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MASTER

THE EVALUATION OF SYSTEMS OF RADIO EDUCATION:

A SEMINAR HELD AT

OAXTEPEC, MEXICO FEBRUARY 17-21, 1975

DRAFT RECOMMENDATIONS

CONCERNING

PRIORITIES OF INVESTIGATION AND

DEVELOPMENT OF METHODOLOGIES

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MASTER

INDEX

LIST OF PARTICIPANTS iv

INTRODUCTION AND SUMMARY vi

SECTION I: THE INTRODUCTION OF RADIO SCHOOLS AND THEIR
IMPACT ON THE SOCIAL SYSTEM 1

1. TYPES OF RADIO SCHOOLS AND THEIR RELATION
WITH THE NATIONAL SYSTEM OF DEVELOPMENT 1

a. Systems integrated into the politics
of development 2

b. Independent systems 3

2. EVALUATING SOCIAL IMPACT AND THE EFFECTS
OF CHANGE 3

a. Measurement of attitude change 4

1. Variables to consider
1,1. Variables in the medium
1,2. Personal variables
1,3. Environmental variables
2. Methodological recommendations
3. Limitations

b. Measurement of changes in values and norms 5

1. Variables to consider
2. Methodology
3. Limitations

SECTION II: INSTITUTIONAL COMPONENTS OF RADIO SCHOOLS 8

1. THE ORGANIZATIONAL COMPONENTS 8

a. Material components 8

1. Objectives
2. Characteristics of the communication media
3. Characteristics of the content
4. Infrastructure
5. Production capacity and competitive quality
6. Recommendations

b. Systems of financing 12

c. Studies of reception and audience 14

d. Organizational dynamics 16

2.	CONTENT OF THE MESSAGE	16
a.	Pedagogical potential of the radio message	17
	1. Methodology	
b.	General characteristics of the radio message	20
	1. Comprehension of the world in which one lives, its options, and its structure	
	2. Development of the existing culture	
	2,1. Methodology	
	3. Link with the context of development	
c.	Characteristics of the message according to the homogeneity of the forms of reception and the type of listening	23
SECTION III:	THE FUNCTIONING PROCESS OF RADIO SCHOOLS	25
1.	INTEGRATED EVALUATION AT THE SERVICE OF EDUCATIONAL RADIO	25
a.	Conditions prior to a project of integrated evaluation	26
	1. The acceptance of the evaluative function by the institution which carries out the project (climate of acceptance)	
	2. The existence of conditions of the system to receive the information (receptivity to the information)	
	3. The possibility of organizing a competent team	
	4. The existence of financial resources for the realization of the evaluative function	
b.	Tasks of the integrated evaluation within the project system	29
	1. General suggestions for the three phases	
	2. Phase 1 -- establishment of objectives	
	2,1. Community needs and resources	
	2,2. Concretization of objectives	
	2,3. Feasibility study of objectives	
	2,4. Check of the appropriateness of the objectives for the community	
	3. Phase 2 -- planning	
	4. Phase 3 -- implementation or realization	
	4,1. Analysis of the process of implementation	
	4,2. Analysis of the role of the receiver	
	4,3. Analysis of the results	
c.	Final considerations	34

d. Appendices on the integrated evaluation theme	34
1. Appendix I: Self-evaluation	
2. Appendix II: The construction of evaluation instruments in integrated evaluation	
2. AUDIENCE PARTICIPATION	35
a. Participation in ownership	36
b. Participation in decision-making	36
1. Ideological orientation	
2. Program production	
3. Administration	
c. Participation as active listeners	37
1. Direct	
2. Indirect	
d. Non-participation or passive listening	38
e. Recommendations for analysis of audience participation	38

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INTRODUCTION AND SUMMARY

THE RATIONALE OF THE OAXTEPEC SEMINAR

This meeting arose from the need to resolve a paradox: why, at a time when radio as a medium of social and educational communication is so highly valued by intellectuals, international institutions, and by the leaders of radio schools -- who of course have always believed in it -- why then has the growth of radio schools in Latin America, save for a few known exceptions, slowed down? Radio schools seem to be confronting barriers which prevent them from making the advances that this renewed interest implies. Members of the Center for Educational Studies of Mexico and of the Institute for Communication Research at Stanford University decided to call a meeting of project directors, evaluators, and social scientists to consider not what radio schools should do but on what research should and can do with and for radio schools in the present historical context.

The meeting was favorably received by those invited -- selected jointly by both institutions -- and took place during February 1975 in the Centro Vacacional Popular which the Mexican Social Security built in Oaxtepec. During the five days of work -- besides the interchange of information and experiences -- they proposed to define concrete priorities for research and evaluation and for the development of appropriate methodologies.

From five themes proposed beforehand (institution and cost analysis; analysis of components; feedback and formative evaluation; the

message and its effects; and effects on outside organizations and social change), plenary sessions took place the first two days in which papers on these themes were presented and the more relevant problems in each proposed for discussion. The participants were organized into four working groups. These groups worked separately and proposed their recommendations to the final plenary session, which discussed them on the fifth day. Now it is the mission of everyone to see if their work was good, and to collaborate in improving it.

The Recommended Proposals

The drafts presented by the different working groups were revised, in some cases rewritten and reorganized, but their substance was carefully respected. The organization of the drafts begins with a search for the sense of radio schools in their active relationships, planned or not, with the social milieu (Section I); it then focuses on the radio schools as institutions, detailing their structure, components, or subsystems, including the content of the communication (Section II); and finally it analyzes the schools in their dynamic aspect, that is, the process which sustains and improves them in each one of the phases of their functioning (Section III).

The text of the proposal contains the recommendations for evaluation as such (which appear in italics), their foundations, and methodological recommendations; that is, whoever wants to read only the recommendations of evaluation can follow selectively what is written in italics.

THE TEN FUNDAMENTAL PREOCCUPATIONS

The wealth and diversity of the experiences and contributions of the participants did not hide, however, certain fundamental common preoccupations which we summarize in ten points.

1. The greater intervention of the audience and participants in the decisions at different levels.
2. The understanding of the connection of educational radio activity with the surrounding social context, especially with the plans for socio-economic development.
3. The link between the projects of educational radio and other community organizations (cooperatives, farmer confederations, unions, etc.).
4. The economic solvency of the projects and the possibilities for economic stability and/or self-financing.
5. Improvement of the usefulness and simplicity of the evaluations.
6. The limitations put on educational radio by other sources of social communication with contradictory objectives.
7. The limitations imposed on educational radio by disillusioning or frustrating experiences of the potential audience.
8. The language differences between the audience and the programmers.
9. The autonomy of educational radio projects.
10. Avoiding the potential manipulative aspects of mass communication.

RECOMMENDATIONS FOR EVALUATION PRIORITIES

Throughout the proposals, evaluation priorities are defined, whether in terms of problem areas or of variables to include in the analyses, or of new perspectives for the solution of traditional problems whose efficacy and viability should be tested. This form of presenting the

evaluation priorities is due in part to the nature of the problem itself and in part -- why not say it? -- to the coherence which the different working groups decided to give them.

Certain themes of evaluation nevertheless appear frequently related to distinct areas and seem to encompass the distinct, specific recommendations.

We have summarized them, also into ten groups.

1. Social integration

The effect of integration, or lack of it, of the educational radio projects with larger projects of development and of their interaction with other community organizations.

2. Financing

The kind of financing strategies, including those never before used. An analysis of how the characteristics of a project determine its form of financing and how this in turn influences its scale, the public, the selection of objectives, and its effectiveness.

3. The audience

Who enrolls, perseveres, leaves? What types of communities tend to participate more? The different images and motivations of educational radio among those enrolled, and not enrolled, in programs.

4. The characteristics of the audiences

The cultural, sociological, and psychological profile of the anticipated audiences. An analysis of their problems, culture, ways of thinking, and levels of expression in which they feel most at ease.

5. Single or combined media

Different effects and possibilities for radio activity alone or combined with other media.

6. Integrated evaluation

Conditions which favor the integration of evaluation as a permanent internal function; forms and goals which integrated evaluation ought to adopt during the different phases of its functioning in order to be more effective.

7. Participation

Effects which possible distinct forms of audience participation would have on the different aspects of the project: quantitative success, qualitative effects, stability, objectives, financial solvency, political solvency. Systems and factors which increase participation.

8. The message

What communication techniques are more effective for short- and long-term projects: prescribed messages of conduct or those which tend to expand the capacity for dialogue in understanding concrete alternatives and decision-making? What is the effect of both techniques on the ability of the audience to treat critically the information which they receive from the social communication media in general?

9. The relation of the content to the form of reception and type of audience

Which content techniques and goals are more appropriate for individual reception and which are better for reception in organized groups? Which content techniques are more suitable with homogeneous audiences than with wider and diverse audiences?

10. The organizational structure

How do the organizational and administrative structures evolve and what is the effect of this evolution on the projects? What are the types of typical leadership and their effects on the functioning of the projects?

PRIORITIES IN THE DEVELOPMENT OF METHODOLOGIES

The social sciences have developed and utilized a great quantity of methodological techniques, some qualitative, others quantitative. The research and evaluation of educational radio projects nevertheless has tended to use only a few (for example, cost-benefit and effectiveness analysis, learning tests, descriptive measurements), but have not taken advantage of the whole gamut of available tools. Far worse, researchers have not generally adapted, simplified, or developed these tools for the benefit of projects and their goals.

The participants pointed out, in terms of the evaluation priorities presented, some techniques to be developed and applied which are considered priorities.

1. Application of anthropological techniques to discover the culture of the audiences and their conflicting relationships with the dominant cultures.
2. Analysis of the types and styles of mass media more suited to the development of the existing culture.
3. Techniques to foment methodological decision-making at the various levels affected by the research. Techniques of feedback, not vertical but horizontal (self-evaluation), so that eventually those affected do not have to send their information to higher levels of the pyramid but can make their own decisions and implement them at their own level.
4. Socio-economic analysis of the appropriateness and feasibility (at the individual, group, or global levels) of the radio program objectives.
5. Participant observation.
6. Comparative studies of institutions in their totality and in their component parts.
7. Multiple methods (psycho-sociological) for the measurement of change in attitudes, values, and conduct.
8. Studies of administrative structure (longitudinal, structural evolution, and their effects) and the flow of communication in the organization and in the communities.
9. Representative biographies and community histories.
10. Analysis of content consistency (internally with program objectives and externally with audience interest). Logical analysis of the content according to proposed alternatives of action, definition of the social factors, and reasoning in decision-making.

SECTION I

THE INTRODUCTION OF RADIO SCHOOLS AND THEIR IMPACT ON THE SOCIAL SYSTEM

The working group* considered that in order to analyze the more profound objectives of radio schools, it was necessary first to describe their relationship to the developmental process of their country or region, and then to analyze their effects on the processes of individual, group, and social change. The analysis was organized in the following way.

1. Types of radio schools, according to their link with the system of development of a country.
 - a. Systems integrated into the politics of development -- advantages and disadvantages.
 - b. Independent systems -- advantages and disadvantages.
2. Themes of evaluation.
 - a. Measurement of attitude change.
 - b. Changes in individual values and group norms.
 - c. Changes in the social processes.

For each theme of Point 2, methodological and limiting variables were treated.

1. TYPES OF RADIO SCHOOLS ACCORDING TO THEIR RELATION WITH THE NATIONAL SYSTEM OF DEVELOPMENT

We begin from the supposition that, by itself, the radio school is only one instrument within a whole host of media which work to fulfill

*The working group on "Social Effects" was composed of: Juan Braun, Jose Teodulo Guzman, Eugenio Maurer, Bertha Salinas, Sylvia Schmelkes de Sotelo, and Hugo Zemelman.

development objectives. Consequently, their effects cannot be isolated, nor can all the variables in play be analyzed.

a. Systems integrated into the politics of development.

We considered that any evaluation of radio schools should take into account their integration into a more extensive program of development in which a variety of institutions are involved.

Advantages of this type of radio school system:

- One can act within a model of integral development.
- One can better define the role of radio within a global context.
- One can participate better within the global program and obtain the help of other specialists.
- One can begin from an integral diagnosis in which not only the communicators can participate but also other specialists.
- There is greater possibility of expansion and one can support the radio school with other media.
- It is possible to work on a long-term basis since radio is only one medium of support for long-term programs.
- One can obtain greater support from the receivers since they can see that the effort which the radio schools are making to improve their living conditions "are being taken seriously."
- In the case of a program failure, it could not be attributed only to the radio school. Consequently, the danger of the radio school's dissolution is minimized.

Disadvantages:

- Lack of autonomy in defining the objectives and in programming.
- Lack of speed in making decisions due to bureaucratic problems.
- The fact that one is identified with the official politics of the government. Thus, the danger of dissolution if the regime changes.
- Greater difficulty of receiver participation in the programming and consequently the limitation of the possibilities of influencing change.

b. Independent systems

In contrast to the first type of system, these programs are not linked to other projects which conform to a global system of development.

Advantages:

- Autonomy in defining objectives and in programming.
- Greater possibility of adapting the content to regional needs.
- Greater possibility of obtaining finance and outside advice.
- Greater flexibility in acting outside the system.
- Greater possibility of effective participation of the receivers in the programming and in the project in general.

Disadvantages:

- The radio school by itself has many limitations in initiating structural changes.
- In a majority of cases, a considerable part of the resources come from outside entities; for example, foreign foundations.
- By the fact of being in general an electronic medium with great range, it is easily subjected to central control.

2. EVALUATING SOCIAL IMPACT AND THE EFFECTS OF CHANGE

The types of evaluation which are presented below are common to the two models of radio systems explained earlier. We do not pretend that the variables noted here constitute an exhaustive list. But they do point out the mainstream of variables which can be identified.

We believe, furthermore, that the variables which we will enumerate below should be taken into account in the evaluation not only of those projects which strive to bring about particular changes, but also of those which do not. The non-desired effects can also be analyzed in relation to these variables in every type of project for development or change.

a. Measurement of attitude change.

1. Variables to consider

1,1. *Variables in the medium.* There is a series of program and medium variables which should be taken into account when attempting to evaluate the subsequent effects of social change. These variables are analyzed in Section II.

1,2. *Personal variables.*

- Roles of the recipient, especially in the process of production.
- Openness to change.
- Individual self-confidence.
- Previous frustrating experiences.
- Degree of internalization of a previous attitude (ego involvement).
- Prior information and ability to process new information. This implies the ability to handle symbols (for example, the capacity to think in terms of the future) and the capacity to express them.
- Individual psychic and physical mobility: contact with other social groups, exposure to other sources of information or to opposing arguments.
- Awareness of the sources of the program.

1,3. *Environmental variables.*

- Greater or less isolation of the community (physical, cultural). Degree of dependence or interdependence on other social groups or communities.
- Structure of formal and informal relationships within the community.
- Level of community development.
- Degree of openness to change.
- Ways of thinking.

2. Methodological recommendations

- There exist specific methodologies for each one of the variables enumerated above. It is interesting to mention that:
 - (a) Given the difficulty of being able to infer a change of attitude based on a behavioral measure, the use of a variety of instruments is suggested (participant observation, representative biographies, group dynamics, scales) to analyze the reliability of the instruments, and thus to be able to infer with greater exactness a change in attitudes.
 - (b) A follow-up of the process over a relatively long period of time is suggested.

3. Limitations

- There are no scales developed in Latin America, which makes the validity of imported scales quite doubtful.
- The impossibility of attributing results to a program because of lack of control over all the variables.

b. Measurement of changes in values and norms.

Many radio school programs attempt not only to change individual values, but also social norms. Some educational radio programs even go further (especially in the case of independent systems), attempting to affect the normative system of the larger society. Although we doubt the viability of this type of program, we are conscious of the need to evaluate the changes in individual values and group norms achieved by such a program. Certainly one runs the risk that individuals whose values have changed might be rejected by their peer groups.

On the other hand, there exist two strategies by which radio school programs can achieve a change in values: that which hopes to effect a deep and lasting change in values as a result of behavior change; and that which attempts to change via verbal transmission of the message. In the first case, one observed the difficulty of knowing if a change in

values was achieved or not, although a change in behavior is proven. This difficulty can be prevented by using a variety of instruments to measure attitude change. For the second type of strategy, it is indispensable that one evaluate whether or not the educational program offers the possibilities of putting into practice at the behavioral level the value changes which are sought through the message. We consider this as an essential element for the effectiveness of the value change.

1. Variables to consider

- Degree and causes of resistance to change on the part of the larger group. This analysis allows one to foresee future conflicts.
- Group norms and individual values should be considered before initiating the program. This requires extensive anthropological study.
- Relationship of the values which they wish to change with the norms of the group in question.

2. Methodology

- Previous community studies.
- Various tools for attitude and behavior measures.

3. Limitations

- Unforeseen value changes can occur. Although difficult, the evaluation can discover this.
- It is impossible to attribute a value change to a specific radio program.

c. Changes in the social processes.

1. Variables to consider

- Whom does the educational radio program benefit; how does it change the stratification system, the participation in the means of production, the internal network of relationships, the access to or mechanism of decision-making, prestige?

- How does one effect the process of making demands heard before the larger political, social, and economic system?
- The rigidity of the larger economic and political structure in regard to its capacity to slow down processes of change.
- Capacity of the population to handle conflicts resulting from the educational program.
- How do individual values and group norms accelerate or slow down the social processes?

2. Methodology

The great majority of these themes can be investigated by those implementing the program with prior training in basic techniques of participant observation, sociometric techniques, etc.

3. Limitations

- The rigidity of the larger structure can impeded what these processes develop.
- How to affect the normative system of the larger society depends on the particular circumstances of each country. For example, in a small and homogeneous country, it is possible to take advantage of a political situation to extend the radius of the program's activity, this is difficult in more complex countries. In this sense, the programs integrated to the process of development promise greater efficacy.

As a final recommendation, let it be noted that not all of the above themes require the presence of a professional evaluation team. Many of these themes can be studied either by analyzing secondary sources or in group studies carried out by those implementing the projects.

SECTION II
INSTITUTIONAL COMPONENTS OF RADIO SCHOOLS

This section includes the proposals of the working groups that dealt with the diverse components of the radio schools (infrastructure, means of communication, financing, administration, message, and audience). They tried to evaluate their possibilities and specific effects on the progress of the whole system. The proposals were arranged in relation to: (1) the aspects of the organizational components*; and (2) the contents of the communication.**

1. THE ORGANIZATIONAL COMPONENTS

a. Material components.

To carry out an educational radio project, there are various alternatives for combining the components. These alternatives go from the extreme of using only radio to more varied combinations of radio with printed materials (signs, listener guides, periodicals, books, cards, posters), taped materials (magnetic tapes, records), and forms of interpersonal relationships (correspondence, monitors, supervisors, promoters, group meetings, seminars, etc.). On another extreme, radio plays a

*The following participated in the working group on "Organizational Components and Institutional Analysis": Estela Barandiaran de Garland, Humberto Barquera, Hernando Bernal, Robert Hornik, Luile McAnany, and Carlos Muñoz Izquierdo.

**The following participated in the working group on "Contents of the Communication": Marta Acevedo, Oscar Betanzos, Regina Gibaja, Osvaldo Kreimer, and Jerry O'Sullivan.

secondary role of support to other activities which carry the greater burden of the educational task or the desired transformation.

In each case it should be noted that:

- Each one of the components or elements of the system has a different cost;
- Probably each one of the combinations possesses distinct effectiveness;
- The material components vary as to the complexity of their production and utilization.

Thus, to define the conformity of the combinations of elements which will make up a radio school educational system, such variables as objectives, capacity of the media, contents, infrastructure, and production quality should be considered.

1. Objectives: what are the goals?

If one seeks to awaken interest through one theme (to create a mood) or dispense general information, it is probable that radio alone is sufficient. If one seeks to bring about behavioral changes which require a specific orientation to or the acquisition of complex knowledge, it would seem that the combination of radio with other media is more efficient. Finally, if what one seeks is to reinforce the actions of another agency to change, the radio becomes a complement of the interested agency (see Section 1).

2. Characteristics of the communication media: what can each component offer?

If we think about the need to combine radio with other components it is because we consider the radio to have certain limitations at any given moment. These can be overcome by combining radio with other supportive media. Such would be the case of visual support. Radio's inability

to present images in direct form can be compensated for by using signs, illustrated posters, or other visual aids.

Time limitations can be seen from different viewpoints:

- Limitation of disposable time. Send complementary information through books, magazines, etc.
- The impossibility of presenting the content according to the needs and learning powers of each individual. Texts of the program's contents can be used, as well as monitors or aides.
- Limited flexibility in getting prime time (day or hour) when dealing with programs at the national level. Instead, tape recordings could be used (magnetic tapes, cassettes) which, theoretically, could eventually replace live transmissions. Nevertheless, that would imply different cost considerations. It would also eliminate the undesirable audience which always exceeds the anticipated audience.

The use of interpersonal communication (letters from broadcaster to listener, paid or volunteer monitors or supervisors) can reduce the unilaterality of radio.

3. Characteristics of the content: what can radio offer?

For non-sequential, less structured knowledge, whether general information or knowledge directed toward the formation or modification of attitudes, it seems that the activity of the radio alone suffices.

For non-sequential, more structured knowledge presented as self-sufficient segments (for example, television's "Sesame Street"), radio alone would suffice.

But for sequential, more complex and structured knowledge, the combination of radio with other media seems to be the most efficient.

4. Infrastructure: what media are feasible in combination?

When deciding whether to use radio alone or some of the possible multiple combinations of diverse media, one should know what media are

available. This availability goes from the extreme of no media, possible access to the use of media (purchase of services), to the ownership of the media.

5. Production capacity and competitive quality: some criteria to keep in mind in this area

- The degree of competition to get the attention of the audience due to the presence of other radio stations in the same area. The greater the competition, the greater the need for better quality programs, or at least programs comparable to those of other stations. Better program quality usually implies a larger investment. To maintain that high quality, a station runs the risk of abandoning its own program. The failure to differentiate between commercial stations has often led to the termination of educational stations.
- The degree of interest and/or need of the audience in programming. The greater the interest and/or need, the less the demand for quality programming to counteract the pressure from the eventual competition.

6. Recommendations

We consider it necessary to make evaluative studies of the effect of the utilization of radio alone and comparative studies of the different combinations of media. This should be based on the global studies of institutions which use different combinations of media. Obviously, a comparative study of the cost-effectiveness of diverse combinations of media will be very difficult. An experimental study is expensive. The modification of results produced by non-controlled variables and applied to a concrete situation requires in-depth studies. Another difficulty with this type of study, especially one carried out in real institutions, is the limitation in being able to isolate the components and measure their impact. There are cases in which the components are the object of modifications, but in general this kind of study is oriented to increasing their effectiveness and not questioning their use.

Theoretically, we consider it useful to study the different combinations to establish a typology. Such a study would have a relative value. Each project inserts itself into a specific socio-political-economic context. The characteristics of the audience differ; the production conditions of each media vary; thus the results of such a study will be substantially affected.

b. Systems of financing.

There are a great variety of ways to finance radio programs. Some projects are self-financing with different strategies; for example, the sale of services to the audience, dues charged for enrollment. Usually the projects charge for materials such as posters or magazines. Relying on volunteer monitors or helpers can decrease the cost and is another way of self-financing. For many people, the goals and prestige of working for an institution compensate for the low salaries (as compared to the salaries of those in commercial radio). This can be considered self-financing. Project costs can be defrayed by selling services to outside organizations; for example, permitting commercial announcements in the transmission, printing materials for other stations or institutions, etc.

Other projects, although partially self-financing, also need to depend on outside funds. They can get resources from the government or from public international organizations, as in the case of a great number of radio schools which operate with private national or foreign funds. In the majority of cases, the projects have various sources of funds.

A study of the financing of radio schools can be made in three stages:

Stage I: Make a typology of financing strategies. We have indicated some of these. It is necessary to study the financing strategy of past and present cases. It is also beneficial to explore possible alternatives of financing that have not been used before.

Stage II: Analyze how and why a project arrives at a specific strategy: What are the political and economic contexts? What are the objectives of these strategies? What influence does the size of the project have on its duration, its organization, and the level of audience participation for choosing forms of financing?

Stage III: The third point, perhaps the most difficult, tries to determine the effects of the specific strategies.

When the projects depend on one source alone, do they in some way lose control over the selection of objectives? Each source has its own politics, and these do not necessarily coincide with those of the project. On the other hand, to choose a strategy of self-financing includes the danger of only reaching an audience which has money to buy the services. Likewise, to depend on a great number of sources, the managers of the project can spend too much time looking for funds and fail to attend to its social and pedagogical aspects. Also, the selection of components is, in some instances, not guided by their educational effectiveness but because their selection facilitates the acquisition of funds for capital costs, technical assistance, etc.

In summary, it would seem necessary to make a study of the financing in three stages: description or typology of strategies, analysis of these strategies as dependent variables, and finally an analysis of them as independent variables.

c. Studies of reception and audience.

Every project has its objectives. Although at times not explicit, one objective refers to the population to be affected by the radio school. Each project chooses between urban or rural people, people who have land or those who do not, men or women, children or adults, the poorest of the community or the social elite, people who speak one or another language, etc.

In terms of project planning, the decision to incorporate one or another group as an audience implies a series of decisions about the work program. Should one use organized groups? What role should the monitor play? What level of profoundness should the transmission have? And supposing that the project is already underway, what investigations seem useful?

The objectives relating to the audience suggest two types of studies. One refers to the actual audience: that is, who is enrolled in the courses? Who perseveres and who does not? One can respond to these questions with various criteria: they can be catalogues according to the community to which they belong, ethnic group, degree of urbanization, culture, or type of livelihood. What type of communities tend to participate more actively in the radio school?

It is also possible to study the audience in the total framework of the communities: that is, the potential audience. What types of persons

attend or do not attend the radio schools? Do they differ in socio-economic status, age, sex, experience, intellect, etc.? What perceptions do the people who attend have, and those who do not attend, of the benefits of the courses? Do they see them as goods in themselves or as an investment which will grant them a return in terms of income, opportunity, etc.? What characteristics of those enrolled are useful to predict who will continue in the course and who will not? Furthermore, one should compare the real audience with that proposed in the objectives.

If the actual audience does not correspond to the proposed audience, it is necessary to understand why in terms of specific components of the project. Do the objectives of the project correspond adequately to those desired by the audience? Are there cultural barriers such as having a feminine monitor in places where machismo predominates? Does the radio school and similar studies demand too much time?

The problem with this procedure is that there exist too many possible mistakes and it is very difficult to consider them all.

The possibility of forming the anticipated audiences will depend greatly upon the ability of the persons in direct contact with the work to specify possible causes of non-attendance within each particular context.

Depending on the causes, various strategies are possible. One can modify the objectives or change the combination of "components" of the program to attract the desired audience. One should also recognize that a given mechanism, like the radio school, cannot always resolve the problems which cause the lack of attendance. In some cases it should be recognized that reaching the desired audience is beyond the possibilities of the radio school. Either it can satisfy itself with the captive

audience or look for another system which will serve to assist the audience originally proposed.

d. Organizational dynamics.

There exists a category of study, predominantly qualitative, which can be eminently valuable for radio school projects: the studies of organization, structure, and administration in an historical perspective. The objective of these studies is to identify the important success/failure factors which other more quantitative methods fail to identify or appraise.

Two examples of this perspective would be:

1. Studies of the form of leadership and its effects. The type of leadership is a critical factor for any project. Frequently it is excluded from the evaluations because of the difficulties in quantifying it.
2. Studies of administrative structure. Experience points out that administrative inflexibilities often impede the resolution of personnel problems, bringing about delay, dissatisfaction, and internal tensions which hinder the progress of projects.

2. CONTENT OF THE MESSAGE

The working group* considered it useful to include an analysis of the priorities of investigation on three levels:

1. Demarcation of the potential of educational radio.
2. General characteristics of the message.
3. Specific characteristics of the message according to the conditions of reception and the type of audience.

The projects and goals of educational radio unfold in a specific Latin American context. The potential of the radio's message should be

*See page 8.

measured in terms of its effects on social change, how it forms individuals capable of exploring and understanding the society in which they live, thus allowing them to influence actively the conditions of daily life.

The working group organized its proposal in hypotheses in which analysis is given priority. They added possible methodologies in each case.

All the planned investigations will only make sense and have value to the extent that they serve the concrete tasks of program production. Individuals and groups who work on projects should implement their objectives within the resources and specific possibilities of the production media and program distribution.

a. Pedagogical potential of the radio message.

Proposition a(1): *The function of educational radio should not be thought of in terms of direct modification of individual conduct but as a stimulus to develop one's dialogical capacity with the medium.*

In its mediating function, radio develops the intellectual capacities of the individual which permit him or her to confront the medium. In its prescriptive function, it proposes innovations in the field of health, agriculture, cooperativism, etc.

The new investigations which seek to test this hypothesis should advance beyond prior experiences which have centered on the use of radio to implement innovations. Success tended to measure itself in terms of acquired knowledge and the adoption of the prescribed innovation.

When investigating radio's function as mediator in a listener's intellectual development, the analysis should be based on variables such as the capacity to recognize and discriminate between sources of information; ability to distinguish among distinct arguments for or against; the process by which one arrives at the adoption or rejection of a measure; the anticipation and analysis of the consequences; the generation of new information and discussions about the innovation, etc.

1. Methodology

These variables can be studied in different ways: in individual or group interviews; observations of audience meetings; and other techniques of collecting data which rapidly measure the effects of a radio program. The evaluation of the cumulative, long-term impact of the radio program will be necessarily confused with the presence of other stimuli which are also directed at the broader education of the audience. Possible changes will be found if specific innovations have been adopted which reverberate in the social and economic situation. This does not invalidate the investigation. The analysis focuses on the general aspects of the intellectual processes of the individuals with relation to the social interactions which generate their decisions. Documentary studies, brief histories, long-term observation, in-depth interviews, and semi-experimental analyses are techniques to be used for evaluating the long-range effects.

Proposition a(2): The efficacy of the radio communications which lead to social change will be limited by the rest of the communication received by the individuals. Radio education can generate a critical capacity towards communication.

Educational radio must develop the critical capacity of the audience not only towards its own message but also towards the message of other media. Its ability to effect social change depends greatly on the audience's critical capacity. In Latin America the powerful stations not only impose individual norms of conduct, but also seek to maintain the levels of ignorance which the political systems require.

With regard to research on programs oriented to this end, the project should discover within each social context: (a) the way of bringing individuals to reflection and ponder each argument; (b) the forms in which logical discussion is manifested through the media; and (c) the type of evidence which is presented as relevant.

Proposition a(3): Educational radio limits its efficacy for social change if it only offers information about new production practices and nothing about (a) the other productive agents -- material or intellectual -- necessary for the concretization of these new practices, and (b) possible forms of action, individual or group, to obtain these productive agents.

What good is it to teach to select seeds if more than half the rural population in Latin America does not possess land? What good is it to learn sanitary habits or betterment of living conditions if one does not have access to the means for implementing them?

Will reference to the means for social change and action restrict or expand the potential of educational radio? For example, this might mean including in the message ways to obtain access to needed productive elements. This must be investigated.

b. General characteristics of the message.

We have outlined three areas of investigation into the message and its effect on social change and individual development:

- *Options and decisions for the real world.*
- *The connection with the audience's culture.*
- *The tie with the events and prevailing plans of development.*

1. Comprehension of the world in which one lives, its options and its structure

- *An understanding of the world in which one lives, the relationship between his or her concrete situation and the rules of the governing system.*
- *Deeper knowledge of the options and decisions open to a person.*

In terms of research, two levels can be distinguished: the analysis of consistency and the analysis of effects.

The analysis of consistency refers to:

- (a) *the congruence between program objectives and the concrete reality of the real world;*
- (b) *the connection between the contents and real events;*
- (c) *the contents' global vision of the real events.*

In order to analyze the options and decisions, the program objectives must offer:

- (a) *schemes to recognize the actual, positive alternatives for action;*
- (b) *schemes for decision-making which permit an evaluation of all the possibilities and consequences of the options; people must become subjects, not objects, of their actions.*

Thus, fundamental priority will be given to the investigation and analysis of the options and schemes of decisions in terms of individual and group action (via cooperatives, defense leagues, etc.).

The research into the effects of these content variables should consider if changes have occurred in the way of making individual decisions. Has comprehension of the alternatives and the arguments of the decisions been sharpened in terms of innovation, creativity, and a search for new solutions? Has the degree and nature of the participation in new or existing organizations improved as a result of the implementation of options not previously used? Have changes occurred in the way of making group decisions and in the way of exercising this consensus on the centers of power?

2. Development of the existing culture

Every social segment has a culture. It is changed through contact with the larger society. To survive within the dominant culture, it produces its own defense mechanisms.

The culture of rural and indigenous societies, and of even urban subcultures, has to act in harmony with the predominant culture. It subsists as dominated, but not totally. These dependent societies have a wealth of cultural resources in the form of popular mythologies, witchcraft, idolatries, etc. They often function as moral guides and become symbols of defensive identification or means to survive materially and spiritually in their life situation. The predominant culture needs to absorb these subcultures into the economic and political apparatus. It endeavors to destroy the original attitudes and replace them with their own.

Proposition b(1): To stimulate social change and individual development through radio, it is necessary to investigate:

(a) the specific culture and its value for the relationship between the individual, the group, and the society, and (b) ways

to develop that culture, preserving its values, and introducing new elements from other cultures.

2,1. Methodology. To analyze the development of the audience's culture, the method of participant observation used widely in social anthropology seems to offer promising results for the goals previously mentioned. This method can be complemented or replaced by:

- The elaboration of an anthropological and socio-economic census.
- The utilization of land maps to determine demographic densities.
- Construction of genealogies.
- Schemes of local power.
- Investigation of the role of myths, legends, miracles, witchcraft, etc.
- Model of economic, educational, political relationships, etc.
- Elaboration of biographies of significant individuals.
- Documentary and testimonial analyses of the past and the present situations.
- Analysis of the elements of the popular culture, its predominant types, and its dynamic of change.

3. Link with the context of development

Proposition b(2): *The efficacy of the educational radio communications depends on the relationship between their pedagogical contents and the context of national, regional, and local development. Can the audience put into action what they learn through the radio?*

The alternatives of action and tools of thinking which educational radio offers should be put into action by the audience within the contingencies

of their real, concrete lives. These tools should help them to understand better their vital options in relation to "what is happening," instead of being tools for unreal situations removed from the development, underdevelopment, or change in which they live. The development of change (planned or not) opens new possibilities and shuts out old ways of action. Group or individual decisions have more value if they aspire to integrate themselves into more global levels of development (e.g., decisions about migration with relation to new works of irrigation, decisions of cultivation in relation to the dynamic of the job market, etc.).

Thus, it would seem a priority to analyze the experience of radio schools in terms of their internal and external efficiency; in terms of the degree and type of link between its pedagogical contents and the context of development or social change in which these contents are illuminated.

c. Characteristics of the message according to the homogeneity of the forms of reception and the type of listening.

Proposition c(1): Research should focus on the evaluation of content techniques which are appropriate for the homogeneous local audiences, in contrast to heterogeneous, national audiences in very diverse situations.

Many of the previous criteria of evaluation orient themselves to Latin American educational radio projects specifically prepared for a particular audience, geographically concentrated, culturally homogeneous, and more or less isolated from the influence of other media. It is obvious that these criteria will not be able to be used when the programs are directed to a heterogeneous public in a national context. Problems relevant to one sector may not relate to others. Some pre-existing cultural

cultural factors, such as the possible and desirable forms of action and organization, would vary according to occupation, ethnic group, or geographic region.

Proposition c(2): Research should focus on the characteristics of the content necessary for individual or group reception.

Organized group reception introduces another level of communication. The program has to adjust itself to the level of the group, perhaps with the help of the monitor. Group discussion and criticism make group action possible, depending on the program's content.

Conversely, the programs which are received individually should provide the receiver with stimuli for his or her individual reflection and eventually for his or her participation and discussion with others interested in the same problems.

Research should establish criteria based on the different categories of audience and forms of reception. Cultural homogeneity vs. heterogeneity, geographic continuity vs. discontinuity, isolation vs. saturation of sources of information, participation in program production vs. production processes without interaction -- these seem to be some of the variables to evaluate in terms of a program's content, goals, and effects.

SECTION III

THE FUNCTIONING PROCESS OF RADIO SCHOOLS

The working groups gave priority attention to the analysis of two themes related to the dynamic process of radio schools: (1) integrated evaluation as a subsystem of the project, replacing the traditional conception of the formative evaluation and feedback*; and (2) audience participation in the control of the school and in the decisions.

1. INTEGRATED EVALUATION AT THE SERVICE OF EDUCATIONAL RADIO

The present proposal presents a possible model of evaluation for the projects of educational radio, given the name of "integrated evaluation." It underlines evaluation not as an "addition" but as an integral part of the educational project.

Based on this fundamental pretext, we have reconsidered the sequence which constitutes "the educational radio project" from beginning to end. We asked ourselves at each step about the functions which the subsystem of evaluation should cover.

As we have already indicated, to conceive the evaluation as a subsystem of the communication system indicates our intention to give evaluation a sense of effective participation in the project.

In Latin America, some institutions have extensive resources while others -- the majority -- have few. Some projects have a history,

*The working group on "Formative Evaluation" was composed of Frank Gerace, Marcelina Llanos, John Mayo, Peter Spain, and Jorge Trias. The theme "participation" was prepared by the "Institutional Analysis" group (see Section II).

others are being born. We do not regard integrated evaluation as a "block" to be considered in all its complexity at the same moment. The serious reader of the studies on educational radio will select from the model what is most feasible and relevant to his or her situation. The apparent complexity of the model should not "discourage" the reader. It will take time to refine well his or her critical sense so that he or she can choose those ideas which best suit his or her institution.

The development of the proposal will follow the following lines: (1) first, the specific conditions which should make up a project of educational radio so that it can equip itself with an integrated evaluation; and (2) the general functions which the evaluation should fulfill in the different phases of the project, inviting suggestions as to specific ways of fulfilling these functions.

The present model will undergo correction, clarification, expansion, and precisions from its dialogue between theory and practice.

a. Conditions prior to a project of integrated evaluation.

We understand by integrated evaluation that evaluation which accompanies the educational project from its beginning to its end. It provides at each stage the information necessary for the better development of the project. It promotes the participation of all levels of persons integrated in the project system. This vision of integrated evaluation contains contributions which differentiate it from the traditional summative and formative evaluation. Certain essential ideas are at the basis of this conception of evaluation: (1) to give priority to the horizontal form of the communications system, and (2) to create interest by means of the evaluative process itself -- in the critical participation

of its members. These ideas respond to a desire for political and social change which lets the rural masses participate more in the society. These are the people whom Latin American educational radio is trying to reach.

So that a project can equip itself with a "function of integrated evaluation,"* we consider it necessary to satisfy the following conditions.

1. The acceptance of the evaluative function by the institution which carries out the project (climate of acceptance)

Independently of the fact that the evaluation is "requested" either by the agency or institution, or "suggested" by a circumstance influential for decision-making, integrated evaluation can only function within a climate of acceptance by the institution. The style of collaboration between the executive function and the evaluative function will be so strict that great difficulties would result where this was not the case. The model contains sufficient differences compared to the traditional concept of evaluation. It can expect less resistance than the ordinary designs of evaluation very frequently find.

2. The existence of conditions of the system to receive the information (receptivity to the information)

The function of integrated evaluation is seen as difficult in a situation where it is considered a priori that there are no significant possibilities of change for the institution. Of special importance it appears to us is that possible alternatives do exist -- although many times indeterminate -- for the system. In a limited case, in effect, we could consider the existence of a program which does not have possible

*We speak of "evaluative function" instead of evaluating team because the model supposes that evaluation is carried out on the basis of integrating elements of the project itself, only with the eventual auxiliary collaboration of outside "evaluators." For further consideration of this point we refer you to Appendix I.

alternatives and which for one reason or another wants to continue notwithstanding its low or inefficient level of functioning. Although irrational, it seems to us that there could be cases which approximate this type.

3. The possibility of organizing a competent team

An evident prerequisite for the existence of integrated evaluation in a project is to have available or be able to train personnel for a team capable of carrying it out. This training includes the technical capacities of the social sciences. It also encompasses a training related to the level of interrelational attitudes, social skills to insert oneself shrewdly and efficaciously in the flux of decisions. Let us remember, in support of the above, that we conceive the function of evaluation as a part of a subsystem of communications among all the members of the project system. This subsystem cannot be disconnected from the rest of the institution. The system would disintegrate if it tended to stereotype the evaluators' function as that of non-dedicated observers.* On the other hand, the training need not be sophisticated and certainly should not be for all levels of the evaluation team. The model tends to involve as many persons possible in the design of the evaluative tools and in the evaluative process itself.

4. The existence of financial resources for the realization of the evaluative function

Although the present model tries to satisfy a general requisite of low cost, a fund for its implementation will be necessary. The

*A great practical difficulty which radio educators cite consists precisely in the frequent confrontation between the evaluating team and the rest of the system which experiences discomfort in the presence of an evaluator, a person not involved with the project, who is looking for information which seems only of interest to him or her.

evaluation understood as a function integrated into the system signifies also integration into the budget.

b. Tasks of the integrated evaluation within the project system.

Integrated evaluation is conceived as a process of collection and distribution of information pertinent to decision-making in the different phases of the project. In effect, the great distance existing between the receiver and the station impedes the production of "natural feedback." This makes more necessary the design of a process of continual feedback.

The process of integrated evaluation consequently is developed simultaneously with the project itself. It generates at each step the information pertinent to the progress of the project. In summary, we have classified the phases of the project as: (1) establishment of objectives; (2) planning; and (3) implementation or realization.

1. General suggestions for the three phases

As an introductory note, we first want to present certain general suggestions as to the tools for integrated evaluation.

- Rapidity of realization. The task of generating and distributing information throughout the entire system should be designed in a way to permit efficiency and speed.
- Ease of interpretation. The results of the evaluative function should be expressed in such a way that they can satisfy information needs for the entire system.
- Low cost. The evaluative function does not have an end in itself. It should reduce its own cost to a minimum. We do not see the sense of a costly evaluative function which strains the project budget and impedes the functioning of the system which it is meant to serve.
- Participation. One of the primary ends of integrated evaluation is to increase the participation of all those involved in the system, including, obviously, the audience.

It strives to encourage as much as possible that those people whose work is being evaluated participate in the construction of the tools of evaluation; these same people also actively participate in the evaluative process through self-evaluation. A difficulty of the traditional evaluation is the poor collection of the evaluative data. The system being evaluated should feel, via its own participation in the process, that it is both evaluator and evaluatee simultaneously, co-responsible for the project and not simply a respondent to external questions.

- Usefulness. The evaluation tools and the resultant information have to respond to decision-making needs in the different phases of the project. The ideal tool for integrated evaluation is not that which gets the greatest quantity of information possible for its eventual use, but that which obtains the key information whose importance is recognized by all the components of the project system.
- Simplicity. Although partially tied to low cost and participation, this element merits a place on this list. Simplicity encourages the audience involvement in the work of evaluation. It includes those being evaluated in the process of evaluation.

2. Phase 1 -- establishment of objectives

Part of the evaluative function corresponds to this stage:

(1) the investigation of needs and resources both before and after establishing objectives; and (2) the investigation of the feasibility, concreteness, and relevance of the operational objectives. In this stage of fundamental importance, the model for integrated evaluation underlines particularly the strategies which urge participation and mutual involvement.

2,1. Community needs and resources. At this stage of the project, the evaluative function investigates the community needs and resources. The first step may be a traditional socio-demographic questionnaire. Then the research group searches for information from which it selects its objectives.

This first part of the evaluative process has three steps.

First, using a variety of instruments, a synthesis is made of the community

needs and resources. Appropriate instruments include: questionnaires, detailed interviews with representatives of the community as well as individuals picked at random, analysis of existing data from similar projects, data extracted from various offices, etc. Second, this synthesis is then presented to community groups who critically analyze it to see if it gives a true picture of the community. This step might present methodological problems. To work, these groups of analyses will have to be coordinated by individuals from the same community to insure a trustful climate of discussion and criticism. Diverse groups will be invited to allow for the participation of different segments of the community. Third, the results of the synthesis, after being critiqued by the community, become the basic information from which the directors of the project determine the program objectives.

It is important to emphasize at this point that evaluation does not pretend only to obtain more and better information. From the start, the project seeks to include the listener as an active participant.

After choosing the objectives, the evaluation must concretize its objectives, study their feasibility, and check their relevance to the community.

2.2. Concretization of objectives. This stage begins with a logical and theoretical analysis of the consistency of the general objectives, the specific objectives, and the goals of the project. For example, it is necessary to demonstrate so that a general objective like "education for the improvement of the community's living conditions" is specified in terms of concrete goals (e.g., establishment of cooperatives) or in partial goals for the acquisition of a general goal (e.g., knowledge of cooperative principles).

2,3. *Feasibility study of the objectives. Analysis of the institutional resources in relation to the concretized objectives; likewise, a comparison can be made of the project objectives with the community resources -- known from prior investigation -- to determine feasibility.*

2,4. *Check of the appropriateness of the objectives for the community. In the process of deciding on and concretizing the objectives, disagreements often occur. The objectives, as a result, may be irrelevant or undesirable for a particular community. In this important stage, if community involvement is hoped for by the educational radio project, the evaluation team has the task of presenting the objectives to the consideration of the community.*

In each of these steps, as much for economic factors as for speed factors, we advise against multiplying the number of interviews, persons, questionnaires, etc., beyond that which prudence advises as necessary for an "empirical" representation. Good sampling allows us to project the results obtained to the maximum audience possible. Where possible, group consultation may be more profitable.

3. Phase 2 -- planning

Once the previous stage is over, the evaluative function has the job of providing adequate information for planners. It studies the appropriateness of the media chosen for the program. In this stage, the evaluative function is conceived of as an analytical quasi-experimental investigation, given how little we know about teaching through radio.

Planning is that stage of the project which designs the role and importance to be played by each component of the project. A great number of components can be involved: technical radio production,

organization, curriculum, monitors, supervisors, auxiliary material, etc. (see Section II).

A great part of the evaluative function will be in providing information to test the feasibility of the planning decisions.

4. Phase 3 -- implementation or realization

Once the planning is finished, the implementation stage begins. By this we mean here the entire realization of the project, as what was planned gets underway. The evaluative function in the implementation takes place in three tasks.

4,1. Analysis of the process of implementation. During this process, the need arises to obtain information on how to carry out the project in terms of what was planned (and not planned). How does the project adapt itself to the irregularities which present themselves? A typical example is the case of the radio school with deficient reception or no signal. In terms of the diverse components of the project, there is a great number of elements which can fail. Methodology: Trouble-shooting with a checklist can be very useful in these situations.

We attach great importance to participant observation and self-evaluation of the various components, as mentioned earlier. We treat these points more specifically in Appendix I (Self-evaluation).

4,2. Analysis of the role of the receiver. Within the horizontal scheme which this model of evaluation proposes, it is very important to analyse the role of the receiver during the project. Such an analysis is the best type of formative research. Methodology: Given the subtlety involved, we recommend the non-directed thematic interview (see Appendix II about the constructing of tools).

4.3. *Analysis of results.* *The content of the traditional evaluations corresponds to this chapter of integrated evaluation. In general terms, the evaluator has at his or her disposal tests of awareness, scales of attitudes, and models of behavior observation. Nevertheless, at this point we emphasize self and group evaluation as instruments that involve people in their own evaluation. They make possible a critical awareness of the effects of the project.*

c. Final considerations.

A final consideration to which we attribute great importance refers to the distribution of the information obtained during the evaluative process. The traditional evaluations, besides being vertical, give preference to some parts of the project over others. The present model looks for the maximum distribution of information among the different elements of the project. Throughout the different stages of the evaluation, there will be deliberate built-in mechanisms to exchange evaluative information among the different levels and within the different elements of the same level. This fulfills our first criterion: the conception of the integrated evaluative activity as an important factor within the project.

d. Appendices on the integrated evaluation theme.

1. Appendix I: Self-evaluation

The present model considers self-evaluation not only as a process of information generation useful for decision-making in the different stages of the project -- and fundamentally in the stage of implementation or realization -- but also and fundamentally as a process of self-feedback for the diverse components of the project itself. Depending

on circumstances, the results of self-evaluation (individual or group) do not necessarily have to be forwarded to the evaluation team. In this sense, the model tends to restore self-evaluation as an instrument for self-correction of some parts of the system without the intervention of other parts when this appears feasible and related to all the components of the project system. This self-evaluation is based on self-evaluation guides which, following the general lines for the construction of all instruments in an integrated evaluation, are produced in collaboration with the people whose work is being evaluated.

2. Appendix II: The construction of evaluation instruments in integrated evaluation

In our model of the construction of instruments, we avoid the difficulties encountered by the traditional evaluation in processing cards, files, etc. Instruments constructed in the central evaluation office are often poorly understood by the respondents as well as by supervisors, helpers, etc. Both in terms of efficacy and in terms of participation, the various instruments can be elaborated better in collaboration with the respondents. This guarantees the relevance of their content and insures participation of those being evaluated. We consider this is a realistic proposition from which we can expect positive results for the evaluative function, for the project, and fundamentally for the education to critical participation of the recipients of the educational program.

2. AUDIENCE PARTICIPATION

As a basic principle, one of the fundamental objectives of the radio schools is the participation of its audience. That participation is

a necessary condition in every form of true education, development, social change, or human liberation.

To provide help to groups who use radio in their educational or development program, the working group considers that a typology of the forms of participation could offer guides to encourage a greater participation among the listeners according to the concrete circumstances of each project. A scheme of audience participation could include everything from the full participation of the audience to no participation. Each radio school should situate itself in that continuum and judge if it is possible to increase the audience participation. Nevertheless, schools should act with caution since inappropriate participation could hurt the entire efforts of the system.

Briefly, examples of distinct levels of participation and the way they work are presented below.

a. Participation in ownership.

When an organized group with clear needs and objectives buys or obtains a station, it converts it into its own educational medium directed to social change. For example, in Bolivia a radio school was given to the farmers during the presidency of General Torres; or in Canada small stations were assigned to communities for use by and for their members.

b. Participation in decision-making.

Representatives of the audience can obtain the power to participate in decision-making although they do not control the ownership or the studios of the station. This participation can be made on three levels: in the ideological decisions, in those of program, or in those of admini-

1. Ideological orientation

The audience participates in the fundamental direction of the radio and the orientation of its contents in reflecting their own interests, needs, and problems.

2. Program production

Among other things, access to decisions and production tasks can refer to: the planning of curriculum; the direct production of programs; appearing in the programs, produced by technicians but with the audience as participants in the discussions; the preparation of programs or other materials by testing them experimentally and giving an opinion about them.

3. Administration

The audience does not participate in the ideological orientation but is involved in the decisions of administrative implementation. This should not be confused with cases in which members of the audience are trained in administration but lose their identity with the audience group and convert themselves into bureaucrats.

c. Participation as active listeners.

When the active responses to the radio programs or other pedagogical materials are:

1. Direct, i.e. when the station often consults its audience to learn their reactions, suggestions about content, disposition to programs, forms or styles, etc.

2. Indirect, i.e. when the station receives the audience reaction through supervisors, monitors, letters, etc.

d. Non-participation or passive listening.

The users are not consulted nor do they have any role in the decisions about orientation, content, or program form. This passivity is typical of commercial radio. It becomes typical of educational radio when the audience questionnaire fails to increase the participation in the decisions and only increases the profits of the owners of the radio who are aware of the habits of the audience but do not consider their interests.

e. Recommendations for analysis of audience participation.

1. *If the directors of the radio school consider participation important, they should first examine in a self-critical way the seriousness of this objective to find out the real level of desired participation and the mechanisms to attain it.*

2. *Three stages of analysis can be indicated:*

- *Historical case studies of varied participation to complete the typology and its description.*
- *Studies to understand the process of participation in a dynamic perspective.*
- *Studies to understand the process of participation, whether as objective (that is, understand the mechanisms and factors which have caused its increase or decrease) or as a medium (that is, understand the effects of participation on other objectives, be it the increase by the audience of the control of their lives, about their learning, values, attitudes, etc.).*

3. *Another important study would be to understand the effects of participation on individual or groups not previously trained or accustomed to such participation.*