general supervision that encompasses a broader area of responsibility. The word "clinical" is used to denote the emphasis placed on observation, analysis of program events, and the focus on teachers' and students' in-class behavior. Clinical supervision is a procedure specifically designed to improve an instructor's teaching performance.

Although the advocates of clinical supervision believe that the clinical process should result in a professionally responsible person who is "analytical of his own performance, open to help from others, and self-directing," they also maintain that there is still need for a supervisor who can provide assistance--"not continuously, but at appropriate intervals."

When supervisors and teachers see the value of this approach, and when they have been trained for their roles/responsibilities appropriate to the concept of clinical supervision, this strategy is likely to be very effective.

Supervision at the National Level

At the national level of the LRC-BCES program, supervisory personnel would be responsible for several kinds of functions: operational, regulatory, service, and development.

Operational functions include the direct administering of a central LRC and services to district LRCs and indirectly to local community LRCs.

Regulatory activities involve systematic monitoring of districts' LRC operations--to determine the extent to which they are meeting requirements and standards, and to determine what action should be taken whenever the requirements and standards are not being met. Through the supervisory staff at the district level, there will also be remote monitoring of local community LRC operations.

Service responsibilities would be directed toward the improvement of the LRC programs, and they entail dissemination of the work of experts. Such service activities will include the preparation of instructional materials, consultation on teaching-learning strategies and instructional technology, as well as advice on other aspects of operating a Learning Resource Center.

Developmental functions would include long-range planning for district LRCs and staff development activities.

At the national level there will be need for supervisors who are generalists and supervisors who are specialists. A modified line-and-staff organization of supervisors is appropriate.

At least one supervisor (a generalist) would be responsible for the operational functions and will also coordinate/supervise the work of other supervisors who have direct responsibility for other functions of the national center. This person would also be a well-qualified specialist in community education.

The other supervisors would be specialists who would serve sometimes as generalists when performing regulatory monitoring of district LRC operations. For the most part, though, these supervisors would conduct themselves as experts in carrying out their service responsibilities and their duties in regard to the developmental functions of planning and staff development.

Some of these specialists would hold full-time positions and be experts in such fields as agriculture, health and nutrition, nonformal education, instructional media, et cetera. Other specialists would have temporary or part-time assignments while using their expertise and serving as supervisors/consultants in one of the program areas.

Supervision at the District Level

At the level of the district LRC program, supervisory personnel would be responsible for the same kinds of functions as those assigned to the national level: operational, regulatory, service, and developmental. District-level supervisory activities would usually take place within the geographical area of a district.

The district supervisory staff would serve operational functions by directly administering a district LRC and by administering services to community LRCs, including appropriate participation in organizing/establishing local LRCs.

The regulatory function would be carried out by supervisory personnel who are responsible for formative and summative evaluation of each local community LRC, as well as responsible for monitoring their own district-level operations.

To meet their service responsibilities the supervisory staff would produce and procure learning-resource materials, and distribute these materials as needed by community LRCs. They also would provide consultant help to LRCs in the field--to aid in efforts to improve teaching-learning situations and to improve the operation of the LRC.

Developmental functions of the district LRC staff would involve them in appropriate planning for district-level and community-level LRC programs. Developmental activities would also engage the supervisory staff in the training of local-level leadership cadres, community advisory groups, and community LRC staff as needed.

At the district level also it would be appropriate to establish a modified line-and-staff supervisory organization. At least one generalist, who also is a specialist in community education, would be needed to coordinate and supervise those on the staff who are

specialists in such aspects of the program as sanitation, basic literacy skill development, animal husbandry, et cetera.

As in the national LRC office, specialists would, at times, need to act as generalists in order to carry out some of the assignments allotted to the district staff, e.g., their responsibilities for monitoring and evaluating programs and personnel. However, when a supervisor would conduct training and serve as a consultant, he/she would be in the role of a specialist and expert.

Needs of the community LRCs within a district's communities would determine to some extent the kind of specialization that the district's supervisors/consultants should have--as well as the number of supervisors, and whether they should hold full-time or part-time positions, and whether they should be assigned on a temporary basis or in a permanent position.

Supervision at the Community Level

Specialists would not usually be assigned to local community LRCs, although local "experts" should be called upon as needed to help in the training of less skilled members of the community. The district-level supervisors, and perhaps on occasion a national-level supervisor, would provide training and consultant services for the local community LRC.

The person who is assigned to the community LRC as a facilitator or coordinator should be prepared to plan and organize LRC programs. This responsibility would include selecting and training those who would teach other persons in the community. It would also include following up and monitoring the work of the local instructional personnel. Those activities, as well as the continuing assistance and evaluation in which the community LRC coordinator will be engaged, constitute supervisory functions.

Evaluation

Administration must satisfy external demands for evaluation and supervision, must satisfy internal demands for evaluation. Cost effectiveness must be respectable to reduce funding pressures and process effectiveness must continually improve to satisfy the values as goals of the LRC-BCES and the client population. A key component of the developing model is evaluation. The how and the why of evaluation must be considered together as the best possible assurance for success and insurance against failure. This section of Chapter V provides guidelines for the conceptual basis of evaluation for the LRC-BCES model. Specifically, it addresses:

- Criteria and key questions
- Information gathering
- Indicators against which to weigh data
- Evaluative standards
- Recommendations

Criteria and Key Questions

An effective system of informal, structural and quantified evaluation for the LRC-BCES system will assume the following statements:

- The major purpose is to enlighten decision-making at management and operational levels.
- The focus (emphasis) is on specific questions that are important to the organization; these are questions or issues relating to more effectively performing the service.
- Data-gathering is related to (and limited to) the questions under study or examination. The instruments (questionnaires, forms, interviews, etc.) are built to get information that will be used in answering the question.
- Questions for evaluation are related to the theoretical, and procedural basis of the organization's work. The theory as well as the practical matters of operation are always subject to change, on the basis of the evaluations.

- Descriptions, measurements, and assessments are carefully made by objective procedures. Guesses (when their use is absolutely necessary), are labelled as guesses. Opinions are labelled as opinions. Actual measurements are quantified when possible.

Data Gathering

Data gathering involves a constant search for selected types of information relating to what is occurring in the field and the philosophy and purposes of the institution. Data will be quantitative and qualitative--how much are we doing and how are we doing it? Program studies, case studies, tracer studies, interviews with teachers and and community students by supervisory personnel will yield this data at the qualitative level. Studies of costs of operation and probable costs of altered operation offer quantitative data.

Indicators Against Which to Weigh Data

Basic field data, gathered continuously by teaching and supervisory personnel, should be compared with the indicators for the four sections and eleven sub-sections defined in the instructional technology systems component of the LRC-BCES Impact Model as it appears in Chapter IV:

- A. Goals and Content--What goals are to be achieved? What content is to be studied?

1. Goals

Phenomena that determine the purposes of the programs
 Diagnosis of educative intervention in terms of the needs
 in the area
 Diagnosis of educative intervention in terms of needs in
 the community
 Concept of meeting needs that underlie the training

Decision process that led to the programs offered
 Decision origin
 Standards that directed selection of participants
 Material resources mobilization
 Techniques resources mobilization
 Financial resources mobilization

2. Content

Nature of content
Information specifics
Sources of information
Quantity of information
Group's product

Psycho-pedagogical factors
Didactics or approach medium
Group's productivity
Group's integration process
Definition of functions and/or responsibilities

B. Conditions--How and under what conditions will participants seek to achieve goals?

3. Status of learners

Client socio-psychological referents in the program
Individual diagnosis of strengths, weaknesses of learners
Documented learning styles, preferences, habits of learners
Attitudes of instructors towards learners
Learner's perception of their status with program

4. Teaching-learning modes

Independent study
One-to-one, student-teacher
Small group
Large group
Other

5. Learning experiences

Clear, defined learning objectives
Content relates to objectives
Activities relate to objectives
Activities diversified for access to objectives
Choice of activities available to access
Adequate instruction(s) for selection, performance of activities
Self-evaluation procedures for student
Posttest identical to objectives

C. Resources--What resources are required for necessary learning experiences?

6. Personnel

Human resources
Participants, quantity
Social/economical/cultural characteristics of participants
Social/economical/cultural characteristics of teachers
and administrators
Physical handicaps of teachers/learners
Exceptional talents of teachers/learners
Positive attitudes of teachers/learners
Negative attitudes of teachers/learners
Coordination and curriculum
Teacher's approach to capacitation
Control of execution
Administrative organization

7. Learning materials and equipment

Types and quantities of basic learning materials
Types of equipment, tools, etc.
Types and quantities of software
Repair of equipment, software, other materials
Availability of above
Practicality for use of above

8. Physical facilities

Adequacy of site
Resources of the environment
Local and temporal conditions and influences
Size of facility
Repair of facility
Adequacy of programmed spaces
Adequacy of space organization, relationships
Utilities
General compatibility
Aesthetics
Furnishings
Equipment
Custodial care

D. Outcomes--How well were goals achieved? What needs to be changed?

9-10-11. Implementation--Evaluation--Improvement of the Plan--How well were goals achieved? What needs to be changed?

Information gains
Instrumental and skill gains
Work plans produced

Difference between the program's intentions and actualities
Origins of failure
Origins of success
Influence of unforeseen agents

Pursuant results (transfer)
Group's level of achievement in follow-up of the educational activity
Population directly reached
Evidence of use of the educative intervention

Differences between anticipated and actual activities
Origins of unsuccessful activities
Origins of successful activities
Influence of unforeseen agents:

E. Induced effects:

Was there a serious discrepancy between the general purposes of the Program and the purposes of the educative intervention in the area?

Was there a serious discrepancy between the general purposes of the Program and the aims of the educative intervention in the community?

Was there a close relationship between the particular purposes of the Program and the community need that caused the Program's origin?

Did the group take part in the search for resources for the recreational program?

Did the community participate in the study of its resources?

Did the content correspond to the Program's purposes?

Was the information sufficient to satisfy the needs of the group being educated?

Did the intellectual product of the group add new elements of the available information?

Were the intellectual, educational and affective characteristics of the people being educated taken into consideration in the handling of information?

Was the productivity of the group enhanced by the approach to content?

Did the structure of educational functions contribute to the group's autonomy and the task's fulfillment?

Were the mobilized material resources sufficient to achieve the aims?

Did the environment conditions contribute to reaching the purposes of the training?

What effects resulted from the participants' homogeneity or heterogeneity?

Did the coordination and teachers' capability level match the group expectations and the demands of the educational intervention?

Did the use of didactic material ease the learning tasks of the group?

Was use made of feedback from the evaluation done during the course of instruction?

Did the group elaborate work plans by the end of the program in order to assure the continuity of educative intervention?

Did the final evaluation of the program indicate its success or failure (achievement or non-achievement of the goals of the program?)

Were plans or indicators for change and improvement of program, instruction and/or resources produced?

Can such improvement be accomplished at the local level?

What assistance is necessary from higher levels?

How can such assistance be assured?

Recommendations

At Levels 1 and 2, evaluation should be a continuous process of collecting data from the client and altering program and process to meet client needs and perceived needs. This kind of evaluation need not go higher unless the resources of the LRC of those levels are insufficient to meet institutional needs. Mobile unit operations will have the ability and the opportunity to convene with the district/regional centers for evaluation. To the extent that this occurs, the supervisory necessity of conducting evaluation at the local levels will be reduced.

At the district level, continuous evaluation of a self-inspection variety will be possible through the feedback of mobile unit evaluation sessions and through supervisory evaluation of Level 2 centers. Further evaluation would be conducted through the national center supervisory staff.

The national center administrative unit, utilizing evaluation reports from district centers and national center supervisors in the field, will be capable of intercepting their own weaknesses and potentialities calling for change. If, in addition to the governing board, the national seminar or KIVA (see Chapter VIII) can be maintained, the culmination of all these evaluation efforts can be effectively captured for directed change fully under the aegis of the philosophy under which the LRC-BCES was originally established.

Chapter VI

PERSONNEL NEEDS AND STAFF DEVELOPMENT

Nonformal Education's Instructional Needs VI-1
LRC-BCES Special Training Needs VI-4
Other LRC-BCES Training Instruments VI-6

Chapter VI

PERSONNEL NEEDS AND STAFF DEVELOPMENT

As important as organization, facilities, equipment and media often are, in the final analysis it is the people who must plan and organize the programs in the LRC-BCES system. In this chapter we focus on the kinds and qualities of personnel we believe are necessary in order to carry out an effective program at various program levels. In the discussion we emphasize the need to include a wide range of people--professional and non-professional--who can, when properly trained, play a variety of roles from local to national levels, working full or part-time for pay or as volunteers. Likewise, we discuss how the project has tried to develop a series of basic training programs in six staff development areas to provide a systemwide foundation at the embryonic level of organizational development.

Nonformal Education's Instructional Needs

Nonformal education, which the LRC-BCES primarily supports, requires a different kind of instructional team than formal education. Formal education is run almost entirely by a full-time professional and administrative corps, neatly categorized as teachers, aides, administrators, supervisors, inspectors, and so on. Typically, these personnel have uniform salary structures according to function, level of professional training, and years of service. We see the LRC-BCES incorporating a more mixed body of personnel--professional and non-professional--and the categories much less sharply defined.

For instance, we know that at the local program level of the LRC program, local citizens in rural villages throughout the world can serve as valuable learning and instructional resources in a variety of ways:

- as nonprofessional volunteers, who serve as organizer and animateur of local study groups (e.g., ACPO in Colombia, the village level Cooperative Education program in Tanzania).
- as village level monitors (agronomists and farmers with basic training), who follow-through with local farmers from radio broadcasts which are addressed to their needs in their language styles (e.g., the Guatemalan Basic Village Education Project).
- as facilitators, who, with only a third grade education and basic training in program philosophy and the use of nonformal education materials, can serve as the key implementers of difficult consciousness-raising adult education projects as in the Ecuadorian Non Formal Education Project. Eduardo Rothkegel Ortuzan and James Hoxeng, writing in Non-Formal Education and the Rural Poor (1977) illustrate how important the seemingly less important can be:

The facilitator became the essential mechanism and the center of the process itself and the activities of the project. He constituted, within himself/herself the destruction of myths that the educator brought the knowledge and the student brought only emptiness that the teacher must fill, that the peasant was an object that could be actualized by education. On the contrary, the peasant was demonstrated to be a somebody with an enormous potentiality of self-affirmation, self-esteem, and a professional sense of his role in bring about the changes which his community found necessary. (pp. 1-4)

- as woman leaders, who serve as a conduit for important information and advice to pregnant mothers about pre- and postnatal care and birth control (as in Kenya's community development programs).
- as local craftsmen, who share their knowledge and skills with students through formal and nonformal apprentice training programs (as experienced throughout the world for as long as history has revealed the story of man).

Yet we recognize that to function effectively as a national or local learning resource system, some sort of professional education expertise is necessary to provide leadership and direction to the LRC-BCES programs. From the instructional/supervision areas of responsibility, we suggest that a comprehensive community-based program would have access to technicians and specialists from the health, agriculture and other nonformal education fields. We believe that generalists, who have had special training in community education, administration, and instructional technology could serve the system

efficiently as program coordinators at the first, second and third levels. (See the discussion on supervision in Chapter V.) Other organizational development areas such as staff training, research, evaluation, the preparation of software, broadcasts and programs that link the center with other community agencies are areas where professional assistance is critical. We believe that the LRC-BCES will incorporate professional and/or specialists in these areas at one or more levels on a full or part time basis.

In general, we can organize the personnel required for the comprehensive, integrated system by drawing from most or all of the following six categories.

1. LRC-BCES career people, professionally trained to work as coordinators, supervisors, and instructors at the first, second, and third levels. Examples of these kinds of people would be agriculture extension agents, literacy trainers, nutrition experts, vocational trade teachers, etc.
2. Professionals, administrators, and civic leaders at all levels who serve as planners, organizers and facilitators of local programs and who assist in identifying local learning needs and arrange to bring potential learners together with expert sources of knowledge to help them meet these needs. For example, the chairperson of the women's movement, the social welfare officer, agriculture or health extension agent, the village mayor, spokesman or priest.
3. Professional trained LRC-BCES career personnel at the CLRC, DLRC, and national levels who generate knowledge or software for local use. Here we see instructional design specialists such as curriculum specialists, artists, communication technicians, script writers, photographers and media technicians.
4. Local practitioners with special skills who give part-time instruction to others in the community. Examples of these kinds of people would be craftsmen, community leaders (civic and women's programs), local artisans, tradesmen, midwives, model farmers.
5. Local volunteers or part-time paid personnel with high motivation, and good organizing skills who serve as local organizers, animateurs, monitors, group discussion leaders, catalytic agents, communicators with outside sources for knowledge and inspiration--but not really as "teachers" in the traditional sense of the word.
6. Miscellaneous cadres associated with one or several organizations who can be deployed to educational purposes--army training centers, labor organization leadership programs, priests, youth mass education efforts, etc.

In summary, we believe that virtually all countries, regardless of their level of development, even the poorest of poor, have a substantial supply of professional and nonprofessional personnel, including many able and well-motivated people at the village level who--if effectively mobilized, trained, and counseled, and provided with backstopping support and encouragement, and inspired by the importance of their tasks and the LRC-BCES programs--could go a long way toward meeting the important learning needs of rural populations. The critical question centers around mobilizing, training, counseling and backstopping them. Of these, training is the more inclusive; if properly done, it can provide the ingredients for natural evolvement of the other qualities.

Special Training Needs

In the development of the LRC-BCES, six critical areas of training were selected as being basic to the personnel development needs of most levels and kinds of LRC-BCES organizational settings. These areas are: (1) assessing community needs, (2) curriculum development, (3) carrying out an economics analysis, (4) women's development, (5) working with Community Advisory Groups, and (6) evaluation. Each of these "skill development" areas has been packaged into a self-administered Training Module designed to assist administrators and field level LRC coordinators with their personnel training programs. A brief explanation of each module is presented below.

1. Assessing Community Needs. Here the focus is on developing those skills--analytical and diagnostic--which will permit one to effectively ferret out the basic learning and training needs of the poor majority in a particular social setting. Much attention has been given to exploring important group process skills that permit the facilitator to develop the rapport and the system whereby local community participants, in the context of their own work and life styles, can identify and clearly determine their needs. The important quality which the module emphasizes is not the needs themselves as

much as it is the fact that once needs are identified and verified, the community participants who have developed them emerge from the diagnostic process as proud owners and architects of their projections.

2. Curriculum Development. Once needs have been determined, the community educator must design and develop instructional programs to meet these needs. The process of going from needs to program is referred to as curriculum development. In this module, skills which lead to the ability to set goals, write good objectives, select appropriate instructional strategies, assess what has been learned, and improve on those program qualities which prove to be weak are stressed.

3. Economics Analysis Skills. Assuming that each LRC education system will strive to be efficient and effective, a special training module showing how and when to apply four common methods of economics analysis in planning LRCs has also been prepared. The four methods covered are: benefit/cost comparison; cost-effectiveness; cost-efficiency, and cost-utility estimation. In this module, a workbook format is used for active participant response. Illustrative examples and exercises demonstrate the use of economic analysis techniques in situations commonly faced by field managers and learning resource center cost analysts when planning and operating community level programs.

4. Women's Development. A special training module has been prepared which focuses on ways in which the community educator can more effectively assist his or her LRC-BCES education program in meeting the special educational developmental needs of women. Presented in this module are critical analyses of traditional deficits in educational offerings and program planning techniques which tend to be insensitive to the unique needs of rural women. Exercises which are designed to bring about new awareness of special community level needs in women's development are interspersed with interesting and thought provoking informational material.

5. Working with Community Advisory Groups. One of the basic principles associated with the community-based learning resource center education program is that programmatic functions be community based. To assure that the appropriate kinds of community involvement and participation are realized, a special training module dealing with the skills needed to effect and nurture community action has been prepared. Emphasized here are group process skills: the ability to come to consensus on issues relating to community development and community education; techniques for setting priorities in program planning; the ability to use various kinds of group process techniques to bring out personal strengths of a variety of personality types within a typical community; and, the leadership skills associated with assisting a community level advisory body to better understand its roles as they may relate to program initiation, monitoring, and evaluation.

6. Evaluation. Essential to all LRC-BCES programs is a comprehensive formative and summative evaluation strategy. What is emphasized in this training module is the ability to formalize an appropriate and comprehensive evaluation system for monitoring and assessing the results of a center's activities. Basic terminology and skills related to program evaluation are developed in a form and style that permit the community educator to better understand the means-ends relationship of his/her program.

Other LRC-BCES Training Instruments

In addition to the six modules presented above, the project has prepared two other important training instruments which are both unique and integral to the LRC-BCES concept. These are:

1. A Special Technical Report on Instructional Technology and its Application to LRC-BCES Models. Prepared by James Brown, a specialist in instructional technology, this report provides (1) a clear summary of the literature and experiences of nonformal community education activities involving specific uses of media for various

educational/informational uses; and (2) presents findings and recommendations for media utilization techniques and procedures having special application to the LRC-BCES model. The audiences for whom this report is prepared are the professional and para-professional personnel who ultimately may be employed in LRC-BCES programs at all levels. Its objectives are to provide readers with a basis for developing many of the understanding skills and appreciations typically expected of various types of instructional technology personnel. Of particular importance in this report are three appendices which (1) describe organizations, associations and centers known to be conducting studies, gathering data, or providing technical information assistance to individuals interested in technology and its application to development education programs; (2) list periodicals (magazines, newsletters, annuals, etc.) that reflect the state of the art in the fields of technology and nonformal education, and (3) present one of the most comprehensive bibliographies in Instructional Technology and its implications for LRC-BCES-like educational development programs.

2. Resource Inventory for Learning Resource Center-Based Education Systems for Latin America. Prepared by Ofiesh Associates of Arlington, Virginia, this inventory or catalogue of instructional materials is designed to help the LRC administrator or facilitator access materials. It provides the system and methodology for categorizing, searching and cataloguing basic reference materials. Table VI-1 (also included in Chapter IV) shows the subject areas covered in this document.

Table VI-1

Subject Content Areas and Other Classification Categories of the Inventory of Instructional Reference Materials (Prepared for the San José University Project Under Special Contract by Ofiesh Associates, May, 1978).

<u>HEALTH (Class 1)</u>	<u>ANIMAL PRODUCTS/HUSBANDRY (Class 5)</u>
Sanitation Body Care Dental Hygiene Mental Health Heart and Lung Dysfunction Miscellaneous Physical Dysfunction First Aid Paramedical Nursing Childbirth Infant Care Contraception/Sexual Functioning Family Relations Prevention (disease, poisoning, infection) Safety	Dairy Products Cattle Sheep/Goats Hogs Poultry Fish/Seafood Horses/Mules Prevention/Sanitation Miscellaneous Farm Animals
<u>HOME/PERSONAL (Class 2)</u>	<u>CONSTRUCTION (Class 6)</u>
Energy Saving/Conversation Consumer Protection Food Preparation Nutrition Miscellaneous Homemaking Skills	Masonry Carpentry Plumbing Home Design/Architecture Landscaping Heating (Installation) Waste Disposal/Sewage Wells/Water Drilling Painting Roofing & Windows
<u>AGRICULTURE/FORESTRY (Class 3)</u>	<u>TECHNICAL TRADE (Class 7)</u>
Forestry Forestry Fire Prevention/Fighting Fertilizers Irrigation Pest Control Land Use/Crop Rotation Farm Tools & Equipment (Use) Erosion, Watershed Management	Gasoline Engines/Motors* Motor Vehicles, General* Farm Equipment (Maintenance and Repair) Refrigeration Equipment* Tool Use/Care Safety
<u>CROPS (Class 4)</u>	*General operation, maintenance and repair, NOT theory, design manufacture or construction.
Fruit and Citrus Trees Coffee Cotton Soy Beans Hay/Silage Tomatoes Miscellaneous Crops	<u>ORGANIZATION & MANAGEMENT (Class 8)</u>
	Farm Management Co-op Management Leadership Small Business Management

Table VI-1 (Continued)

<u>EDUCATION (Class 9)</u>	
Teacher Training	Basic Concepts/Skills
Educational Systems Technology	Mathematics
Media/Communication	Catalogs of Instructional Materials
Nonformal Education	Second Language
Literacy	
<u>Miscellaneous Classification Categories</u>	
<u>COST RANGE</u>	<u>LANGUAGE</u>
1¢ to 50¢	English
51¢ to \$1.99	English & other language (bilingual)
\$2.00 to \$10.99	Spanish
\$11.00 to \$30.99	Spanish & other language (bilingual)
\$31.00 to \$75.99	
\$76.00 to \$150.99	
\$151.00 to \$250.99	
\$251.00 to \$400.99	
\$401.00 on	
Free	
	<u>AUDIENCE</u>
	Between 1 and 5 ages
	6 and 12
	13 and 16
	17 and 21
	6 and 17
<u>MEDIA</u>	
Broadcast Television	6 and above
Radio	12 and above
Individual Instruction	18 and above
Teaching Device Required	Teachers/Trainers
Group	
Videotape	
Cassette	
Still Transparencies	
Microfilm, Microfiche, etc.	
Filmstrip	
Film	
16mm Film	
Prints (Photos, Charts, Illus.)	
Audio Tape	
Sound Track	
Optical	
Audio Disc (Record)	
Self-contained book, pamphlet, notebook, etc.	
Script	
Teachers Manual	
Models, Specimens	
Games, Toys, Puzzles	
	<u>LOAN/RENTAL</u>
	Rent for free
	Loan, no fee
	<u>DOMAIN</u>
	Public Domain
	<u>SPONSOR</u>
	U.S. Government
	USAID

Chapter VII
FACILITIES PLANNING

Level 1: Learner Groups	VII-2
Level 2: Community Learning Resource Centers.	VII-4
Level 3: District Learning Resource Centers	VII-11
Level 4: National Learning Resource Center.	VII-16
Other Considerations in Establishing Centers	VII-22

Chapter VII
FACILITIES PLANNING

Planning and selection of facilities for each of the four levels of learning resource center operation (learner group, community LRCs, district LRCs, and national LRCs) assumes several considerations. First is the consideration that the smaller the community, the less likely is the probability of encountering utilities, vehicular traffic, discrete population centers, good roads, etc.; the larger the community, the more difficult it will be to acquire good sites and the more expensive will be site purchase and contribution. Secondly, indeterminate statistics regarding specific services to be offered at each site, specific population figures, etc., and the exorbitant differences between standard specifications for technical spaces as found in the traditional literature on learning resource centers and those occurring informally throughout Latin America, will result in the planning of smaller, less specified space than would be justified. Furthermore, established criteria for site selection, construction, and planning in one country may be inappropriate and/or unreasonable when placed in the context of another. Such standards as are applicable and such other criteria as may be needed will be applied in accordance with the development of each level in this chapter. Definitive sizes, utility specifications, and convenience suggestions for flexibility and adaptability must be weighed against the assumptions given for the level in order to determine their reasonableness or further range of required adjustment.

These are not crippling reservations. Specifications will be usable and useful for architectural design, given the probability that minor mathematical adjustments may be required of any given site once the local necessities and resources are determined.

Level 1: Learner Groups

Level 1 is conceived to serve communities having 2,500 persons or less. In fact, since the client is the rural population, the urban portions of Level 1 centers are likely to be more on the order of several hundred to a thousand in population with the remaining portion of the people residing in the countryside, at varying distances from the town. Utilities, traffic arteries and vehicles are likely to be minimal.

Site

The size and resources of Level 1 centers are such that it is doubtful if site purchases or donations will be made for specific buildings. More likely, such centers will be serviced by mobile units; or, existing community facilities will be borrowed (shared) or rented, in which case, site recommendations may have no application. Obviously, the community or town, as the local marketplace, is the only place to which the rural community members travel; considerations of "centeredness" for convenience or prominence are worthless in this context. Possibly the advisability of renting, borrowing or locating near the marketplace may have some value and applicability. Further, though no specific facilities may be planned, there will frequently be a perceived need for a site for experimental crop plots, animal plots, or orchard plots which can be maintained and protected by the community. This might require sheds and fencing consistent with local, small-farm out-buildings.

General Facilities Considerations

The large probability of mobile units servicing Level 1 centers minimizes facilities considerations; however, where local community structures are pressed into service (by whatever means), some criteria for selection may be helpful were choices are available. (Mobile units are discussed near the end of this chapter.)

Populations and Activities

Level 1 learners will be the most isolated, least literate, and probably the most naive and needy of those served by the LRC-BCES. Until such time as literacy rates are considerably increased, most learning activities will involve demonstration, group discussion, graphic reinforcement materials, and hands-on performance by learners under the direction of LRC leaders. Initial populations of learner groups will be primarily male, interested primarily in agriculture, animal raising, water, power, etc. In many places it will take time and effort to achieve adequate representation by female clients--because of local values and culture. With the offering of hygiene, sanitation, prenatal care, secondary income producing activities (folk-crafts, etc.), the female learning population should rise to adequate levels.

In communities of this size, given the natives' reticence to "foreign" or outside influences and their lack of organizational skills and knowledge of themselves and/or their relationships with broader communities, plus the difficulties of travel and cost of time spent away from primary occupational production, it may be expected that several years will pass before 10 to 20 percent of the community can or will become involved in the program at an intensive or regular level. Much teaching originally (and even subsequently) will take place in the fields with small groups of adjacent farmers. Thus, community facilities for assembly for discussion or demonstration might well be limited by the assumption of 30 to 50 participants for one presentation or session.

Space Considerations

Obviously the best possible selection of facilities from among local institutions would be, first, the normal schools and, second, the local schools, where congregation, assembly for demonstration and storage space would be available. The existence or availability of

such facilities, however, will be infrequent; and in all likelihood in communities of this size what may be available will be churches, private homes, plaza bandstands and possibly the patio areas of administrative or judicial buildings. From among these choices probably the assembly and storage capabilities of the church--which is nearly always available and accessible--will constitute a best second choice. Given other institutions, such as medical clinics, warehouses or other commercial spaces (with are not usually found at this level) it is possible that the many activities of the LRC-BCES will function among a number of sites, some offering assembly, some work space, others storage, etc. Storage will include tools and instruments for farming and animal care as well as instruments and materials for hygiene, woodworking, weaving, ceramics, and graphic learning materials. Should the community have electricity, the use of (and consequent storage of) audiovisual equipment should be considered. However, the lack of local power should not obviate the possible use of electronic equipment, either audiovisuals or power tools. Mobile units could certainly carry gas-operated generators; such generators could also be kept and stored locally just for such instructional use.

If enough population and activity is generated in Level 1 centers to eventually warrant the construction of special facilities, specifications made for Level 2 and Level 3 in succeeding sections of this chapter should be considered. Any such construction should be of local materials with local labor.

Level 2: Community Learning Resource Centers

Level 2 is conceived to provide services to communities of from 2,500 to 5,000 persons. By comparison with Level 1, the components may be expected to be larger, slightly higher levels of literacy may be expected, and road access should be greater. Except under fortuitous circumstances, Level 2 centers will not be either located for nor technically capable of supporting Level 1 centers, except as storage and distribution centers when this is necessary and possible.

Level 2 will have Learning Resource Center facilities. Site considerations become relevant here and space considerations become imperative.

Both Level 1 and Level 2 will depend immediately upon Level 3 centers for logistics support.

Site

Site size should range from one-half to one hectare. If the lower range is selected or is made imperative by practicalities, the site should be located among or adjacent to other sites which might later be purchased, leased, rented or borrowed. Approximately half the site, assuming one hectare, would be in agricultural fields, sheds, etc., and the rest would be given over to facilities, access, and expansion space.

The site should be relatively level, with adequate drainage to avoid ponding. The rural environment minimizes concerns of centrality or traffic. Access to utilities, if they are available, is important. Otherwise, access to water is imperative, either by way of ground water or canal or by way of well-source. Electricity should be provided for indispensable services using gasoline-operated generators.

General Facilities Considerations

Facilities should be constructed from local materials and with local labor wherever possible. The most commonly utilized local materials are wood, adobe, and stone. Wood is frequently the least desirable because of its susceptibility to the elements, including termites, and the general inability to weather-proof it in small Latin American communities. Where concrete is scarce or expensive and most local construction is not of stone, the cost of stone-cutting and concrete may make construction prohibitive, even though stone is generally the most suitable material otherwise. Adobe is generally

acceptable if adequate roofing systems are achieved to protect it. In most Latin American countries barrel brick is available and cost-acceptable, though in many cases metal sheet is more economical. Local conditions may make concrete slab-roofing feasible, though (particularly in the Andes countries) construction with concrete roofing systems may require foundation and roof rings be employed with brick or stone construction in order to ensure safety under earthquake conditions. The barrel brick, sheeting, or concrete systems will offer adobe walls adequate protection, whereas frequently wood, palm thatching or other common roof topping will not--due primarily to demanding maintenance requirements.

Population and Activities

Level 2 centers may expect a higher immediate local percentage of participation than experienced by Level 1 centers. It is estimated that space for assembly and large-group activity may very well be planned initially for up to 150 persons. Specialized spaces, labs, etc. could be planned for the same number at any given site. Outside space would accommodate some of this number of course. Thus, the building could then conceivably support up to 300 people with all services functioning simultaneously and could rotate and duplicate scheduling to increase this number geometrically as the program grows. These figures should, however, be challenged at each site and adjusted in accordance with local interest or prior experience. In some areas these figures may be low, in others they may be high--so that smaller structures may be initially constructed, if expansion is planned for. Distribution of the suggested model design would be as follows:

<u>Area</u>	<u>Population</u>
1. Assembly--large groups	150
2. Specialized labs	120
3. Outside plots	30
One session total:	<u>300</u>

At any given site a determination of services to be offered must be made following the community surveys. Prior sections of this report have listed the areas of need generally associated with the rural poor of Latin America. The following would translate into shop or lab spaces or field spaces used either separately or in combination:

1. Agriculture--plants and trees
2. Irrigation Systems--drainage--road building
3. Animal raising
4. Construction
 - a. Plumbing
 - b. Electrical
 - c. Carpentry and Metal Forming
 - d. Masonry
5. Mining
6. Sanitation, hygiene, prenatal
7. General (medical) clinical
8. Homemaking arts
9. Crafts
 - a. Painting
 - b. Ceramics
 - c. Woodcarving--sculpting
 - d. Fabrics, weaving, serving, etc.
10. Recreation

In addition, there may be a need for community dining space. There will also be requirements for service space, storage, rest rooms, administration, delivery and circulation. And the instructional program could make certain demands regarding materials production and library services. The above is indicative, rather than exhaustive, but will serve for estimation of space needs under general conditions.

Space Considerations

One center might contain the following for approximately 300 clients.

<u>Facility</u>	<u>Standard (square feet per person)</u>	<u>Capacity</u>	<u>Area in sq. ft.</u>
1. Assembly	10	150	1500
2. Construction Lab		30	
Plumbing	20		
Electrical	50		
Carpentry & Metal	50		
Acreage	40		
3. Clinic	17	30	500
4. Homemaking Arts	30	30	900
5. Crafts (art, textiles, leather, ceramics)	75	--	2250
6. Library	10	--	300
7. Production of Materials		--	540
Taping	300		
Photography	120		
Radio	60		
Storage	60		
8. Administration	200	--	200
9. Washrooms, toilets	626	--	30
10. Patio for recreation and dining (20'x40')		60	indeterminate
11. Circulation	1/3 total		1/3 of total

The total area in square feet, given these standards, could range between 6400 sq.ft. and about 8150 sq.ft., depending on program situation.

Following are space considerations for some of the facilities listed above.

Assembly. This space may be a flat-floor with raised stage area. A projection screen, sound system, curtains and lighting should be included. Folding stack chairs can provide seating. Acoustics must be considered, and chair and stage property storage provided.

Construction Lab. Depending on budget and availability of utilities, this lab may range in sophistication from a workbench and hand tool operation to a shop with various kinds of power machinery--saws, grinders, lathes, welders, etc. The more machinery, the greater the overall requirements. Also, power equipment;

- Makes special demands on electrical phasing and cut-off;
- Creates traffic patterns which are required for safety;
- Increases need for high-quality lighting;
- Adds to complication and/or need for acoustical control;
- Results in increased production which calls for increased storage.

Each type of storage; will have special interior requirements, special relationships to the outside, and special relationships to the shop area to which they pertain, will require sealed concrete flooring for health reasons; and will make cleaning of sawdust and debris very important.

Clinic. This area will consist of a waiting room, conference room, bedroom, and demonstration room. Major requirements are in the third room, which will contain two cots, a medicine cabinet, sink with hot and cold water, sterilizer, bathroom and demonstration counter. If power is available, several outlets should be at hand.

Homemaking Arts Lab. This area should contain local-type stores, a washing bench, sink, drainer, boiler with a 42 liter capacity, work tables, ventilated shelf storage, kitchen ventilation, insect prevention, and impermeable floor and wall surfaces. This area may be located near the patio and/or assembly area to facilitate community feeding.

The clothing area will contain cutting tables, sewing machines, a modeling platform, closet storage, washing area, stain removing rack, ironing area, and clothes-drying rack area. Good lighting is needed in this area.

Crafts. This area should have several storage areas for a number of activities. Painting, weaving leather work, small model work, basketry, wood carving will require heavy-work tables, sinks with plaster traps, water, gas for soldering, and a welding torch--possibly a sander or grinder saw. Clay modeling, pottery, and ceramics will require work tables with sinks, clay traps, damp cupboard for clay storage, potters wheel, damp or drying storage, ovens or kilns (protected from general traffic patterns), and power for ovens or kilns. Textiles will require carding and spinning wheels, looms, dyeing tables, racks and sinks, and ironing area. Each of the above will need a small demonstration area and table, special storage with variable shelving, special ventilation for drying paintings, ceramics, fabrics, etc. Dye resistant floors, good lighting, hanging and/or display space, and hooks should be provided. Outside work will require a patio, with water if possible.

Recreation. The patio may serve for feeding, group assembly, dancing, basketball, tennis, and floor games. Area should have night lights, a concrete floor, and be fully or partially shaded, if possible.

Agriculture and animal raising. A small shed may be developed for tool, produce, and fertilizer storage. Small fenced lots with housing and shade for animals may also be developed.

For the central patio, a separation among building areas for breezeways, an orientation of buildings along an east-west axes, and an orientation of windows and air catchment to utilize prevailing winds, will result in the most comfortable climatic arrangement.

Heavy noise areas, such as construction and crafts, should be separated from areas like the clinic, homemaking, assembly, administration. Level 2 facilities and space relationships are depicted in Figure VII-1.

Level 3: District Learning Resource Centers

Level 3 will come into being by demand as Level 1 and 2 centers develop in sufficient numbers to create pressure for resource materials production, resource people, garage and maintenance services for Mobile Units, etc. They will probably be located in provincial or state capitols, or in large regional cities with roads and highways leading out to Level 2 centers. In the Level 3 areas one will find sufficient commercial activity to allow for purchases of paper, paints, tools, machines, film, film processing and other goods and services ultimately required by the community centers. Thus, commerce, traffic, utilities, higher literacy rates, and labor will provide the logistical support which is lacking at lower levels.

The facilities of the Level 3 center will depend on the size of the urban community. If the urban center is large and the district center is centrally located for access to commercial services, Level 2 type centers may occur at the periphery to serve the rural community and the Level 3 center will contain only support facilities for these and other centers in the district. If the district center is small, it is possible that Levels 2 and 3 will be combined. In any event, the center described here is assumed to be in a large urban setting primarily as a back-up institution to Level 1 and 2 centers.

Site

Site size will depend upon the number of existing or potential Level 1 and 2 centers, their program requirements for materials, tools, machines, machine maintenance, personnel resources, and Mobile Units. It would appear to be more efficient for one center to serve the

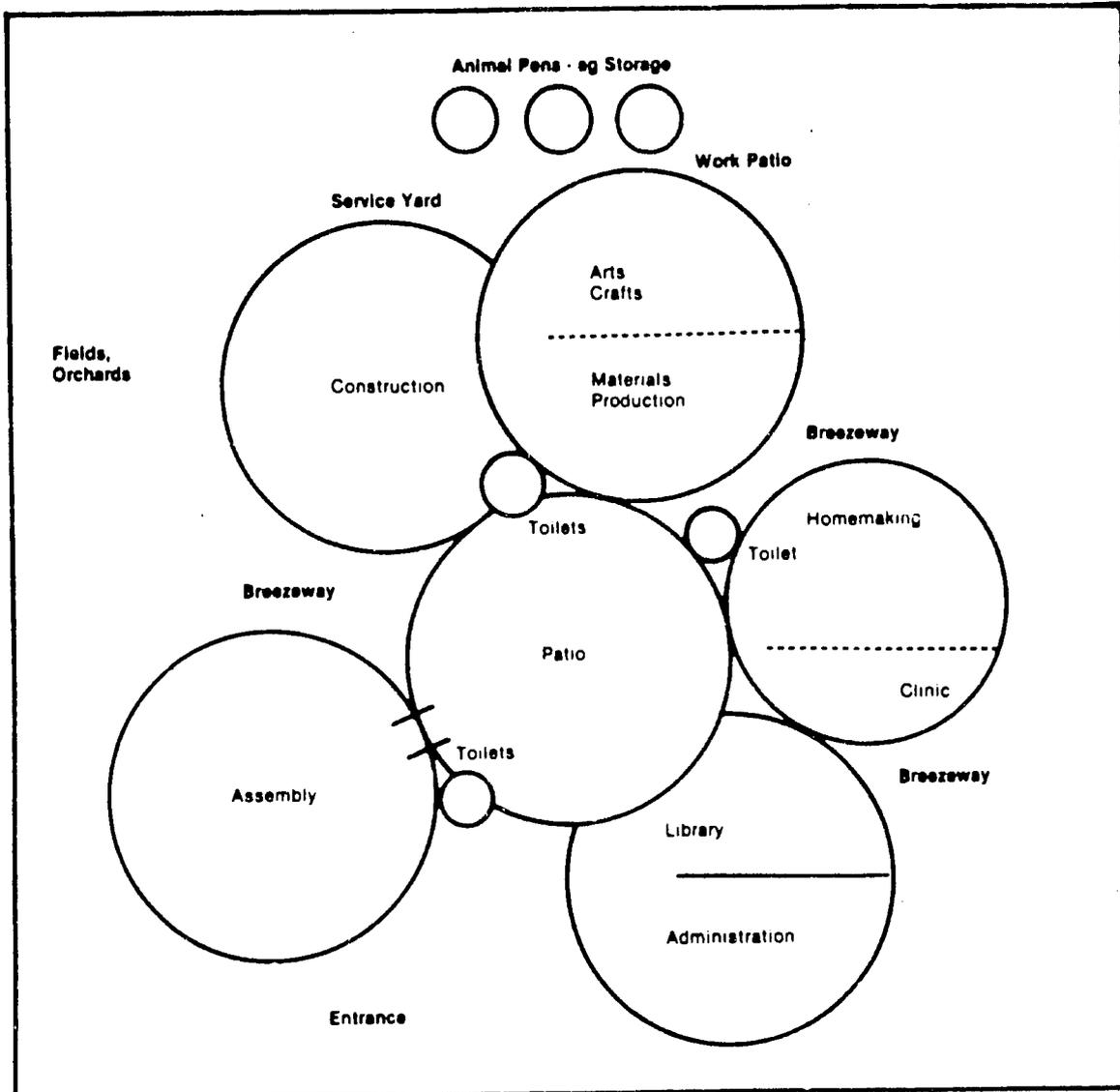


Fig. VII-1. Configuration of the Community Learning Resource Center (a Level 2 center).

district than for several to be developed as the district grows. Therefore, it is suggested that site selection be made originally according to the number of vehicles, people, and shops or labs likely to be required ultimately or at maximum levels. If the district center is expected to service 20 to 30 Level 1 and 2 centers, it is entirely possible that from two to three hectares may be required. If some time is anticipated between the establishment of the center

and its ultimate growth, or if budgetary resources are limited, smaller sites may have to be acquired; but if so, these should be selected where future site expansion is possible and feasible. Primary site selection criteria will include:

- drainage
- good road access
- easy access to water, electricity, sewerage
- proximity to commercial districts
- lack of serious pollution factors

General Facilities Considerations

If the center is to be in a large urban setting, it is advisable (local laws may make it imperative) that professional architectural, engineering and construction services be employed. Otherwise it may be both possible and advisable to construct with local labor and/or materials in smaller cities. However, because of the complexity of technical requirements, an architect should be employed to design this facility.

Populations and Activities

Personnel at this center will include the following types:

- district administrators and supervisors
- resource teachers for community centers' use
- materials production technologists, library
- purchasing
- receiving, storing, dispersing
- machine, tool repair
- truck and auto maintenance
- vehicle parking

Administrative, supervision and resource personnel will perform office activities and research and development. They will be

traveling between the community centers and the district will hold seminars and demonstrations for district level meetings of community level personnel.

Materials production technologists and librarians will manage and supervise the library (including circulation of books and periodicals to Level 1 and 2 centers), manage the production of workbooks, manuals, photos, slides, acetates, audio tapes, models, puzzles, games, radio, and possible television broadcasting or taping.

Materials will be received, stored and distributed to center departments or to community centers.

Machine and tool repair will service small machines and tools and audio-visual equipment at the center and will travel to the lower centers for repair of larger equipment.

Mobile Unit trucks and vehicles used by center personnel in their work with the community centers will be serviced and repaired. Protected parking for these vehicles and visiting vehicles will be provided.

Space Considerations

Facility Size. Because of the number of unknown factors outlined previously it is not possible to estimate the size of a representative district center at this time. The sizes of administration/supervisor and resource personnel spaces, purchasing, and distribution will depend upon the number of people required. Vehicle maintenance and parking will be directly related to the proposed loads. These are future planning decisions. Library size is usually allocated on the basis of about 10 sq.ft. per person for 10% of all possible or projected users. The materials production space can be estimated on the basis of processes

and equipment required for a minimal installation--which will, however, have considerable production capacity. This suite may require review as the time programs are established for architectural design.

Other spaces not sized will, however, be described.

<u>Facility</u>	<u>Area in Sq. Ft.</u>
Administration offices	-
Resource teachers' research area	-
Materials production suite	1,260 sq.ft.
Library	-
Assembly	600 sq.ft.
Purchasing	-
Stock storage	-
Machine repair	-
Vehicle maintenance	-
Toilet facilities	-
Circulation	-
Parking, service access ramps	-

Facility Description. The major administrator's office, at about 150 sq.ft., will have traffic control from the secretary's office. Messenger and public waiting areas will be at about 200 sq.ft. Other administrative/supervisory offices may be at 100 sq.ft., with several sharing secretary, messenger, and public waiting areas.

The resource teachers may be housed in a room with a large center work and conference table. Cubicles around the perimeter would contain desks, book shelves, and files. Room space would require 150 sq.ft. for each cubicle provided. The cubicles should be well lit for reading. Convenience outlets should be available at each cubicle for operation of AV machinery.

The materials production area will have the following sub-divisions and minimal square footages:

<u>Facility</u>	<u>Area in Sq.Ft.</u>
Radio broadcast, control	60
Studio and taping	100
Tape production	300
Art, copystand, darkroom	120
Acetate production	100
Storage	60
Reproduction room	<u>520</u>
TOTAL	1,260

The library will contain book storage, a reading room, resource books, a check-out station, librarian's workroom (book processing) and other storage.

Purchasing offices will approximate minor administration offices and may be clustered with those.

Storage and distribution will require ramp and loading dock and may be adjacent to machine repair and vehicle maintenance for that reason. Machine repair will have electrical and bench work requirements which must eventually be fully specified. The vehicle maintenance will be a highly specialized, completely stocked shop area, for all types of vehicle repair and maintenance.

Relationships. Vehicle maintenance, machine repair, stock storage, and materials production will be separated from other areas for noise considerations. Resource people and library should be adjacent. Other offices should be located at the entrance. Assembly space location is not critical.

Level 3 facilities and space relationships are depicted in Figure VII-2.

Level 4: National Learning Resource Center

The national center will be the overall administrative unit for the LRC-BCES. Policy planning, administration, communication, major

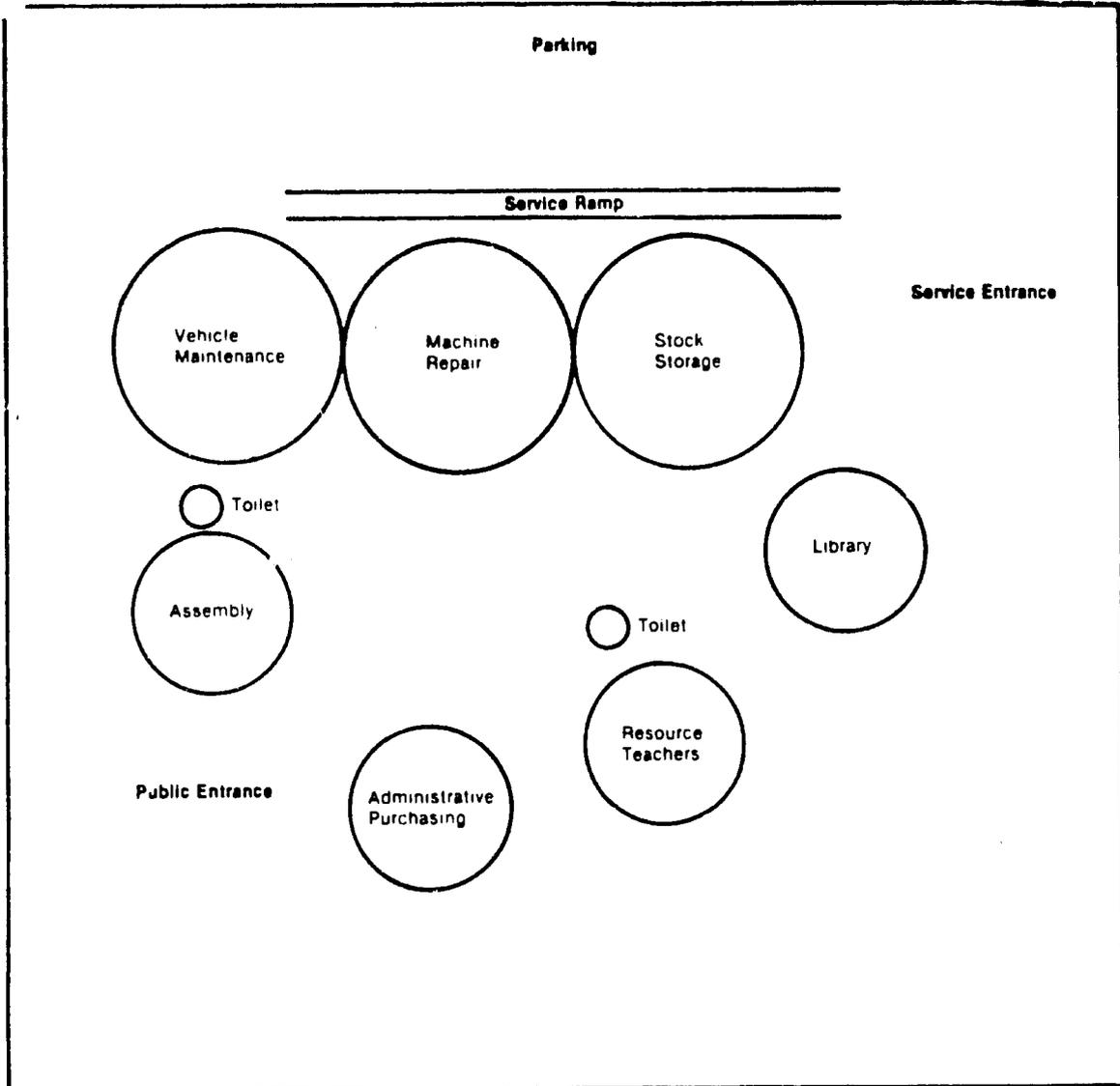


Fig. VII-2. Configuration of the District Learning Resource Center
(a Level 3 center)

research, major production of learning materials, and general support will be its functions. In all likelihood, its construction will be in the capitol city and will be accomplished soon after the LRC-BCES program is initiated.

Site

As an urban center, the NRLC will have many site selection criteria:

- adequate size-expansion potential
- good drainage
- good subsoil conditions for foundations
- nearness to other governmental and educative agencies
- nearness to commercial district
- excellent traffic location
- minimal pollution
- immediate access to all utilities
- convenient to reach by community transit systems
- parks, planting, landscaping potential

General Facilities Considerations

Because this facility will be located in the capitol city, in close proximity to other education-oriented, policy-making governmental and national institutions and agencies, costs for site acquisition and construction will be high. New construction may be impossible because of this or because of the lack of adequate undeveloped sites. There is a high likelihood that these facilities may have to be rented or leased and/or that existing facilities, however acquired, will require remodeling to serve the purpose of this program.

There is little question that these facilities, whether designed from the ground up or remodeled from pre-existing space, should be developed under contract with qualified architects, engineers, and construction contractors.

Populations and Activities

Three levels of personnel will be employed in the NRLC:

- Directing Board, administrators, liaison specialists, supervisory personnel;
- Research and development personnel and high-level technical planning and production people;
- Skilled labor for broadcasting, printing, and materials production processes.

The top level will be involved in office work, communication, conference, and review processes. Internal work conferences and reviews, beginning with policy establishment, organization of resources, coordination with allied institutions and internal planning, and concluding with work specifications and schedules imply significant internal and external phone and/or intercom access, small work areas and large and small conference spaces.

The research and development staff will be involved in basic and applied research to create conceptual material which both supervisory and planning people will use in communication with the local centers and in providing basic scripts from which texts, filmstrips, broadcasts, and other learning activities and materials will derive. Production people will create layouts, graphics, photography, tapes, texts, magazines, etc. for final production for distribution.

Printers, binders, TV cameramen, radio technicians, announcers, assembly and packaging and delivery personnel will perform the variety of tasks which this level implies.

Space Considerations

Types. The Board, administrators, supervisors, and liaison specialists will require a boardroom, conference spaces, group work spaces, offices, waiting areas, small kitchen for drink and snack preparation, and restrooms.

The research and development staff will require offices, a library of books, periodicals, photos, etc. Technical and production staff will need editorial offices with layout boards, a projection facility, as well as arts and graphic labs, tape production, TV, radio broadcasting facilities, darkroom, etc. These facilities will be of the same sort as those specified for the regional centers, except that they will be larger, more comprehensive, and more sophisticated.

Skilled labor areas will involve an off-set printing shop, binding room, storage, packaging, receiving and delivery dock, vehicle parking.

Space Relationships. Administrative, supervisory, and liaison people will require access to the public and an orientation to the main entrance. They will be associated on the other side with the research, planning, and production staff. Planning and production facilities should be immediately adjacent to the printing, packaging, and delivery spaces, and should be protected acoustically. These last spaces will require a service entrance for delivery trucks, a delivery ramp, and parking for delivery and personal vehicles.

Level 4 facilities and space relationships are depicted in Figure VII-3.

The Mobile Units

The Mobile Units will serve the community learning groups. They will go into the field and remain for protracted periods of time. Their equipping and maintenance will be performed by the regional centers.

As classrooms for the community (and perhaps living quarters for the instructors) they will carry a variety of equipment. Representative of such is:

- Gas-powered electricity generators
- Powered wood-working equipment
- Powered metal-working equipment
- Projectors, radios, TVs, cassettes and other AV machines, kilns, looms, etc.
- Agricultural and other small tools
- Sanitation and minor medical supplies and instruments
- Books, charts, models, films, paints, clays, brushes, knives and other learning materials

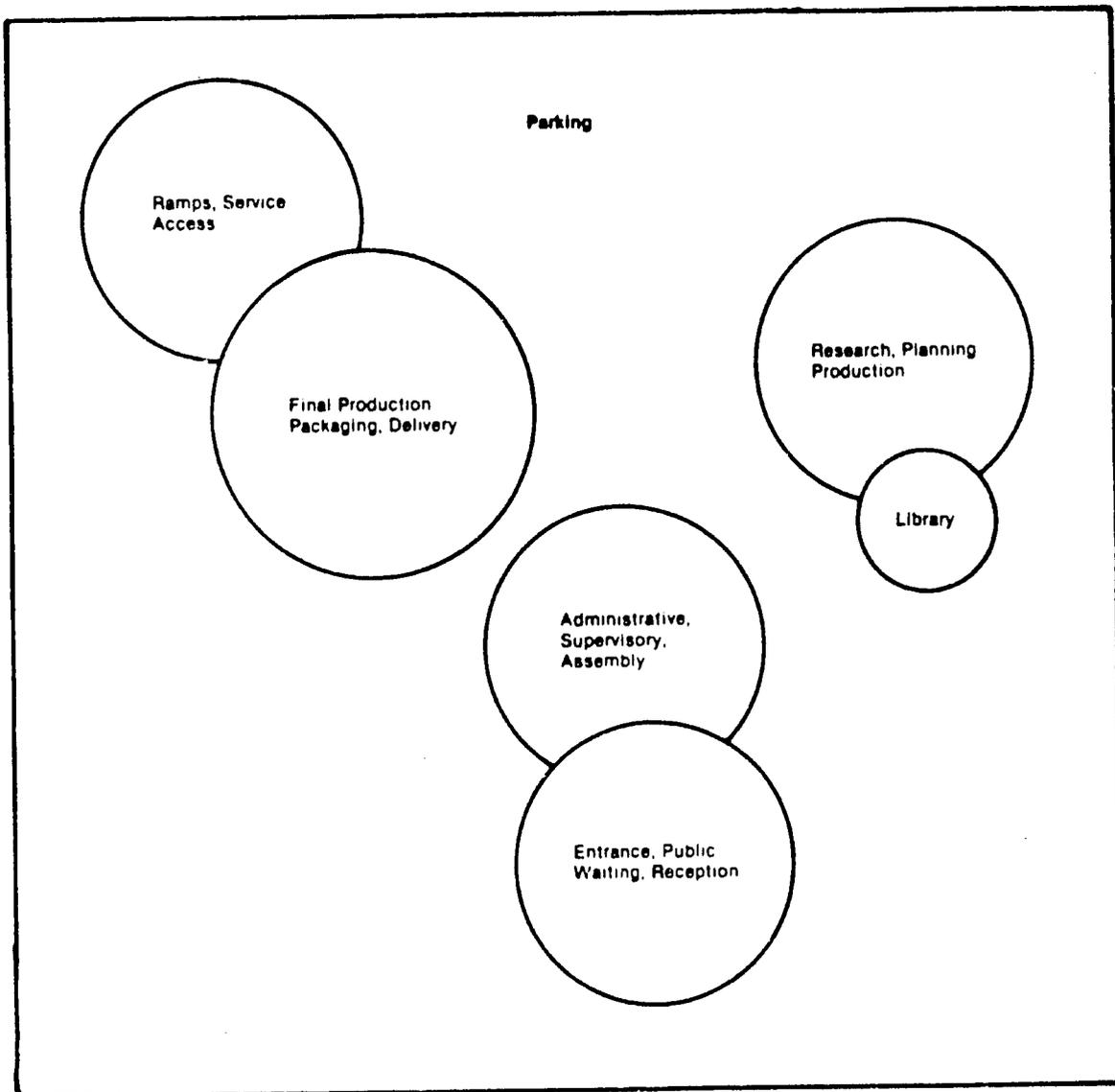


Fig. VII-3. Configuration of the National Learning Resource Center (a Level 4 center)

- Bed, bath, cooking facilities
- Spare tires, parts, tools for vehicle

These vans would be rugged four-wheel drive vehicles, capable of covering rugged territory having poor roads or no roads, and fording streams.

When specifications for these vehicles are made, special attention might be given to the studies made by Educational Facilities Laboratories, Inc., of New York several years ago regarding design of mobile units to carry instruction to Indians in the southwestern part of the United States. Also, study might be made of the vehicles specified for the mobile maintenance system for the Republic of Mexico (CONESCAL in Mexico, D.F.), currently in use.

Other Considerations in Establishing Centers

The National Center is likely to be the first facility considered. Its specifications must eventually reflect the administrative organization, line and staff decisions, surveys of estimations or production limitations, and service practicalities.

Before this center or any other goes to architectural planning, the services of a facilities planner should be employed to translate program decisions and statistics into design criteria in the form of educational specifications with regard to the following information:

- Philosophy--objectives
- Populations
- Activities
- Space sizes
- Space descriptions
- Space relationships
- Special requirements
- Pre-schematic bubble diagrams
- Equipment specifications

Policy must be developed to determine the number of centers or geographical ranges appropriate to the establishment of regional centers. Each one developed will require program decisions which will result in the evolution of the above detailed specifications. The desire for standard or prototype solutions to design of these

centers will be frustrated by the program alternatives available and the logistical differences which will occur. Specific shops or labs, however, may respond to such design, more or less, if variations in size are allowed.

Some portion of the administrative component of the National Center should be devoted to continuous research and planning in the area of facilities and equipment.

Chapter VIII

STRATEGIES FOR IMPLEMENTING THE LRC-BCES MODEL

Contact-Presentation VIII-1

Baseline Planning. VIII-2

Modification-Promotion VIII-4

 Phase I--The Issues Seminars VIII-5

 Phase II--The KIVA Seminars VIII-10

Adoption-Implementation VIII-13

Chapter VIII

STRATEGIES FOR IMPLEMENTING THE LRC-BCES MODEL

Current project funding provides for a limited amount of field testing of the Learning Modules in Latin America. The true power, however, of the LRC-BCES model will emerge conclusively only with its application to a site-specific situation, because the model must be adaptable to the diverse socio-political conditions to be found among the various Latin American countries. This chapter is concerned with the development of a process version which will permit such testing of the LRC-BCES model, through the intervention of USAID resources and the materials and learning modules developed for the project by San Jose State University, California. Critical steps in the process involve the following:

- Contact-Presentation
- Baseline planning
- Modification-Promotion
- Adoption-Implementation

Contact-Presentation

Contact is made by way of the country education office for AID or the OAS. Communication may be initiated either way, of course; but presumably education officers would be given advance information for distribution to ministry of education and/or other official organs or officers interested in or responsible for informal or rural education programs. Contact constitutes an expression of interest by the host country in exploring the potential of the LRC-BCES model, and would result in orientation sessions with lay host-country personnel, utilizing the LRC-BCES materials, San Jose State University staff, and the multi-media presentation of the final report. Discussions would explore the adaptability of the model to the country's community education plans. If, following this contact, AID is assured that the national commitment to establish policy to implement the development of the system warrants further assistance, the next series of steps may be begun.

Baseline Planning

Assuming that two or three countries show an interest in developing the model more thoroughly within their social/cultural context, a technical assistance planning team selected from the project staff and other consultants could be sent down to work with key officials on methodologies for implementation. It is anticipated that this would take approximately 18-24 person months. Six to eight person months would be spent on orientation and training of personnel selected from a wide range of institutions and/or disciplines. Six to eight person months would be given to policy development and institutional analysis as it relates to site specific situations at selected community levels.

Inherent in this phase of the project would be the thorough validation of the ideas, the training modules and the model constructs developed as a result of this project. The critical part of the planning phase would be to determine the degree of national level commitment and to develop policy that facilitated program development. Also important here is to assure the vertical and horizontal integration of various institutional formal and nonformal programs; to assist in the implementation of the community-level education advisory council, to determine the criteria for selecting communities, and programs within these communities, by prioritizing national and community development needs in a systematic manner; and, finally, to train in-country personnel for the appropriate application of Brown's systematic methodology for selecting media and technology for the learning resource systems. It is anticipated that the planning team would have six to ten person months of short term technical assistance available to study and make recommendations regarding the above concerns.

Following a more prescriptive application of the process version at this stage, the country-level planning teams would be involved in the following specific activities:

1. Setting criteria for selecting geographic areas--rural and perhaps urban--where poor people are concentrated and where community education is seen as a possible solution for socio-economic development.
2. With the help of national and international resources, training teams to accomplish the following tasks:
 - a. Conduct socio-economic surveys of the program service area;
 - b. Identify local leadership cadres--men and women--who can conduct these surveys;
 - c. Identify current patterns (indigenous and modern) of communication, nonformal and informal learning systems;
 - d. Identify two or three possible sites for DLRCs;
3. Organizing training programs for the local leadership cadres identified above to work toward:
 - a. Conducting, with the help of the community, local needs assessments in each community;
 - b. Integrating local needs with national aspirations;
 - c. Coming up with an agenda for community development for community action participatively for the local community;
 - d. Organizing learning resources, including community learning resources, to fulfill the agenda and to determine what must be obtained from outside;
 - e. Making a decision as to which type (learner groups or CLRC) would be required to maximize those resources from outside systematically and with certitude; and
 - f. Training the cadre to plan, program and manage the learning center program.
4. Designing a DLRC that could provide backstopping services to the training and learning resource needs of the many CLRCs and community learner groups as discussed in 3 above, and to reconsider the question of site/location of the DLRC and design the DLRC then by objectives of the programs.

5. At the same time that decentralized planning is going on, systematic thinking and dialogue must be engaged to develop plans for the national learning resource center, or the larger backup system to the DLRCs. This dialogue must incorporate within it the needs established by the communities; i.e., size and form of media production facilities needed; the degree and orientation of technology; the organizational implications of system-wide vertical and horizontal integration, etc.

6. Help select participants for the community and national seminars to follow in the next step of the process version.

Modification-Promotion

This next step in the process is most critical and will require considerable time and dedication by representatives of all levels of national and community life. The reasons for establishing clearly the national commitment to integration of the rural population with national mainstreaming through education, inherent in the Contact-Presentation level of the process version, become manifestly obvious at this juncture. Elements of the client population, the rural poor, must have major responsibility for and provide major contributions to the modification-promotion process. The process would proceed with two phases:

- Phase I--issues seminars held at all four LRC-BCES levels.
- Phase II--modified KIVA model seminars, held at the national level with representatives from all the issues seminars.

The prime purpose of the Phase I seminars will be modification of the LRC-BCES model for adaptation to local requirements.

The prime purposes of the Phase II seminars will be a continuation of this modification for adaptation to national values; a reaching of consensus and a structured plan for promotion.

Phase I--The Issues Seminars

Individual LRC-BCES Issues Seminars would be instituted at four organizational levels: national, district, second and first level communities. Each seminar would have a similar mission: to clarify the concept of the LRC-BCES model; to expand it and/or modify it to fit more closely the special needs of the identified or community; and to prepare its members to meet with other seminar groups in a national setting where recommendations will be formulated regarding the application of the LRC-BCES model for the benefit of the country.*

For each seminar group, a facilitator/seminar manager would be chosen, that individual would be responsible for the maintenance of the seminar, for agenda planning, meeting schedules, data collection, and the leading of discussions. Facilitators will be trained in the use of the seminar procedure by USAID/Washington, and the Latin American Country Team.

Potential seminar members would be identified by the Latin American country team, and invitations to join the seminar would be tendered by NLRC Commission. The status of the seminars becomes an important ingredient in their maintenance, and the invitation sponsor thus plays a significant part in establishing the climate and importance of the seminar.

Phase I seminars will be maintained as separate organizational entities for six months. This will provide time for the members to become familiar with the seminar procedures, the topics, and their colleagues.

*The application of the LRC-BCES seminar described here is based heavily on the work of Dr. Harold Lasswell, professor emeritus, Yale Law School. Dr. Lasswell, an expert in many fields including law, communications, and international relations, developed and applied his theory of the decision seminar for problem solving in a number of settings, including among villagers in the Philippines and Malaysia.

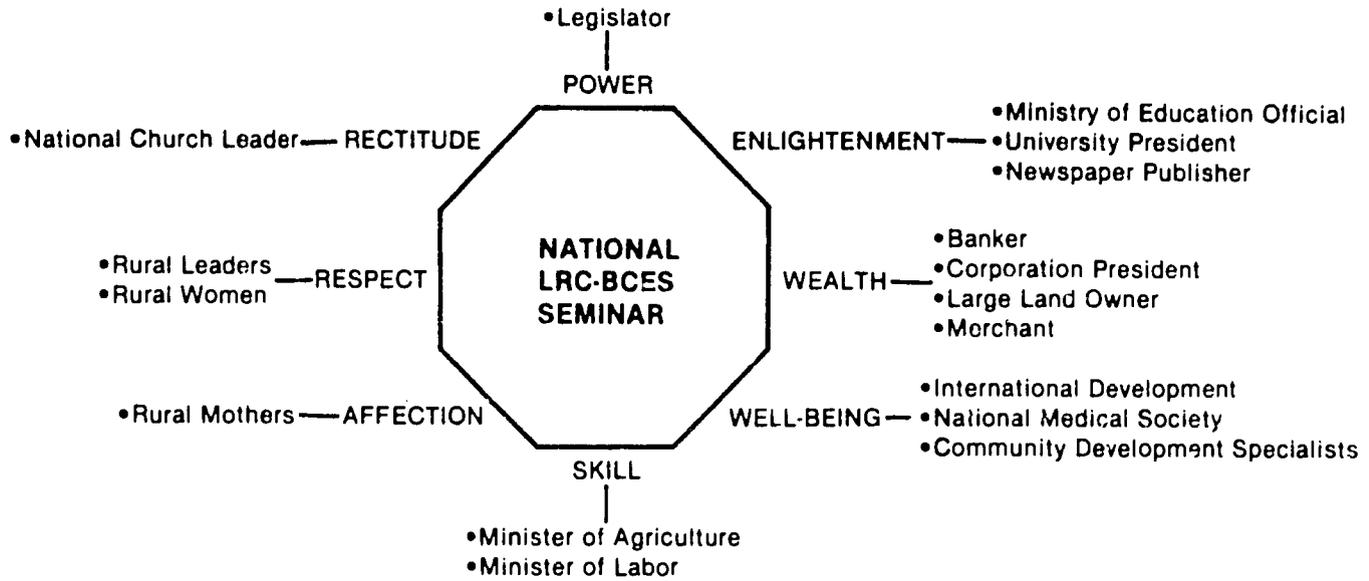
A core group of participants (16 to 25 persons) is selected on the basis of several criteria: (a) their affiliation with one of the following eight institutional categories: power, enlightenment, wealth, well-being, skills, affection, rectitude, respect; (b) their interest in and commitment to education; (c) their willingness to participate over an extended time frame in an effort to expand the educative capacity in every village and for each campesino.

Regular seminar sessions are held on an ongoing basis in a permanent meeting place. Data to assist in the group's deliberations are obtained and presented in graphic form, or through the testimony of expert witnesses invited to the seminar as needed. An ongoing record of the seminar's proceedings is made, referred to and reviewed at each session.

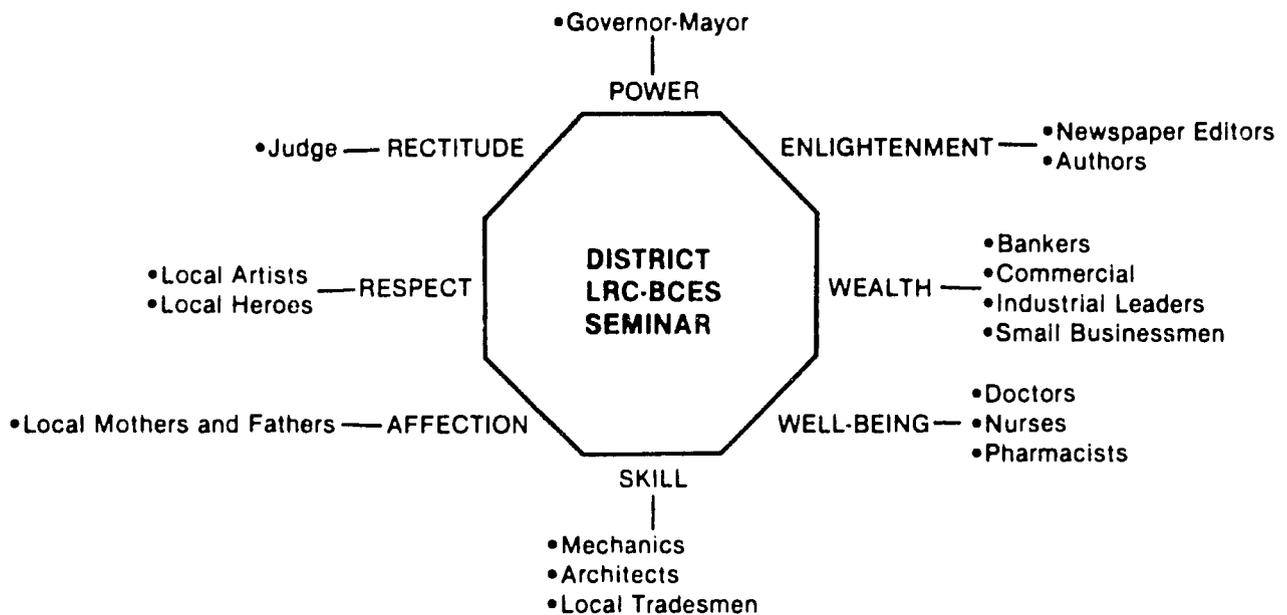
Contextuality, the past, the present, and the future always surround and are part of the seminar discussions. A common vocabulary is established among the members by the continuing use of key concepts provided for the deliberations. These key concepts become the "check list" used to ensure logic and rationality in the outcomes of the seminar.

The National Level Seminars. Persons representing the eight institutional categories of a nation's society would be assembled as the core participants in the National LRC-BCES seminar. They would study the LRC-BCES concept, inject their own perspectives, develop their own goals, and formulate new ways to use the model. They would examine values, costs, dissemination, outcomes, and comparisons to other modes of education. The categorical areas which could be represented at the National Level Seminar would include:

VIII-7



The District Level Seminars. The district level participants would include government officials, business persons, health officials, clergy, and others who know well the geopolitical features of their district (region). Examples of participants would again fall into the eight categories. The number of district seminars would depend on the work of the Latin American Country Team. That team would have set criteria for selecting the geographic areas, and would have identified local leaders who would be involved, as follows.



The Second Level Community Seminars. Here again, the number of seminars will depend on the results of the country team's investigation and available resources. A number of the seminars could be instituted simultaneously. Members at this level will be very local in outlook and undoubtedly more specific with respect to their interests and needs. The membership of a Second Level Community Seminar might include:



The First Level Community Seminars. Potential usefulness and success as well as available resources will determine again the number of First Level Seminars. The importance of the village level seminars should be emphasized. It is there that the basic LRC programs will take place, and their usefulness will depend heavily on how much opportunity the villagers have in helping to plan and determine programs which they may want to--or not desire to--attend. In Level 1, the seminar concentration will be on programs and utilizing the facilities that will probably only exist in the larger (Level 2) villages. At this level, the seminar facilitator will most likely be a priest or a teacher.



The utilization of the eight institutional categories of a national society is a basic ingredient of the KIVA model (see Phase II). The inclusion of the categories combines the power and influence necessary to mobilize resources, secure cooperation and provide legal and "political" foundation for the adoption and implementation of the program. However, it must be remembered that the "client" is the rural poor and that the model prescribes the initiation and maintenance of a program based on the input of the client and upon his continued interest and support. Since he is not found (by definition) at the national level, and only marginally at the district level, his inclusion must be guaranteed if the client is to be represented in a manner consistent with the philosophical underpinnings of the model. Further, power and influence are probably least representative of the rural-poor community. Enlightenment, wealth, skill, etc. are the very categories which the LRC-BCES program seeks to create, in fact. Therefore, the selection of community members at Levels 1 and 2 is equally critical to the success of the project.

During the six-month period of the issues seminars the Latin American country team and USAID representatives will be designing the Phase II, multi-level (KIVA) seminars at which members of all issues seminars will convene. The planning team will be in contact

with the various seminars around the country to ascertain their progress, questions and concerns. These will be built into the agenda for the Phase II national seminars.

Phase II--The KIVA Seminars

In Phase I, the seminars operated at four organizational levels, all with similar methodology and subject matter, but as independent units. The seminars in Phase I dealt with intelligence gathering, and the early promotional phases of a process to acquaint influentials with the LRC-BCES model, and was designed to stimulate interest in the LRCs, and to modify them to adapt to local needs and potentials.

Assuming that the seminars have indeed stimulated interest in LRCs, a process is then required to encourage a unity of purpose to flower among national, district, and local forces. Within the Issues Seminars, the effort to develop cross sector understanding was built in by the selected membership. In Phase II, an effort is needed to link national, district, and local seminars' participants. Thus, a responsive, vertical dimension must be incorporated to help foster a recognition that the most difficult problems of achieving a national education vision is in understanding the vertical roles and responsibilities as they relate to implementing that vision.

At this point members of the forthcoming seminars should receive some training in group dynamics and consensus development. Following this, they will be more receptive to the instructional procedures that are necessary for successfully carrying out the KIVA seminars and the seminars would begin.

The KIVA is used to surface those issues which are affected by the country's line of authority, from the top down, and from the bottom up. The KIVA format incorporates that vertical dimension comfortably.

The KIVA convening takes place in a very large conference room (or hotel ballroom). At the center of the room, a conference table is arranged in an octagon shape with a hollow center. The facilitators work in the center space, and proceedings take place in a "theater-in-the-round" atmosphere. All discussions are tape recorded for a post conference report. They are also recorded on newsprint which is immediately displayed on the walls of the room as data and reminders during the span of the conference.

Chairs are arranged in three concentric rings (A, B, and C) around the table. Participants are assigned to a ring according to the organizational level seminar in which they have been working. At the outset, Ring A is closest to the conference table, and those participants have the opportunity to control the discussion for a specified time on a pre-arranged topic. The topic is generally stated in the form of a "Key Question." At the end of Ring A's discussion period, the other rings of participants move one row of chairs closer to the table, and Ring A moves to the last row (now vacated by Ring C).

Ring B members are now seated at the table, and they respond to the key question (and other questions subsumed under it prepared in advance) from their perspectives. The procedure is repeated once more to provide Ring C with the opportunity for discussion. On occasion, a person not directly at the table may have a significant bit of data or observation to contribute. To allow for such events, and to soften the rigidity, two microphones are placed at diagonal corners of the table. Any member of the group may move to the microphone and be recognized out of turn. However, facilitators in their orientation to the KIVA emphasize the importance of using that technique sparingly, with timeliness, and for making major points.

Two facilitators are required to conduct the KIVA. Participants should not exceed 100, although observers can be accommodated on risers behind the participants. Each key question can consume 2½ to 3 hours. Such a period is referred to as a "round."

The success of the KIVA depends on (1) freedom and collegiality among the participants, (2) the use of a disciplined frame for time and topic, and (3) the skill of the facilitators in eliciting observations, ideas, maintaining control, yet having flexibility, and building the program to a finale where plans for action may be expressed by the participants.

The issues seminar and KIVA combination is a way for interested persons to make an initial examination of the feasibility of LRC-BCES proposals. Should these proposals be accepted and moved into operational centers and programs, the seminar and KIVA can be utilized as a mechanism for continuing inspection of the effectiveness of the LRC-BCES.

Conclusion. The Issues (decision) and the KIVA convening seminars, used in concert, form a process model, or conceptual framework within which key leaders (elites, influentials) at all levels in a specific country can:

- | | |
|--------------------------|---|
| Gather Intelligence | - Become acquainted with the LRC-BCES concept in its general forms
Have the opportunity to examine the concept from many institutional perspectives
Uncover issues or potential problems that lie within the LRC-BCES model |
| Engage in Promotion | - Formulate modifications and goals for the use of the LRC-BCES
Develop the strategies necessary to gaining support for the LRC-BCES |
| Achieve Prescription | - Exchange program ideas and disseminate information and recommendations to appropriate policy/decision makers at all governmental levels and provide guidance in the formulation and enactment of policy |
| Encourage Implementation | - Provide support to decision makers who have legislated action related to LRC-BCES and to those charged with implementation |
| Engage in Appraisal | - Meet to continue inspection of the LRC-BCES with respect to its effectiveness |

Adoption-Implementation

Conceivably, adoption may have taken place as a result of Baseline Planning and Modification-Promotion; however, it would appear that such action at the national level would occur most logically following the Phase II seminars. In any event, the continued use of the seminar-KIVA process, as indicated in the conclusions to Modification-Promotion, would serve, with members of the planning team, AID, and whatever administrative personnel were designated in-country for the project, to direct the growth of the project.

Chapter IX

ECONOMIC ANALYSIS OF THE LRC-BCES MODEL

Methodology for Studying Learning Resource Center Economic Feasibility	IX-2
Some Considerations in Economic Analysis of LRCs	IX-4
Other Factors Suggesting the Economic Feasibility of the Concept.	IX-7

Chapter IX

ECONOMIC ANALYSIS OF THE LRC-BCES MODEL

Learning Resource Centers are combinations of plant, media, materials, people, and administration that facilitate out-of-school learning. As the logistics arm of nonformal education, they are economically feasible to the extent that they supplement the formal education system in bringing services to non-school-attending youth and adults who would be otherwise unattended.

There are as many forms of LRCs as there are combinations of their elements. Advocates believe that their advantages in flexibility of curricula, media, use, scale of operation, integration of services at the community level and provision of learning access to an otherwise unattended clientele make them attractive as a complementary mode of community-based education.

For the learning resource center concept to be viable economically, learning resource centers would have to provide more educational value to the community than they consume in the worth of resources assigned to them. The LRCs would either have to make money, save money, or provide some new learning cheaper than alternate forms would. They would have to be externally as well as internally efficient. That is, they would not only have to provide good value for money to their own users and sponsors, but would also have to enhance the community's total package of formal and nonformal educational offerings. This would have to be done at an affordable cost and one which contributes more to the community's social welfare than it diverts from other worthwhile activities.

Economic prudence requires that if learning resource centers are to pay their way, they must give more than they take and look good economically both in the big and small pictures. The data and

analytical tools available determine the kinds of economic that can be made of learning resource centers as a concept or of specific learning resource centers as individual experiments. In every case, the LRC planner is looking at "what you get" for "what you pay."

Methodology for Studying
Learning Resource Center Economic Feasibility

The economic feasibility of learning resource centers can be studied by using a variety of available methodological tools.

Cost/Benefit Comparison Approach. Here the planner asks: Do the dollar benefits coming from a proposed learning resource center exceed the dollar costs that go into it? For example, if a farm animal vaccination training LRC saves a community \$60,000 in avoided animal deaths and costs \$20,000, that LRC would be "worth it," according to the cost/benefit comparison basis. More "bang" than bucks. Note that this is an example of money saved rather than "made" from additional production created. "Money saved" is a recognized financial benefit in cost/benefit analysis.

The Cost-Effectiveness Basis. Suppose we can't obtain measurable dollar benefits in studying a proposed learning resource center project's economic feasibility. We can still ask: Can the proposed learning resource center provide the same thing more cheaply (albeit to a different clientele) than the formal schooling system? For example, suppose a learning resource center could instill fourth-grade level functional literacy in adults and youth at considerably less cost per person than the formal school's budget allocated for this task. The learning resource center would be economically feasible on the basis of literacy cost-effectiveness--less bucks for the same "bang." It could be recommended to decision makers.

The Cost-Efficiency Basis. Suppose we can't identify equal outputs of two competing systems. We can still look at the output of each per dollar spent, to determine each system's cost-efficiency. They may then be ranked.

"Learning" is hard to measure, so lets take person-hours of training exposure as a proxy measure as an example. Suppose a learning resource center provides the community with 1,000 person-hours of automobile mechanics training for \$1,000 (one person-hour per dollar). The vocational school in the nearest town provides 500 person-hours of the same kind of training for \$2,000 (one-fourth person-hours per dollar). Since the learning resource center is four times as cost-efficient as the formal vocational school, the LRC could be recommended on this basis--it gives more "bang" for the buck. Again the lack of a measurable dollar payoff does not deter LRC planners from making rudimentary economic analysis.

The Cost-Utility Basis. A person-hour exposure to one kind of training may not be perceived by some to have the same "value" as a person-hour exposure to an alternate kind of training. People make these kinds of value judgements regularly. The cost-utility technique incorporates them into the calculation, yielding "weighted" output-per-dollar spent--weighted "bang" for the buck.

As an illustration of cost-utility , suppose that 2,000 hours of artisan-upgrading training could be provided in one learning resource center at considerably less cost per person-hour than a certain number of person-hours of typing instructions could be provided in the formal school system. Should we immediately stop teaching typing in the schools and replace it with artisan training in an LRC? Not necessarily. If it is granted that both are desirable, but scarce money dictates that one has to go, cost-utility can help make the choice. The learning resource center artisan activity might not be worth initiating, if it

is rated very low in perceived value by judges in the community, when compared with the existing formal typing training.

Through cost-utility analysis, total community learning tasks can be distributed economically between the formal and learning resource-center-based systems, each doing what it does best. Again, man-hours of training are used here as the quantitative measure of this learning output. Economic analysis for decision making can thus be made without necessarily having dollar measures of worth of the LRC innovation being studied.

Some Considerations in Economics Analysis of LRCs

There can be no one economics analysis of learning resource centers as a concept since the concept takes on many forms. There could be as many economics analyses of learning resource centers as there are combinations of the ingredients that make them up. Among the elements are curriculum, size, clientele, media, plant, schedule, cost and outcome measures.

Suppose the curriculum is dichotomized here--for simplicity--into only two major categories of LRC offerings: (1) personal and (2) production-oriented learning activities. A learning resource center could focus on those personal and individual activities which make home and family life more desirable, such as nutrition, hygiene, family-planning, literacy and cultural and philosophical enhancement. The financial benefits are indirect and difficult on which to place a dollar figure. Other forms of economics analysis than cost/benefit comparison would have to be employed (the other three tools).

Another learning resource center might instead emphasize direct community economic activities that could be grouped under "production." These include upgrading of agriculture/industrial artisanal, vocational, commercial, managerial, numeracy or other skills, depending on the

economic needs of the local community. An economics analysis of these kinds of LRCs depends on the costs and benefits associated with the particular curricula offered and the extent to which the LRC duplicates other sources of obtaining these skills in the community. The benefits could here be tallied as the value of increased production.

LRC administrative decision-making can be dispersed or centralized, and each mode has its costs and benefits. A central theme running through the LRC model assumed in this project is integration of services at the community level to prevent or reduce unnecessary inter-ministerial overlapping and duplication, due to community integration of services. Advocates of the LRC concept would expect that LRCs save more than they cost: a systems-view look at the total community "what you get" for the total "what you pay."

Another common thread running through the LRC idea, affecting economic analysis, is that since attendance at learning resource centers is voluntary, and since the curriculum offerings are developed (indigenously) in response to local demand, clients using LRC services attest to their value by their continued attendance. They could "vote with their feet" and walk out if they sensed that their time and effort were not worth it. Thus, the LRC concept has a built-in evaluation and feedback mechanism that operationally indicates its positive value to users.

LRC size considerations are from small to large and there are apparent advantages of learning resource centers at either extreme. On the small end, a minimum bottom level community could provide what the formal schools do not reach. In Honduras, for example, the economics analysis part of a proposed AID rural primary loan stated that many small rural communities did not have any elementary education, and a central-satellite rural primary school system was under consideration to remedy that. An LRC could, of course, be even smaller than the smallest primary school and perform a useful service, presumably with some support from the next larger community.

At the larger, more capital-intensive end of the size scale, economies of scale appear attractive especially if substantial capital investment in shop-training and other equipment can be centralized to avoid expensive duplication.

Peru's Educational Service Center plans may be used as a case study on the larger size LRCs to sense some of the economies of scale possible when consolidating capital equipment in a plant shared by a large day and night student clientele. According to the economic feasibility study made on the Service Centers, it is estimated that the annual capital costs will amount to about \$1 per student and annual operating cost to about \$7 per student, totalling \$8 per student (using rough rounding off and considering the sol to be worth approximately 1¢). Thus, capital costs are only one-eighth the total. These figures come from:

Plant Cost (Pacasmayo Center):	Capital Cost	\$170,000.00
Annual Capital Cost (25 year life)		7,000.00
Annual Capital Cost (per student, 6000 students)		1.20
Annual Operating Cost		40,000.00
Annual Operating Cost (per student, 6000 students)		6.70
Total Annual Cost (per student: \$1.20 + \$6.70)		7.90

If the capital equipment were to be duplicated instead in ten separate school plants, the total capital cost would be roughly \$12 per student instead of \$1.20, an increase of \$10.80.

Taking only this savings (\$10.80) as the benefit in a benefit/cost comparison, we have:

- Benefit (savings from non-duplication), annual per student: \$10.80.
- Total cost, planned service center, per student, per year: \$7.90.
- Ratio of benefit-to-cost = $\$10.80/\$7.90 = 1.4$, a favorable benefit-to-cost ratio.

Although this analysis is rudimentary, it illustrates the magnitude of advantage when savings are likely, even in the absence of extra production stimulated. This is a mixed example, because some formal full-time day students are involved in the educational service center of Pacasmayo, Peru. The example indicates economies of scale, due to savings from non-duplication of capital investment, that could also be realized by learning resource centers which serve only an out-of-school population. It also shows that ambitious capital investment is not prohibitively expensive if a substantial size clientele can be attracted to use the facility.

Other Factors Suggesting the Economic Feasibility of the Concept

Additional factors that appear to make the learning resource center concept economically attractive include:

Flexible Scale of Operation. LRCs can get started on a very small scale, but may tie into an expanding network of learning resource centers as the concept grows, providing interchangeable modular packages and increasing economies of scale. This avoids the need for large initial capital expenditures--a desirable economy.

Integration of Services at Community Level. This would maximize the utilization of total human and physical resources. There could be much less segmentation into separate resource packages belonging to the separate Ministries of Health, Education, Agriculture, Commerce, Social Welfare, etc. Wasteful duplication of parallel efforts would be avoided. Learning modules, once developed, could be used anywhere in the community as needed, without having to cross ministry boundaries. Savings would accrue from the consolidation of effort.

LRCs Have a Flexible "Curriculum." This curriculum meets demonstrated needs and is not imposed from above. It can be modified on demand, expanded, abandoned or re-directed without regard for the traditional school year or day. Money would be saved by not dispensing unwanted learning.

The LRC Concept Offers Opportunities of Potential Economics for Innovative Use of Appropriate Media. A growing literature supports radio and programmed materials, and portable videotape seems promising. Experiments in technical education have pointed to the economic attractiveness of self-paced learning by the Keller-Personalized System of Instruction. PSI was 27 percent cheaper per learning output when compared to the traditional instructor-paced-lecture method at the university level. Some of the same potential savings ought to apply at any level.

Clientele Are Provided Access to Information Important to Their Lives and Not Available Any Other Way. Regardless of the cost, supporters would maintain that learning resource centers are desirable for this reason alone.

Emphasis on Access at User's Convenience. Education analysts, among them Stuart Cooney (1900), have indicated that education is in transition from modes of "delivery" to modes of "access." Economics is on the side of this transition which has relevance for learning resource centers. Traditional "delivery," according to Cooney, is instructor-centered and institution-structured. "Access" is learner centered, direct, immediate and learner-controlled. It is the so-called, "individualized learning," and is "vocational" in the sense that it is of lifelong learning value. Instructional design is passing from instructor to learner-control. What learners need most is free access to their community's data base. Needed are open access alternatives with the possibility for learner query and requery, diagnosis, remediation and acceleration.

Among the consequences for instruction based on access are role changes for educators including community learning resource facilitators. Their roles will be more therapeutic--design, evaluation, facilitation, innovation, research and archives. While the access referred to in

Cooney's presentation is access primarily to communities where the elements of electronic access are already in place--cable TV or interactive mini-computer--the thrust of his argument has implications for less electronically sophisticated LRCs and is in harmony with the notion of free access to information at the learner's pace rather than an institution's pace.

References

- Baker, R.L., & Elam, R. J. Managing the Development of Comprehensive Instructional Systems. Submitted to Improving Human Performance Quarterly, 1978.
- Bhola, H. S. Learning resources for community education: An integrative general model. San Jose: San Jose State University/USAID Project on Learning Resource-Centered Community Education Systems in Latin America, 1977.
- Brown, J. W. Media in the LRCBCES program. San Jose State University, 1977.
- Brown, J.W., Lewis, R. B., & Harclerod, F. F. AV instruction: Technology, media, and methods. New York: McGraw-Hill, 1977.
- Coombs, P. H., & Ahmed, M. Attacking rural poverty: How nonformal education can help. Baltimore, MD: John Hopkins University Press, 1974.
- Educational technology: The design and implementation of learning systems. Paris: Centre for Educational Research and Innovation, Organisation for Economic Co-operation and Development, 1971.
- Hamilton, R. The campesinos of Colombia, Peru, Bolivia, and Paraguay. Paper presented for AOD LRCBCES Project, San Jose State University, 1977.
- ILO. "Employment, Income Distribution and Social Progress", World Conference Report, Washington, D.C., 1976.
- McAnany, E. Radio's role in development: Five strategies for use. Washington, D.C.: Academy for Educational Development, 1973.
- Non-formal education and the rural poor. NFE Exchange, No. 5, January 1977, pp. 1-4.
- Ofiesh Associates, Inc. Status report: LRC-BCES project. June 30, 1977.
- Schramm, W. Criteria for selecting media systems. Stanford: Stanford Institute for Communication Research, 1976.
- Schumacher, E. F. Small is beautiful. London: Abacus Edition of Sphere Books, Ltd., 1973.
- UNESCO, Building New Educational Strategies to Serve Rural Use, "The International Council for Educational Development," Essex, Connecticut, 1974, (unpublished mimeographed paper).

Selected Bibliography

The following books, among many others, have been used in the development of this paper:

World perspectives:

Mihajlo Mesarovic and Eduard Pestel, Mankind at the Turning Point. New York, N.Y.: E.P. Dutton and Co., 1974.

Development theory:

Dennis Goulet, The Cruel Choice: A New Concept in the Theory of Development. New York, N.Y.: Atheneum, 1971.

E.F. Schumacher, Small is Beautiful: Economics if People Mattered. New York, N.Y.: Harper and Row, 1973.

Latin American Realities:

Irving Louis Horowitz (Ed), Masses in Latin America. New York, N.Y.: Oxford University Press, 1970.

Seymore Martin Lipset and Aldo Solari, Elites in Latin America. New York, N.Y.: Oxford University Press.

Nonformal (lifelong) education theory:

Edgar Faure and others, Learning To Be. Paris, Unesco, 1972.

Ivan Illich, Deschooled Society. New York, N.Y.: Harper and Row, 1970.

Nonformal education: research analysis:

Marvin Grandstaff, Alternatives in Education: A Summary View of Research and Analysis on the Concept of Non-Formal Education. East Lansing, Michigan: Michigan State University (Program of Studies in Non-Formal Education), 1974.

Philip H. Coomb with Manzoor Ahmed, Attacking Rural Poverty: How Nonformal Education can Help. Baltimore, Maryland: The John Hopkins Press, 1974.

Nonformal education case studies:

Manzoor Ahmed and Philip H. Coombs (Eds), Education for Rural Development: Case Studies for Planners. New York, N.Y.: Praeger Publishers, 1975.

Russell Kleis, Case Studies in Non-Formal Education. East Lansing, Michigan: Michigan State University (Program of Studies in Non-Formal Education), 1974.

Nonformal education in Latin America:

Thomas J. La Belle, Nonformal Education and Social Change in Latin America. Los Angeles, Calif.: University of California (UCLA Latin American Center Publications), 1976.

Appendix A

LIST OF PERSONS WHO HAVE CONTRIBUTED TO THE LRC-BCES PROJECT
July, 1978

Latin American Educators

Darío Montaña Alarcón	Jefe Zone 2 y 3 Depto. de Promoción y Extensión de Acción Cultural Popular (ACPO)	Bogotá, Colombia
Teodoro López Ardón	Coordinador de Nucleos Escolares Rurales del Proyecto Piloto de Nuclearización de Boaco	Boaco, Nicaragua
María Elena Cadena	Asesora de la División de Metodología del Servicio Nacional de Aprendizaje 'SENA'	Bogotá, Colombia
Efraín Castañeda	Asistente del Departamento de Promoción de Acción Popular (ACPO)	Tolima, Colombia
Heriberto Coronel	Experto en Proyectos de Educación, USAID/PARAGUAY	Asunción, Paraguay
Fabio Echavarría	Programador Académico de Escuela Unitaria de Antioquia	Medellín, Colombia
C. Ernesto González	Profesor de Matemáticas, Instructor de Edicación Basica General, Director del Primer Ciclo de Remedios, Chiriquí	Provincia de Chiriquí, Panama
Jorge Vrey Granera	Director del Proyecto Piloto de Río San Juan, Departamento de Río San Juan	Río San Juan, Nicaragua
Orlando Rojas Hurtado	División d Educación y Recursos Humanos, USAID/PERU	Lima, Perú
Oscar Loncharich	Coordinador del Sistema Instruccionál del Programa de Adiestramiento Extra-Escolar (PAE), Servicio Nacional de Promoción Profesional (SNPP)	Asunción, Paraguay

Abraham Ellis López	Director del Centro de Educación Basica Genral de Chitra, Provincia de Veragua, Panama	Veragua, Panamá
Laura Santacruz de López	Supervisora de Mathemáticas del Departamento de Centros Regionales de Educación, Ministerio de Educación	Asunción, Paraguay
Arminda Ruiz Pavetti	Directora del Departamento de Centros Regionales de Educación, Ministerio de Educación	Asunción, Paraguay
Carlos González Pitti	Director de Escuela Basica y Instructor de Maestros de Educación Basica General	Panamá
Solando Rizo Rivera	Director de Educación de Adultos	Managua, Nicaragua
Rolando Rizo	Ministerio de Educación de Nicaragua	Managua, Nicaragua
Catalina de Rodríguez	Directora del Centro de Educación Basica de los Lotes de Pacora Provincia de Panamá	Pacora, Panamá
Ricardo Sotelo	Director de Programación de Educación del Ministerio de Educación Publica del Perú	Lima, Perú
Hernando Gelvez Suárez	Director de la Escuela Unitaria Pilota del ISER de Pamplona. Universidad de Pamplona	Pamplona, Columbia
Abraham Rocha Tercero	Jefe de Desarrollo de la Comunidad Ministerio de Educación	Managua, Nicaragua
María Eugenia Villamizar	Asesora de la División de Desarrollo Social del 'SENA'	Bogotá, Colombia
<u>Grup de la Universidad de San Jose, California</u>		
Harbans S. Bholá	Professor, School of Education, Indiana University	Bloomington, Indiana

Phillip Blair	Professor, San Jose State University	San José, California
Jack Crawford	Director, Office of Educational Services and Development	San José, California
Gene Lamb	Associate Dean, School of Education, San Jose State University	San José, California
Francis Villemain	Dean, School of Education, San Jose State University	San José, California

Professional Consultants Outside the University

Robert O'Hare	Southwest Regional Laboratory
Robert L. Baker	Southwest Regional Laboratory
W. G. Feild	Private Consultant
Francisco Swett	Secretaría de Planificación, Ecuador
Cathryn Crone	World Education Incorporated
Gabriel Ofish	Private Consultant
Jogindea Bhola	Private Consultant
Wendell Clutz	Institute of Cultural Affairs
Iris Tidt	Private Consultant
Luvern Cunningham	Administration and Government
Lila Carrole	The KIVA Model
Charles Mohler	Private Consultant

San José State University Personnel

G. W. Ford	Supervision
David Bond	Curriculum
Donald J. Lew	Nonformal Education
R. Freeman Butts	Community Education
Celeste Brody	Women's Development
James W. Brown	Instructional Technology
Earl Strohbein	Instructional Technology
Ron Hunt	Instructional Modules
Phillip Blair	Economics
Stewart Wells	Economics

Gary Johnson	Community Advisory Group
Jack Crawford	Evaluation
Alba Ortiz	Women's Development
Celia Zapata	Women's Development
Roland Hamilton	Latin American Culture
José Luis Moreno	Graduate Assistant

USAID Professional Staff

James Singletay
Stanley Applegate
Howard Lusk
Charolette Jones
Bernie Wilder

Appendix B

RURAL DEVELOPMENT PROJECTS IN LATIN AMERICA

Two Community Level LRC Scenarios: Venezuela and Peru*

Community Education in San Dimon de Cocuy, Venezuela. San Simon De Cocuy is one of a cluster of three or four communities in the midst of the Amazon jungles. While it is isolated, it is not inaccessible. An all-weather runway and a road connect it to the capital city, which has the resources generated from the nation's oil wells and has the will to colonize the area. Thus, it is an interesting case of community education participating in the very birth of a community rather than serving the educational needs of a community with history and tradition. It is community education for social construction rather than for reconstruction.

The ethnic and class mix of this fast-emerging community is complex, members of the Indian tribes still roaming in the Amazonas (The Marquiritare, the Waica, the Yanomano), some from the Indians of the river culture who as farmers, hunters, and traders are familiar with the ways of the Latin people, and the Latins themselves who have come as military officers, elite development officials, and entrepreneurs.

The CODESUR has done a lot of social and scientific research to further the best possible job of colonization. They have plans for agriculture, health, small and large scale industry, collective decision-making, at the community level, and for saving the traditional forms of culture, including the folk art forms of the jungle cultures.

*These scenarios were written by two Doctoral students at Indiana University studying under Dr. H.S. Bholá, a principal consultant to the Project. Scenario one was written by Ms. Bette Booth, a former Peace Corps volunteer who had lived and worked in Venezuela in the early 1960's. Scenario two was written by Ms. Barbara Amer. Ms. Amer is a graduate student in International Education.

The curricular aspirations of such a community may include literacy teaching in Spanish, history and folklore, agriculture, nutrition and child care, construction and crafts, leadership training and conscientization. Understandably, the "group" is seen as an important setting for community education; therefore, the establishment of radio forums has been emphatically recommended.

To achieve the above curricular aspirations, the following staff has been proposed for the CLRC:

- Agricultural Extension Agent
- Home Extension Agent
- Health Educator
- Information Officer with assistants to include Media Production Staff, Radio Production Staff, and Library and Media Coordinator.

It is recommended that the training of this staff should be given special attention. They should learn to be social catalysts before coming to be in charge of the community they are meant to serve.

A rough sketch of facilities to be built in such a CLRC is proposed in Figure B-1. Notice the inclusion of the Latin patio in the architectural design of the CLRC and the uses to which it could be put in the tropical climate of the Venezuelan Amazonas. Notice also, the separation of the workshops and kitchen from the main building.

Booth emphasizes "small media". Radio once again plays the central role. Money is not a problem here, and there is no radio station nearby to hook into, so a radio station is planned for the CLRC itself. Books are given a place of pride. Other equipment proposed for the center includes:

Entrance

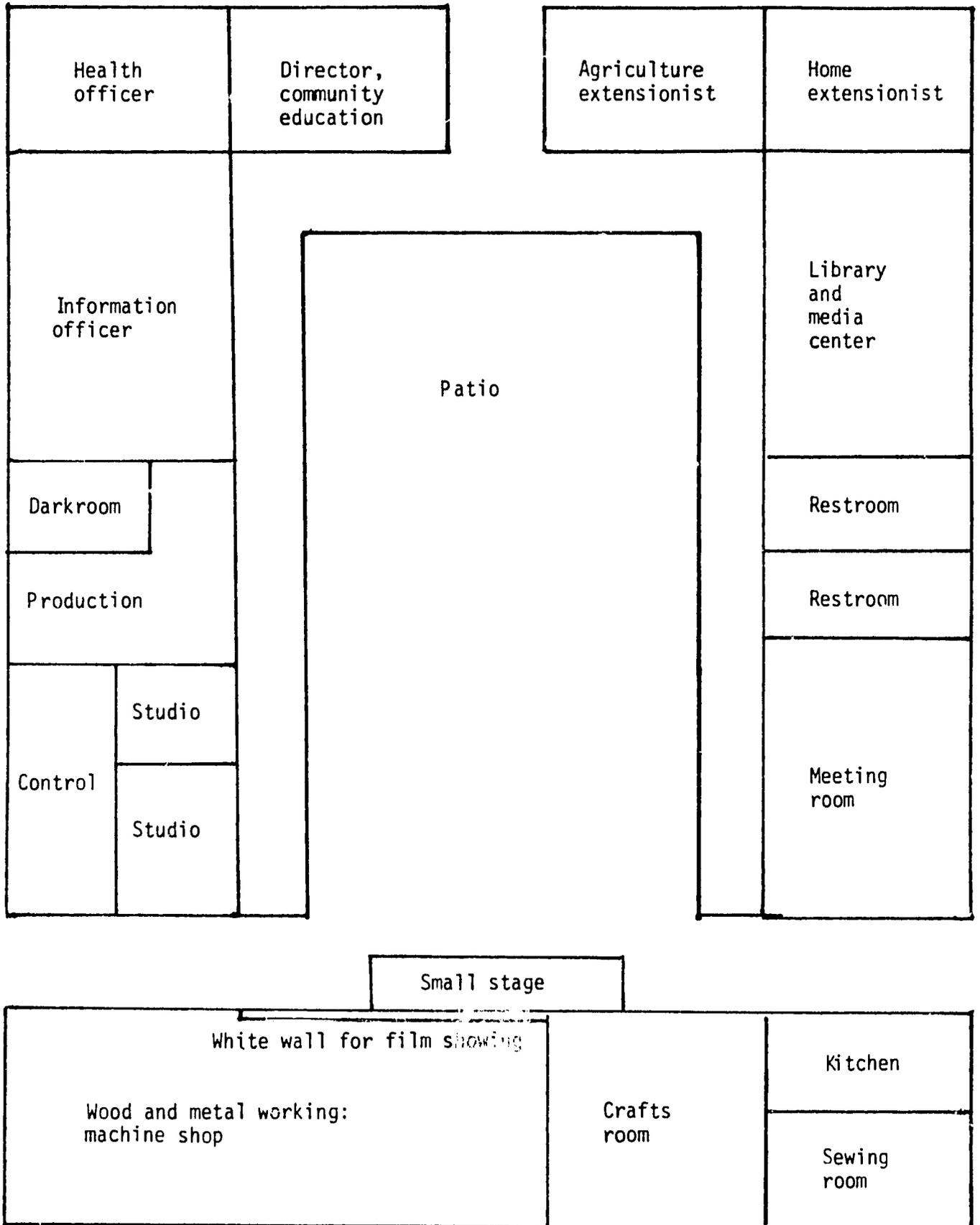


Fig. B-1. Proposed design for Venezuela LRC.

Film and film projectors;	Records and recordplayers;
Slides and slide projectors;	Electric Typewriters;
Tapes and tape recorders;	Duplicators, and
Slide tape presentations;	Cameras, especially polaroids

A Community Center in Peru. The communities are in the Peruvian Sierra which is dotted by small, free holding communities of the Quechua-speaking indians and by ill-organized haciendas of the Mestizos where the indian works. Most of these communities live by farming and herding sheep and llama. Some send men to work seasonally in industrial and mining centers. Ms. Amer notes that the Sierra indians do have a form of community government based on tradition which elects local leaders and already provides channels for community action. Also, the traditional cultural norms of the indian teach restraint, disapproval of display of emotion and forceful behavior, and even self-expression, as we understand it. There is a lack of emphasis on personal uniqueness and a focus on the needs of the social group.

The center is called a "community center" rather than a "learning resources center." In operational terms, however, the distinction disappears because the community center, as proposed, does become a place where learning resources are stored and utilized.

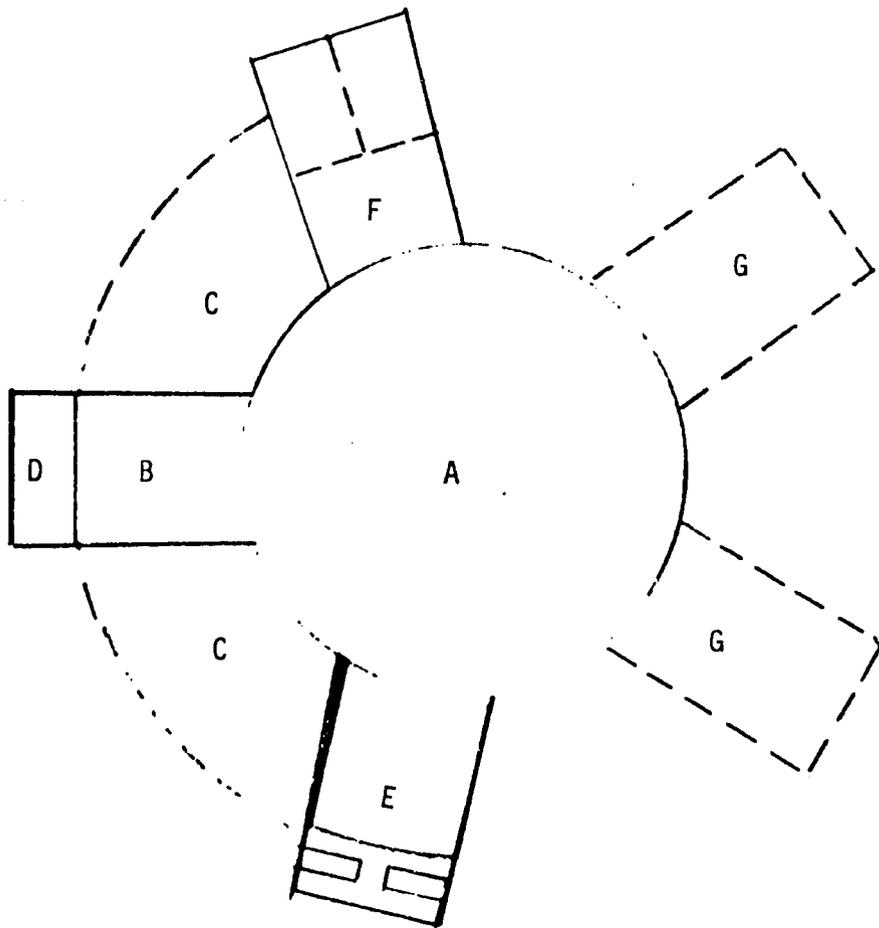
There are four program elements (1) nutrition, (2) agriculture, (3) literacy and (4) folk arts and crafts. There are two clear phases in the program, one building upon the other:

<u>First Phase</u>	<u>Second Phase</u>
Nutrition, emphasis on protein intake, especially of pregnant mothers	Becomes a more comprehensive program, includes training of local cadres of health workers
Agriculture, also vegetable gardening	Perhaps the introduction of new crops, leads to purchase of tools and some agricultural machinery, also agro-industry
Training in speaking Spanish	More advanced training in literacy and numeracy in the Spanish language
Folk arts and crafts for extra income	Perhaps a cooperative for both production and marketing of handicrafts
	Drug education programs, programs to stop drift to the city of Lima

Using the existing community organization, the creation of an arrangement called "community work time" is suggested which obligates each individual in the community to put in some time every week in the development of a community project. The construction of a community center is included in Figure B-2. The learning resources proposed for such a center are:

- Agricultural Machinery and tools;
- Radio sets;
- Demonstration materials and specimens;
- Picture sets and learning materials kits.

Once again, the usefulness of the "group" is emphasized. Also, a back up system is assumed at the regional (district) and national levels. A regional center of some sort (DLRC) is expected to help by providing material inputs which only the government can provide. More importantly, the regional center is expected to help train local cadres, market goods and services produced in the community, and provide expert consultancies on all the various aspects of agriculture, animal husbandry, health, and management of agro-businesses. This same regional center, or one at the national level, is expected to circulate instructional materials such as films and demonstration kits.



A--Community meeting room including a small library and projection equipment

B--Agricultural center

C--Experimental vegetable and flower garden

D--Tool storage room

E--Medical clinic with a two-bed room for serious cases

F--School, movable dividers make different divisions possible

G--Other wings that may be added later

Fig. B-2. Proposed design for Peruvian LRC

Nonformal Education Project (Ecuador)

The Nonformal Education Project in Ecuador (Ecuadorian NFE Project) is a "real" good example of CLRC in its earliest stage. The Ecuadorian Project can best be understood as a series of sub-projects loosely linked together by a common staff and a corresponding similarity of basic philosophy concerning goals, staffing processes.

In any particular village setting, some combination of the various techniques such as fotonvelas, games, simulation methods and tape recordings would be selected for use. Later efforts such as the bibliobus combined a wide variety of the techniques into a single vehicle, which in that case was used as a means for achieving initial contact with the village and stimulating their interest.

The three years of the Project involved a focus which shifted from creation and experimentation with methods during the first year, to an emphasis on finding and testing delivery mechanisms in the second year, to consolidation and summarizing these experiences during the third year. Continuing throughout this time period were two general programmatic thrusts: 1) creating and testing an approach to working with village facilitators, and 2) adapting materials and methods to be used by the adult education staff of the Ministry of Education. These two avenues of approach were used throughout the three years and continue on in a modified form at present, under the aegis of the Ministry of Education.

Concentrated Rural Development Program (Columbia)

A second example of a simple community-based program is illustrated by the Concentrated Rural Development Program (CDRP) in Colombia. This program focuses on community participation and presents community education as an innovative, developmental process. The CDRP has five basic foundations for its activities. Like the Ecuadorian Nonformal Education Project, cited above, these foundations give us important

insights into the types of structural orientations a program of this nature can take. According to the CDRP, the focus is on the community and its development needs:

- (1) It suggests that basic education in the rural areas is not simply limited to the perspectives of the agricultural world, but to the diversification of a rural life that becomes varied as there is more input in the modernization process. From there, it offers alternatives for a basic formation and the initial occupation of the rural student in the areas of farming, industry and promotion. These opportunities present necessary study areas due to the deficit situation of rural areas and due to the pressure for the agricultural development in the project areas.
- (2) It tries to initiate the student to "learning by doing" through education. This is done in productive work projects at the school and community levels. These projects arise from the context of the rural medium in which they operate.
- (3) It generates an educational process of community action that will superceed the limitations of the campesino and form the resources that he already has and convert these positive factors of well-being thus improving his income.
- (4) It tries to recapture the image of the teacher as community change agent.
- (5) It conceives education as transcendental in the same sector trying to accomplish the integration and coordination of the institutional agents and the community. It focuses upon actions that will last and stay permanently at the local levels.

Regional Educational Service Centers (Peru)

Perhaps the most contemporary concept or program developed at the regional level is the Peruvian Regional Education Service Center Program. At present, there are three different types of Centers serving different regions of the country. In brief all Centers are to have the following three basic functions:

1. Designing, producing distributing storing, and lending educational materials and equipment to individual schools.
2. Providing center staff consisting of two and possibly three educational specialists to assure design, production, distribution, and use of the services by working directly with individual teacher or community-level facilitators throughout the region served.

3. Providing a children's book lending service to various schools in the region.

One education service center proposed at this early state of development is to serve directly a minimum of 500 students and it is designed to consist of a basic structure providing one common classroom, one combination science/biology laboratory to accommodate 40 to 45 students and one combination manual arts/agriculture workshop also 40 or 45 students. This center is to be located at sites where sufficient land is available to allow for physical education activities, experimental garden plots and other agriculture activities. The main service provided is to facilitate the teaching of science and pre-vocational subjects in the basic regular education program, grades 1-6.

Another type of center in this phase of the Peruvian Reform Program is designed for more heavily populated, low income urban areas and would perform all of the functions described in the examples above as well as others. It is based more on a learning resource center concept and is designed to provide and offer a greater range of services for students from nonformal as well as formal programs. Additionally, it provides a wide variety of community, as well as educational services.

Jamaica Vocational Regional Programs

The most significant program for the vocational preparation and training of young Jamaicans is organized through the Ministry of Labour and National Insurance. The present structure dates from plans drawn up in 1966, which were put into operation in 1968. Overall charge for the program is vested in a National Industrial Training Board, specially set up for the purpose, consisting of representatives from various government ministries concerned with training and from employing bodies in private industry and commerce. Intended as an independent statutory board with executive powers, the NITB still awaits a charter, and in practice its role remains

largely advisory. However, it acts as a forum in which the demand and supply of different kinds of skills can be discussed, and it helps in deciding the location and development of vocational training institutions.

The main thrust of vocational training is through an expanding pattern of nonresidential Industrial Training Centers (ITCs). In 1972 there were 14 centers catering to some 1,000 young people and 10 additional centers, almost ready to open their doors to 1,275 more. About 25 percent of the centers are in the Kingston area; the remainder, in small towns scattered throughout the island.

Each center offers full-time day courses to about 100 students. Candidates for the courses have to be 17 years of age and familiar with the basics of a skill. They will often have been in paid employment and have a basic education sufficient to allow them to benefit fully from the skill training. Attempts have recently been made to standardize entry at the grade 9 schooling level, that is, at the completion of first cycle secondary education. A few centers run evening courses and Saturday courses for those working and unable to attend on week-days.

Sri Lanka: Rural Nonformal Education

The Ministry of Public Administration, Local Government, Home Affairs and Justice established the Department of Rural Development in 1947, when Sri Lanka emerged as a politically independent state, for the purpose of effecting a closer liaison and coordination between government officials and villagers and to harness the enthusiasm and voluntary cooperation of the latter for their own village improvement. The result has been the formation of more than 8,000 Rural Development Societies, of which 1,500 have a membership exclusively for women. It is estimated that one-third of these are active; another third, partially active; the rest, inactive.

The Rural Development Society is a voluntary organization, functioning in a village or group of villages, meeting from time to time and responding to present needs--basically on the principle of self-help, but nevertheless drawing upon technical and financial assistance of the Department, when such assistance is available. The value of self-help contributions in 1971/72 was roughly the same as government expenditure. In that year Rural Development Societies completed 861 public utility projects and constructed 138 miles of road. The total value of self-help contributions, as reported by the Department, was Rs1. 327,308; the total government expenditures was Rs1. 481,408. Primary concerns of the Societies have been construction and building projects, irrigation and transplanting, and the organization of rural industries. The women's Societies undertake vegetable production, hygiene and sanitation drives, and since 1972 they have maintained 147 needlework centers in which field staff members of the Department and local staff members conduct courses of a year's duration. Over 4,000 young girls benefited from these activities in the first year.

The Rural Development Department initiated, in 1972, a pilot project to develop 500 villages on an intensive scale. To be chosen, each village was to be accessible, have a relatively active Rural Development Society, and be unencumbered by any major social, economic, or political problems. Approximately three such villages in each electorate sent ten young men and women in the 18-35 age-group to a Divisional Training Center for two weeks' training in general development problems. On their return, priority needs were discussed in a Society seminar, a three-year program was outlined, and an annual program implemented--usually by an Implementation Committee selected by consensus. By late 1972, 300 village plans had been prepared.

The Department runs ten Training Centers with residential facilities for 30-35 trainees at each Center. In 1971/72, 3,500 young people underwent, at government expense, the standard two-week course in conducting village surveys, programming, and implementation. The senior Rural Development Officer put in charge of each Center is assisted by a panel of lecturers from related government departments. Besides his administrative duties, he is charged with organizing the development programs of the four nearby demonstration villages, which are attached to this Center. Furthermore, he attends the deliberations of each Rural Development Society, when its three-year program is under discussion.

In addition to personnel working at policy levels, the Rural Development Program is supported in the field by the following full-time paid staff:

- 22 Supervisors of Rural Development (one for each District)
- 11 Inspectors of Work (one for two Districts)
- 12 Needlework Supervisors (one for approximately two Districts)
- 145 Rural Development Officers (one for each Division and one for each Training Center)
- 147 Needlework and Home Economics Demonstrators (one for each Needlework Center)
- 400 Community Development Workers (these are trained young volunteers from the villages who are paid an allowance of Rs30 per month)

Also under the auspices of the Rural Development Department and besides programs undertaken for the betterment of themselves and the village, the people undertake programs of Shramadana (voluntary labor). A shade of difference is drawn between these two. In the former people contribute their self-help and mutual help to achieve better conditions of living for themselves and their village. In the latter, people of one or more villages get together to implement a project that will not necessarily benefit either the participants of their respective villages. The projects, sometimes in entirely different villages, range from varied agricultural activities and the construction of roads, irrigation channels, and public buildings to setting up a burial area.

National Youth Service Council (Sri Lanka)

The National Youth Service Council, established in 1969 by an Act of Parliament, functioning under the direct supervision of the Prime Minister, and "subject to the general or specific direction and control of the Government," is the national level policymaking, planning, and coordinating body on youth services in Sri Lanka. In principle, the Council aims to coordinate existing agencies within the context of national objectives, and to extend its support and surveillance wherever required by young people of the both sexes, 14-25 years of age, whether in school or out, employed or unemployed. Basic in the National Youth Service programs are 1) involvement of youth in activities beneficial to themselves and the nation, 2) training and education to equip them for competent and responsible adulthood, and 3) integration of youth into the mainstream of economic activities.

In support of these general goals, the specific responsibilities given to the Secretariat of the Council include establishing a Central Institute of Training and Research to conduct research and training in respect of youth leadership and youth programs; working with the Ministry of Planning and Employment to promulgate strategies for youth employment and to raise capital for investments creating employment for youth; undertaking sports, cultural, and other youth welfare activities; and promoting for youth vocational training that has promise in the light of national economic trends.

In practice, the implementation of the program has been most active and conspicuous in the area of national service, and this has been accomplished through two components that function concurrently; residential training schemes, and the involvement of youth in national development schemes.

Residential Training. In an attempt to foster a sense of both dignity and discipline in labor, as well as an awareness of socio-economic problems and a spirit of national consciousness, two types of residential work-camp training organizations have been set up for young people, 16-18 years of age, who have completed their secondary education and are ready for employment or tertiary education:

1. work camps, accommodating 100-200 trainees
2. agricultural farms or estates, accommodating 200 or more trainees

The training in camp or farm over three-month period comprises equal amounts of manual work and classroom study on weekdays, religious and cultural activities on Sundays and full moon days. Classroom training covers such subjects as "The Individual and Society", "Governmental Mechanisms," "Social Welfare," "Sri Lanka in Relation to the World," and "Appreciation of our Culture"--with modifications and adjustments according to the sex and educational attainments of each group. An incentive system, that of the national Service Credit Card, under the terms of which a young person earns one credit for each five days of service, is intended to give him some preference in gaining employment or admission to an institution of higher education.

Mobile Trade Training School Program (Thailand)

The first Mobile Trade Training School (known as Mobile Trade Training Unit, or MTU, until July 1970) was opened in Changwat Cjumphon in Southern Thailand in 1960 by the Vocational Promotion Division in the Vocational Education Department of the Ministry of Education, giving effect to a Thai government decision to extend skill training to out-of-school youth with at least four years of education and no other opportunity to continue further education. The second school was opened in 1964 in the Northeast province of Sakon Nakhon.

The program was rapidly expanded in 1966 when the Thai government sought and received assistance from the U.S. Agency for International Development (AID) in the form of equipment, technical advice, and foreign training of program staff. The purpose of AID assistance was to set up 52 more schools by 1972. Expansion has proceeded according to the original plan--five schools were established in 1967, eleven in 1968, and nine each year since 1969, making a total of 54 MTTs in 1972.

By the end of 1970, a total of about 51,000 trainees had enrolled in the MTTs courses and more than 30,000 had completed the five-month training course. According to the Vocational Educational Department's plans, more than 43,000 trainees are to be enrolled during 1972 and in each future year in the 54 schools. This number of trainees represents about 6 percent of the current out-of-school youths who have completed four years of primary education.

Objectives. As noted above, the program began with the government decision to provide skill training to out-of-school youth with four years of education and no opportunity for further education. This population is, of course, largely located in the rural areas. The formal objectives of the program are:

1. To set up mobile schools for the purpose of providing skill training to out-of-school youths and adults with only four years of compulsory schooling; training facilities are to be made available at the minimum possible expense and time for those who have had no previous skill training and for those who have some training but need further upgrading
2. To raise the standard of living of the less fortunate people living in rural areas and to help the individual to help himself
3. To supplement the training programs offered elsewhere in order to meet the ever-increasing demand for skilled and semiskilled person-power in accordance with the national economic development plan, and to prepare citizens for new job opportunities

4. To bring the Ministry of Education activities to the rural people so that they might, in turn, understand and support government aims

The objectives listed above imply an intended supplementary character of the program--the schools would supplement other training facilities supposedly available to the rural population. The program is viewed as a contributing factor in general economic development of the rural areas, though not operationally identified as an element in a broader rural development plan.

U.S. AID originally saw the program as a job-preparation activity benefiting the economically disadvantaged and politically "sensitive" region of northeastern Thailand. By 1971, however, these purposes had been modified. The program had been extended throughout Thailand and was no longer limited to the Northeast and its purpose was widened beyond job-preparation, as indicated in the following description of project goals dated March 1971:

To provide skill training to individuals with a minimum of four years of formal education and little or no opportunity to continue in the formal educational system to enable them to obtain employment, upgrade their employment capability or improve their domestic situation.

Inclusion in the program of skill training to "improve their domestic situation," which does not necessarily lead to paid employment or earning, of course, substantially alters the character of the program and the criteria for its evaluation.

Location and Clientele. The typical MTTs is located in one or more stationary buildings rather than on wheels (only one mobile school is actually on wheels, the shops being located on trailers). The buildings are made available to MTTs either free of charge or for rent. Typically, a school operates in one location for one to three years and is then

moved to another district in the same or a different province. The schools, according to the Vocational Promotion Division (VPD), need to stay in one location for two or more sessions, that is, one year or longer, to be able to serve those who want the training. The distinguishing features of the MTTs are the absence of capital expenditures on permanent buildings and its ability to move out of one district (once the demand for training is satisfied) and go to another.

SENA Servicio Educativo Nacional de Aprendizaje) (Colombia)

Structure and Scope. SENA was established by government decree in 1957 to provide skill training for employed adults and apprenticeship training for adolescents (aged 14-20). Administratively, it is part of the Ministry of Labor but it enjoys considerable autonomy, with its director appointed directly by the President of the Republic. SENA's governing council has representatives from the Ministries of Education and Labor, the National Planning Office, the Catholic Church, and management and labor organizations. It is not responsible for the major part of person-power training in all sectors of the economy, with an enrollment of 280,500 young people and adults in a wide range of courses.

Much of SENA's autonomy, as well as its ability to expand its programs rapidly, derives from the nature of its financing which is largely based on a payroll tax. In 1971, anticipated SENA income (and expenditures) was expected to reach 500 million pesos--equivalent to one-fourth of the Ministry of Education's budget in the same year.

Most of the training offered by SENA in its early years was directed to the industrial, commercial, and services sectors. Since 1967, agricultural training has become an important element in SENA's activities. SENA has now taken on the responsibility for providing skill training to the unemployed. In 1970 the government authorized SENA to devote 10 percent of its budget for such courses. Some of SENA's unemployed trainees are in PPP-R courses (devoted to basic

industrial commercial/service skill training in short-term courses, usually offered in temporary locations in urban centers).

SENA now trains more skilled workers than does the formal vocational school system. SENA had a total of 280,500 trainees enrolled in 1968 in vocational programs (excluding teacher training) in formal schools. However, SENA courses normally last for less than a year (up to three years for apprentices, who make up 7.3 percent of total enrollment), while formal vocational secondary school courses may last up to six years.

In addition to its new role in training the unemployed, SENA now offers technical assistance to small industries for upgrading the skills of their staffs, and offers semiprofessional training for staff of larger businesses.

Although SENA has no formal relations with the school system, the Ministry of Education is represented on SENA's governing board so that some interchange between these two educational agencies can be expected.

Organization and Facilities. SENA is organized into three operational divisions: Agricultural, Industrial, and Commercial/Services. Administratively, the PPP-R is located within the Agricultural Division and is headed by a coordinator in the Director's office.

SENA has constructed substantial training facilities, especially for its regular training programs in urban areas. But it also uses outside and temporary facilities, especially in the PPP-R program. Approximately 63 percent of SENA students receive training outside of fixed SENA training centers. SENA operates eleven agricultural training centers serving all sections of the country. These centers offer formal apprenticeship training in rural occupations as well as short courses at the skilled and semiskilled level. All these centers have

boarding facilities for the trainees in addition to classroom workshops and demonstration fields.

The PPP-R program itself is decentralized to 14 regional offices which cover all sections of the country. PPP-R offices are usually housed at a SENA training center, if such a center is within one of the 14 PPP-R regions. However, PPP-R instruction is not offered at these centers but in temporary facilities in rural communities.

SENA's Training Programs. SENA offers a wide variety of vocational and some general courses to meet the needs of clientele ranging from unskilled adolescents and adults to skilled workers, technicians, and professionals responsible for personnel training. Courses in 651 subject-matter fields were offered in 1970. (A full training in a given occupation, however, may include several courses.)

SENA's Ties to Rural Development Agencies. SENA provides training services for many of the public and private agencies in Colombia that are working to promote rural development. SENA is working with the Coffee Growers Federation (Federacion de Cafeteros) to improve farm practices in coffee growing zones as well as in a program to help these farmers diversify their farm businesses. It has also worked with the Cotton Growers Association (Federacion de Algodoneros) in the training of migrant workers.

SENA also works with INCORA (Instituto Colombiano Para Reforma Agraria), the National Land Reform Agency, in training the agency's own staff and by seconding SENA instructors to teach courses organized by INCORA for recipients of redistributed land (Aparceros).

SENA has an agreement with the Agricultural Bank (Caja Agraria) to promote a program called "Operacion Telar" designed to upgrade the skills of workers in the woolen handicrafts industry. SENA, along with the Bank, INCORA, and the armed forces, also provides training in rural skills for military personnel about to leave the service.

The Colombian Agricultural Institute (Instituto Colombiano Agropecuario--ICA), the government agency responsible for agricultural research and extension, and SENA are seeking to improve coordination of their field activities. At present, official collaboration is limited to minor programs such as promoting the raising of improved strains of sheep.

The Applied Integrated Nutrition Program (Programa Integrado de Nutricion Aplicada) is an interministerial effort (Labor, Agriculture, and Health) designed to improve the nutritional practices of rural inhabitants. SENA is a party to this convention, whose activities include educational programs and the distribution of foodstuffs. The PPP-R has made use of the food program as an incentive to participation in its courses in some communities, especially those in more remote areas.

SENA is working with the Artisans of Colombia (Artersanias de Colombia), a government-run program to promote traditional handicrafts production (much of it rural-based) and to strengthen the marketing of products.

Accion Cultural Popular (ACPO)--Radio Sustetanza (Colombia)

The Popular Cultural Action (Accion Cultural Popular--ACPO), a private nonprofit educational institution, provides basic education to rural Colombians by means of mass communication (radio and newspaper) coordinated with local (mainly volunteer) personnel. SENA has made its training materials available to ACPO, which in turn offers the use of its national radio network to SENA to promote its training activities among the rural audience. ACPO's program is carried to its rural audience through multiple reinforcing channels. These can be grouped into three major modes of communication: radio, printed matter, and personal contacts.

Radio Sutatenza. ACPO owns and operates Colombia's largest radio network, Radio Sutatenza. The name of the network is taken from the small municipality in the Department of Boyaca where the first station was founded in 1947. By means of long- and short-wave transmissions, Radio Sutatenza covers the entire geographic area of Colombia. Its focus to date has been primarily rural Colombia, although it is now seeking to cultivate an urban audience during the hours when there are fewer rural listeners.

Radio Sutatenza has a 19-hour broadcast day. Its programming consists of 6 hours of structured courses offered in the "Escuelas Radiofonicas" (radio schools), as well as programs of informal education (for example, programs offering practical advice on agriculture and the home, general entertainment, and news).

Escuelas Radiofonicas (Radio Schools). The "Radio School" is the seed from which the entire ACPO organization has grown. Started in 1947 with a handful of students, there were 303 schools in 1950 with 3,636 students. In 1965 there were 28,535 schools with 240,915 students, and in 1968, the last year for which comprehensive data were available (as of 1971), there were 169,696 students in 22,212 schools.

The term radio schools may be misleading. These are not special school buildings with classrooms filled with students; a radio school is a small group of individuals (the average number is less than eight), often all members of the same family or close neighbors, who meet daily in one of the student's homes to listen to the radio class.

The "school" is administered by an Auxilar Inmediato (Immediate Auxiliary)--a member of the local community who usually has slightly more formal education than his neighbors (or other family members) and who volunteers to organize a radio school. It becomes his duty

to help promote enrollment, organize a regular meeting site, obtain a radio for the class, see that the students attend regularly and on time, tune the radio into the proper station, assist the students during the radio class (upon instruction from the radio teacher), encourage discussion after class, and ensure that a set of textbooks is available for the class as well as a blackboard and chalk (if possible) and pencils and paper. He must send in enrollment statistics to the regional ACPO office and attend regular meetings (in theory, these are weekly meetings) of auxiliaries, lideres (local ACPO staff), and parish priests in the municipal center.