RADIO SCHOOLS IN NONFORMAL EDUCATION:

An Evaluation Perspective

Emile G. McAnany
Institute for Communication Research
Stanford University

June 1974

Introduction

In the recent literature accumulating on nonformal education, there has been an emphasis on achieving agreement on a definition, discussion of the general problems and theory relating to the phenomenon and a recent emphasis on surveys of existing programs.[1] At the same time, people have been looking ahead to a new era when nonformal education will become a recognized part of countries' educational planning and financing. In anticipation of such a new era, many have tried to suggest different ways in which educational resources can be made available to large groups of learners outside the formal school system. One strong suggestion, coming from a number of sources[2], is a greater use of mass media in the variety of tasks in a nonformal approach to learning. There has been relatively little use of media for these goals in the past and those projects using media have often done so haphazardly and have not been carefully evaluated so as to provide future planners with sufficient information for guidance.[3]

---

1. Coombs, P. H., with R. C. Prosser and M. Ahmed, New Paths to Learning for Rural Children and Youth, New York: International Council for Educational Development (ICED) for UNICEF, 1973. ICED, Building New Educational Strategies to Serve Rural Children and Youth, N.Y.: ICED for UNICEF, 1974 (mimeo); Coombs, P. H. with M. Ahmed, Attacking Rural Poverty: How Nonformal Education Can Help, Baltimore: Johns Hopkins, 1974; Foster, P., and J. Sheffield (eds) Education and Rural Development London: Evans Brothers, 1973; Sheffield, J. and V. Diejomaoh, Non-Formal Education in African Development, N.Y.: African-American Institute, 1972; Michigan State University series, Non-formal Education Discussion Papers (Nos. 1-6), East Lansing, Michigan State University, 1973.

2. Coombs et al., Attacking Rural Poverty, op. cit., ch. 10; Coombs et al., Building New Educational Strategies, op. cit., ch. 5; E. Faure et al., Learning to Be: The World of Education Today and Tomorrow, Paris: UNESCO, 1972; Agency for International Development, The A.I.D. Education Program Stategy, Washington, D.C.: Agency for International Development, 1973, pp. 35-37.

3. E. McAnany, Radio's Role in Development: Five Strategies of Use, Washington, D.C.: Information Center on Instructional Technology, 1973; R. Hornik, J. Mayo, E. McAnany, "The Mass Media in Rural Education" in Foster and Sheffield, (eds) Education and Rural Development, op. cit.

A closer look at the history of mass media use for education in developing countries reveals that television has tended to dominate the attention of education during the past decade.[4] This attention has largely been because television was used to reinforce formal school programs, often in predominantly urban areas. Formal systems were expanding rapidly at this time and enjoyed increasing proportions of national budgets. Large claims had been made for the potential of TV for formal schools, but a glance at the outcomes of most efforts have not revealed that possibilities' achievement in most cases.[5] Few examples can be cited that could be called cost-effective.[6]

Today people are suggesting smaller, more flexible and lower cost technologies such as radio, cheap printed materials and simple audio-visual aids as most appropriate for nonformal learning. The reasons mentioned most often are that they are often already existing technologies that countries can immediately apply to nonformal education, especially in rural areas. Radio has been one of the technologies most often cited as appropriate for furthering the goals of reaching rural, out-of-school masses of people. A review of radio's use in rural development[7] reveals a history of increasing use in a variety of ways in almost every developing

---

4. W. Schramm, Big Media, Little Media, Stanford: Institute for Communication Research, 1973.

5. A. Coladarci and R. Arnove (eds), Educational Television: A Policy Critique and Guide for Developing Countries, Stanford: School of Education, 1973.

6. R. Hornik, H. Ingle, J. Mayo, E. McAnany, W. Schramm, Television and Educational Reform in El Salvador: Final Report, Stanford: Institute for Communication Research, 1973; J. Mayo, E. McAnany, S. Klees, The Mexican Telesecundaria: A Cost-Effectiveness Analysis, Stanford: Institute for Communication Research, 1973

7. McAnany, Radio's Role..., op, cit.

countries. What is evident from this evidence is that radio has been used widely and haphazardly; it has many adherents but little evaluation evidence exists about its effectiveness and costs.

Latin-America, relatively media rich in comparison with Asia and Africa, has had a long history of using radio for a variety of tasks. With new pressures to create more learning opportunities for masses of marginal people, especially in the rural areas, Latin-American countries have perhaps more naturally turned to media such as radio. To date there have been few new nonformal programs launched in Latin-America. Before a spate of media based programs are launched, it would be good to illustrate from a single example both the potential strengths and weaknesses of a medium like radio.

The Latin-American radio schools represent, perhaps, the most widespread form of media based nonformal education in the world. Beginning in 1947 with a single radio transmitter and a few people, they have spread to most other Latin-American countries and reach several hundred thousand rural people. There has been relatively little evaluation of this phenomenon although a nucleus of studies do exist.[8] If evaluation may be identified with asking difficult questions about success or failue, then there is a real need to do more evaluation on the nonformal educational efforts the radio schools represent.

The following pages will attempt to review, from an evaluation perspective, the radio schools as they exist today. This general review should illustrate both the strengths and weaknesses of the radio school model so that improved understanding might contribute to the future needs of nonformal education in Latin America.

---

8. Most of these are cited in McAnany, Radio's Role..., op. cit.

I. An Evaluative Review of Radio School Efforts in Latin America

The evaluation process is a complex one. There have been a few serious efforts to evaluate radio schools, but not enough to have created a single model to be followed in future evaluations.[9] From the perspective of evaluation, the basic question to be asked of the radio schools is, What they have accomplished in the last 25 years? Too often in the past, the potential of the media has been stressed without sufficient thought of what they have accomplished. The radio has long been used in Latin America. Radio Schools are a quarter of a century old. If there is potential for this nonformal educational tool, then we should know what it is by now.

Suchman, in his treatment of the evaluative research process[10], names "five categories of criteria according to which the success or failure of a program may be evaluated": effort, performance, adequacy, efficiency, and process. Briefly they refer to the following aspects of evaluation of a project: (1) effort: the quantity and quality of the work done in the program; (2) performance: the effect that the effort expended in the program has produced among its target population; (3) adequacy of performance: "the degree to which effective performance is adequate to the total amount of need"; (4) efficiency: the ratio of input to output or effort to effect with the further question of genuine alternatives to the

---

9. A beginning attempt to create an evaluation model for educational television, especially for developing countries, can be found in E. McAnany, R. Hornik, and J. Mayo, Studying Instructional Television: What Should be Evaluated, Stanford: Institute for Communication Research, 1973 (draft for UNESCO).

10. E. Suchman, Evaluative Research: Principles and Practice in Public Service and Social Action Programs, N.Y.: Russell Sage Foundation, 1967.

method chosen (often included in cost-effectiveness studies); (5) process: how and why a program works or fails to work.

Ideally, the radio schools individually and collectively could be reviewed under each of these categories. The result would be to provide information for the future of these schools in three important ways: (a) to improve some existing radio schools so that they functioned better (formative or feedback evaluation); (b) to discontinue other projects in the light of their achievements over a period of several years (summative evaluation); and (c) to provide a better understanding of the costs, benefits, and especially the process of radio schools so as to better plan new projects using radio for nonformal education (planning evaluation). However, as we have pointed out, such evaluative data do not exist for most radio schools. Therefore, the remainder of the paper will attempt to include what is known about the radio school projects under each of these categories and to assess their overall impact on a general level.

Such a review begins with several caveats: radio schools are not identical everywhere in Latin America; little written evidence (even descriptive) exists on many of these projects; certain questions raised about problems that seem common to the idea of radio schools or their management may not be true for some existing projects.

A. Effort

What has been the scope of effort in Latin American radio schools? There are two ways to look at this category, both over time and in terms of recent trends. The Colombian radio schools of Accion Cultural Popular (ACPO) were the prototype in this effort. Begun in 1947 by a parish priest in the small town of Sutatenza, the effort in Colombia today has grown to include 22,212 listening centers with 167,451 registered

students (1968), printing presses, a network of radio transmitters, a record company, and an annual budget of between 4 and 5 million dollars (U.S.).[11] What is apparent from this is that ACPO has not only survived over time (a key evaluative criteria that many projects do not meet) but has grown and institutionalized its efforts.

A second way of looking at the effort is to examine how the radio school innovation has diffused to other places. Table One gives a summary of some other radio schools in Latin America. This shows that in 1973, the ACPO idea was found in at least 23 other projects in 16 Latin American countries. An examination of the dates of foundation also shows that most projects have been begun within the last decade and this represent a relatively new trend toward expansion.

A third way to look at the effort is to see how many people these radio schools serve. Here there are no absolutely reliable figures but based on some figures reported in 1973[12] and making a conservative estimate for projects that do not report their figures, the radio schools served about a quarter of a million people in their listening centers. A careful distinction needs to be made here between the number of people enrolled in listening groups as estimated above and those who may listen to radio programs but who are not enrolled in a group. There is no easy way to estimate this latter number. Rural people in most Latin American countries seem to own or have access to radios in large numbers. Radio schools, in addition to their educational programs for groups, often do programming that is educational in a general sense. Thus, a much

---

11. S. Brumberg, Accion Cultural Popular: Mass Media in the Service of Colombian Rural Development, Essex, Connecticut: ICED, April, 1972.

12. Oficina de Servicios para America Latina (OSAL), Las Escuelas Radiofonicas en American Latina: II Seminario de Directores de Escuelas Radiofonicas de America Latina, Bogota: OSAL, 1972.

TABLE ONE: Radio School Projects in Latin America, 1973 [Source: OSAL, 1972]

Country	Radio School	Date Begun	Target Audience	No. Centers	No. Students	Ed. Levels	Media Employed: Rad.	Bks.	News	Chts.	Other	Field Org.
Argentina	INCUPO	–	RI	–	–	L	X	X	X	X	wk/sks.	VM/S
Bolivia	CAMCOS	–	Aymara I	443	6167	L	X	–	X	–	–	VM/S
	ERSAR	1970	RI	67	866	L	X	X	–	–	–	–
	ACLO	1967	Quechua I	126	1890	L	X	X	X	–	–	VM/S
Brazil	FEPLAN	1965	RA	–	675 8912	L equiv. sec.	X	X	–	–	–	VM/S
	MEB	1961	RA	–	4776	L 1°, 2° cycle	X	X	–	X	–	P(?)
Chile	Sta. Clara	1967	RA	–	–	1° cycle	X	X	–	X	Freire mt.	–
Colombia	ACPO	1947	RA	22,212	167,451	L/1°,2°	X	X	X	X	other soc. materials	VM/PS
Costa Rica	ICECU	–	–	–	–	–	X	X	–	–	–	–
Dom. Republic	Sta. Maria	1964	RA	–	10,000	L prim. equiv.	X	X	X	–	–	PM/S
Ecuador	ERPE	–	RA	–	–	L/1°	X	X	X	–	wall newsp.	–
	SEMA	1964	RA	65	1000	L/prim.	X	–	–	–	–	VM/S
	SUCUA	1972(?)	Shuhar A	50	2035	L/1°	X	–	–	–	–	VM(?)

Key: RI = rural illiterate
RA = rural adult
L = literacy

V = volunteer
M = monitor
/S = or supervisor
P = paid

TABLE ONE: Radio School Projects in Latin America, 1973 (continued)

Country	Radio School	Date Begun	Target Audience	No. Centers	No. Students	Ed. Levels	Media Employed Rad.	Bks.	News	Chas.	Other	Fund Org.
El Salvador	Rad. Schools	–	RA	–	–	L/1°2°	X	–	–	–		–
Honduras	Rad. Schools	1962	RA	–*	–	L/1°	X	X	–		[illegible]	[illegible]
	Rad. Progresso	1969	RA	–	–	L	X	X	–	–	[illegible]	
Guatemala**	Rad. Schools	–	Native Indian Ladino pop.	–	–	L	X	X	–	–		–
Mexico	Tarahumara	1957	Tara prim. child.	46	1081	prim. to 4th grade	X	X	–	X	–	[illegible]
	Huayacocotla	1964	Indian RA	80	2000	L	X	X	–	–	–	[illegible]
Nicaragua	Rad. Catolica	1966	RI	67	2000	L	X	X	–	–	–	[illegible]
Panama	CEPAS	1969	RI	50	470	L	X	X	–	–	[illegible]	
	Rad. Hogar	–	RI	–	–	L	X	X	–	–	–	
Paraguay***	Sch. Soc. Comm	–	–	–	–	–	X	–	–	–	–	
Peru***	Rad. Onda Azul	–	–	–	–	–	X	–	–	–	–	
	Rad. 800 Hullaya	–	–	–	–	–	X	–	–	–	–	
Venezuela	IVT	planned for 1973	RI	–	–	L	X	X	–	[illegible]	[illegible]	[illegible]

*White (1972) makes no information available on numbers of centers or students in his summary.
**Guatemala has six separate stations with groups of students; no numbers available (Gomez, 1971).
***Information not available from OSAL (1972) but from Musto (1971) p. 153.

Key: PT = paid teacher

wider potential audience is open to the informal learning that often comes to them via radio and other influences in their environment.[13]

A fourth category of effort would have to be the quality of work performed. Such a consideration would include important operational aspects of radio schools like (1) its ability to plan and clearly define objectives; (2) the quality of software (radio programs, printed materials, audio-visual aids, etc.); (3) management (including supervising groups and getting feedback from them); (4) financing. All of these are vital elements in producing an effective radio school product. Although relatively little public evidence on the quality of the operation and the product exists, what does exist[14] seems to indicate that major improvements could be made here.

In summary, the evidence concerning effort for the radio schools in Latin America is certainly impressive. There has been a steady increase in growth, over the past 10 years especially. The concern for quality is manifested for example in the meeting of the radio schools in 1972[15] and the more recent formation of an international body, ALER

---

13. S. Scribner and M. Cole, "Cognitive Consequences of Formal and Nonformal Education," Science, Vol. 82 (Nov. 1973), pp. 553-559; Coombs et al., New Paths to Learning, op. cit.

14. R. White, The Adult Education Program of "Accion Cultural Popular Hondurena": An Evaluation of the Rural Development Potential of the Radio School Movement in Honduras, St. Louis; St. Louis University, Oct. 1972, 2 vols.; S. Musto et al., Los Medios de Comunicacion Social al Servicio del Desarrollo: Analisis de Eficiencia de "Accion Cultural Popular - Radio Satatenza" Colombia, Bogota: ACPO, 1971; S. Schmelkes de Sotelo, The Radio Schools of the Tarahumara, Mexico: An Evaluation, Stanford: Institute for Communication Research, 1973; P. Spain, A Study of San Luis Potosi, Mexico, Stanford: Institute for Communication Research, 1973.

15. OSAL, op. cit.

(Association of Latin American Radio Schools). There is [illegible] of information about the quality of this effort but some [illegible] to serious shortcomings in planning, management and financing as well as software quality. The radio schools have continued to show a record of growth in the efforts they have been making. What about the performance of the schools?

B. Performance

The difference between the criteria of effort and performance in the evaluative task is often a critical one. To ask a project, "What have you done?" will bring a barage of statistics [illegible] programs made, people enrolled, budgets, etc. To ask a project "What have you accomplished?" is quite another thing and brings anxiety and excuses from project directors. This is why evaluation is often done by outside groups who will not try to justify the administration. Ideally, a critical self-evaluation is what projects could most profit by. How have the radio schools performed?

There have been a growing number of evaluative studies asking this question.[16] The problem has been in goal definition. Evaluation is often an uncomfortable activity. It involves the researcher in finding out what the goals of a project are and then examining the evidence as to whether those goals have been accomplished. There seem to be two common problems for radio schools regarding performance or accomplishment: (1) the goals of the projects are often so vaguely stated that it is difficult to pin them down to see whether they have been achieved or not (if a radio school proposes to create the "new Latin American man" among its audience, the task of defining the goal and estimating its

---

16. The best of these have already been cited above: White, Musto, Schmelkes, and Brumberg.

for development; (2) human promotion or education of the whole man; (3) integration of the campesino into society; (4) organization and development of the community especially by participation in local organization; (5) productivity of the campesino in his agricultural work; (6) spiritual development of the campesino in his personal life.[18] The problems with the performance question are obviously two: choosing which of the goals to evaluate performance on and explicating the general terms of the goal in such a way to find appropriate and observable indicators. Both are difficult tasks but there have been an increasing number of researchers who have attempted both.

Briefly, how have some of these goals been examined by researchers and what have they concluded about performance? Motivation: DeKadt,[19]

---

17. OSAL, op. cit.
18. Musto, op. cit., gives a summary from official ACPO documents.
19. E. DeKadt, Catholic Radicals in Brazil, London: Oxford, 1970.

small and would be discouraging were it not that the Honduran project was attempting to create a leadership for a movement to mobilize rural people. On this score, White observes that perhaps the impact was small but indirect (i.e. on leaders who would later reach people).[20] Schmelkes de Sotelo evaluated the educational accomplishments of a radio school's effort among Tarahumara Indians of Northern Mexico. She found that for the few Tarahumara who got through a fourth grade of the radio schools, learning was comparable to regular primary schools. However, she also showed that educational achievement meant almost certain loss of the best students from their own native communities to the larger urban centers.[21] Others have tried to evaluate educational performance with the conclusion that it is by no means as simple as it seems.

---

20. White, op. cit., pp. 56 ff.

21. Schmelkes de Sotelo, op. cit.

Yet if radio schools are promoting the training of people in useful learning skills, they must be able to answer the performance question of whether they are achieving something or not.

Integration of the campesino into society: One of the great problems of the radio schools and similar projects is a basic one of the development model that underlies their attempts at social change. The relationship of the campesino to his society is a critical one. If the campesino is exploited and the attempt of those working with him is to help him overcome his exploitation, then some explanation of who or what is exploiting him is demanded. If the goal is to change the unjust structures of society as is often stated by ACPO and other radio schools, even if it is indirectly through education, then integrating him into that society may not be the best strategy. There are sharply divided opinions here. DeKadt, Musto, and Schmelkes would not think the goal is correct and would go beyond evaluation to a critique of the philosophy behind the radio schools themselves. The difference in attitude is perhaps best illustrated by the titles of the two readers that the Brazilian radio schools of MEB published just before and just after the military coup of 1964. The first was called Viver é Lutar (To live is to struggle) and the second, Mutirão (cooperation); the titles emphasize the difference of approach. The first was militant, the second conciliatory. There is little consensus on what exactly the goal of integration means, much less any good measure of its performance. Fundamentally, the question may come down to a simple one about performance of radio schools: Have the radio schools helped the campesino to be any less exploited?

Organization and community development: Another problem manifests itself when the question of participation of radio school people in community organization and development is concerned. Again it is as much

a problem of the goal as in judging performance concerning it. ACPO has encouraged its students to participate in other community organizations but has stayed out of organizing or mobilizing communities itself. The radio schools in Brazil and Honduras, on the other hand, have called themselves "movements" and have attempted to mobilize the campesino. The criteria for judging performance on this goal would be quite different in the two cases. In the cases where radio schools see themselves as limited to strictly education, one would have to examine, for example, how much being a member of a radio school encouraged a campesino to join local community organizations. Musto and Brumberg did not really examine this question. Vega and Keeler's evidence shows little or no relationship between the two.[22] White has most closely examined the other side of the question and has evidence to indicate that the Honduran radio school movement has had some impact on creating communities that are more dynamic.

Productivity: This is an important goal for agricultural people but it has not been subject to much rigorous evaluation among radio school projects. If radio schools are teaching skills and attitudes that lead the campesino to be a better farmer, then the test of performance would be to ask if he is producing a larger crop (and if this crop finds a market to increase his income). Where some measure of performance has been attempted, the problem of proper evaluation design arises. Evidence often shows that it is the better off campesino who both is a member of a radio school and has larger crop yields. But it is also true that he is relatively better educated, has higher status

---

22. E. Vega and H. Keeler, "Evaluation of the Radio Schools Program for Basic Literacy in Tabacundo, Province of Pichincha, Ecuador," Centro de Motivacion y Assesoria (CEMA), Quito, 1971 (mimeo), pp. 55.

in his community and is generally better off than others.[23] It is difficult to establish causal direction in radio school projects, whether the relatively better off people in a community are able to take advantage of the radio schools as they do of most community resources or whether the radio schools create a better educated, more modern and productive campesino.

Spiritual development is a dimension that is most difficult to judge and has been left to church leaders to deal with. The measures of performance on the other goals, however, have been attempted although no final answers are available. The definition of the goals themselves have often been in dispute. Musto, in a critical evaluation of the ACPO project in Colombia, probably summarized the feelings of many by admitting that despite all the criticism of ACPO it still had accomplished something positive during its twenty years of existence. The question, however, is not whether radio schools accomplish anything but whether they are making a serious difference in the solution of the problem addressed.

C. Adequacy

The third criteria of evaluation, adequacy, asks an even more difficult question of radio schools. It is not whether the radio schools have done something or made some change, but how relevant that performance is, relative to the problem. White[24] asked the adequacy question in his study of the Honduran radio schools not only by estimating the total number of people made literate in 10 years (certainly an accomplishment in itself), but also by comparing this with the total

---

23. E. Rogers, J. Ascroft, and N. Roling, Diffusion of Innovation in Brazil, Nigeria, and India, East Lansing: Michigan State University, Department of Communication, 1970.

24. White, op. cit., pp. 56.

number of illiterates. He found that during the 10 years about 7,000 people had been affected decisively in their literacy through radio schools. When this is compared with the approximately 500,000 illiterates in Honduran rural areas, we can see that the program has had relatively little impact. If radio schools in Honduras had for their main goal the teaching of literacy during the first decade of their existence, their performance was hardly adequate to the task and perhaps some other solution need be sought. The adequacy question may be turned to formal schools in the rural areas of Latin America and a similar answer given. Formal schooling is simply not reaching the vast majority of rural people needing education. It is inadequate to the task and therefore nonformal solutions are being sought.

The problems that the radio schools have focused upon are problems of the rural masses. They are in that way involved in mass goals whether they like it or not, and they will be partly judged on whether their performance reaches a significant number of campesinos. This is not just a question of numbers of people enrolled in programs that was included under effort. Rather it is a follow-on question to performance: If radio schools educate, change attitudes or increase productivity, how many and who are the participants? If the numbers are few and the beneficiaries are those relatively better off campesinos, there is certainly a question of whether the radio schools are adequately solving the problems incorporated into their goals. Schmelkes showed that in a formal school setting, the Tarahumara project reached few of the children with the full benefits of four years of basic education, and even for those who were benefited, they tended to be from better off families and were often lost to the community by migration.

Few projects ever hope to solve a problem completely, but some criterion must be set to judge the level of performance relative to the whole problem. In Brazil,[25] a report on educational radio projects spoke of a potential campesino audience of 40,000,000. In reporting that only 40,000 or 1% of the whole was actually enrolled in the radio projects, the authors demonstrate the gap between need and response. The criterion of adequacy is obviously a relative one that must take into account the time a program has had to grow, and its potential for expansion provided the program can solve certain internal problems. Nevertheless, the question of adequacy is a hard one that needs to be posed of any project after a certain period of trial: will the project help to solve a significant enough proportion of the problem to justify the resources that are put into it, or should some alternative be sought?

D. Efficiency

The question of efficiency is a comparative one. Two comparisons are assumed here: comparing the amount of input (or effort) to the output (performance) and then looking at this ratio across several alternatives for solving the same problem. Cost-effectiveness analysis is usually concerned with the question of efficiency: given a goal to be achieved, what is the most effective and least costly way of attaining it among an array of possible alternatives. Radio is often proposed as one of the most efficient means of achieving educational goals in rural areas both because of its accessibility by large numbers of people and because of its lower costs, especially in comparison with alternatives like television.

The evidence for the efficiency of radio schools is almost wholly lacking because little reliable data on performance exists and even less

25. Instituto de Planejamento Economico e Social (IPEA), Diognostico de Radio Educativo No Brasil, Rio de Janeiro, 1973 (mimeo).

on costs. It is mainly through monetary equivalents like costs in dollars that alternatives can be judged. Thus if two media alternatives like radio and television were to be compared on both effectiveness and costs, it is likely that radio would be more efficient.[26] However, when one is comparing several different educational systems like radio schools to the cultural action centers of Paolo Freire, the question becomes more difficult. Goals often differ and, furthermore, costs have not been gathered in most radio school projects so that viable comparisons are not often possible.

There is an added consideration in looking at alternatives. What is almost wholly absent from the planning literature on media projects is a careful projection of cost and a realistic estimate of performance so that serious alternatives to media might be considered.[27] Whether documents are only produced for public relations or whether project planners are unable to consider serious alternatives to expensive, capital-intensive media projects, there has been a great lack of critical alternative thinking in the planning stages of such projects. As better evaluations are performed on radio school projects, a better estimate of their efficiency may lead to both improvement of performance or serious thought to nonformal education alternatives that might not employ radio as a primary instructional resource.

Another aspect of the efficiency question among radio schools is the definition of audience. Cost per student will vary greatly if only the more restricted audience of enrolled students is counted. The

---

26. For a discussion with some cost data, cf. D. Jamison with S. Klees, The Cost of Instructional Radio and Television for Developing Countries, Stanford: Institute for Communication Research, 1973.

27. M. Carnoy, "The Economic Costs and Returns to Educational Television," in Coladarci and Arnove (eds), op. cit., Ch. IV, pp. 103-174.

problem with counting the unorganized listening audience, presumed to be many times larger than those persons working in organized listening groups, is that there is almost no way to really evaluate the impact on this group. If one assumes no impact beyond the students enrolled in groups, then one disregards considerable evidence of large radio listening audiences in rural areas and evidence of media effects on such audiences. On the other hand, evaluations are based on evidence, not assumptions, of effectiveness. The answer must include better audience research that would give estimates of both size and degree of message effectiveness among the unorganized audience. Once this is included, more realistic comparisons can be made between radio schools and possible alternatives.

F. Process

The final category of evaluation is the most difficult to study. The question to be answered is why radio schools succeed or fail. It is the most critical question because it helps planners and project managers to improve radio schools in the future. There is, however, an important element in each radio school project that is unique and often it is this element that has made the difference. Such elements are ordinarily not quantifiable but the evaluation effort is not itself based solely on quantitative measures.[28] Factors of leadership have been among the most important for radio schools. It would be difficult to measure this, but no one acquainted with ACPO can discount the enormous influence of Msgr. Salcedo as founder and leader. Political factors are also of great importance as DeKadt documents in the case of the Brazilian radio schools of MEB. Among radio schools where much depends on the volunteered services of large numbers of people, the level of

---

28. McAnany, Hornik, and Mayo, Studying Instructional Television, op. cit.

enthusiasm and belief among volunteers is fundamental to survival. All of these factors enter into the process of goal achievement and help to explain the relative success or failure of radio schools. Radio schools obviously differ in terms of these factors. In planning each project, these contextual factors have to be taken into consideration.

Other questions of process are more easily quantified if not more easily studied. There is real need to isolate those other factors in the learning process of rural people to be able to provide better materials or more appropriate organization of instruction. Radio school studies, therefore, have confined themselves to answering mostly questions dealing with effort (how many students, what quality of program, etc.) or performance (what was taught, how were people changed) but little about adequacy or efficiency (often because of lack of cost data). There is, nevertheless, a gradually accumulating body of data that will begin to allow questions about process to be answered. There are, in addition, two other favorable factors. One is that there is a growing collective experience among radio school projects that could be analyzed to provide better insight into how the radio school idea might be made to work more effectively. Second, there seems to be a growing attitude of critical self-awareness on the part of the radio schools that would favor evaluation studies that include questions of process.

II. The Future of Radio Schools for Nonformal Education

An evaluation perspective on the radio schools can serve a double function: looking over past performance and building a better program for the future. Evaluation is often accused of being negative, of finding fault instead of helping to improve. There are three general

goals for evluation, as we mentioned above: to improve projects through feedback (formative evaluation); to judge projects' success or failure (summative evaluation); to provide for planning needs (planning research or evaluation). In some sense all three goals can be positive rather than negative for the radio schools. The usefulness of doing more evaluation of radio schools rests on one important assumption. Let us briefly examine these to see how this research might be made useful for the benefit of radio schools.

There is an important underlying assumption that the radio school model is a viable and useful instrument for serving nonformal education needs of Latin America. Is this correct? There is some positive evidence to support this assumption as well as some negative. No generalization is valid for all radio schools since each is the adaptation of a general model to local conditions. Nevertheless, some estimate can be made about the model.

The positive features of the radio school approach in Latin America for nonformal education are several. First, radio schools have historically always focused on the campesino audience in rural areas where learning needs are greatest. Second, several features of their approach fit in with important learning principles: the group learning approach; multi-media instructional methods (radio, printed booklets, newspapers, and audio-visual aids) coordinated around learning objectives; supervision by a local person who can relate to and motivate the learning group. Third, the radio schools have been built on an already existing and important structure in rural areas, the parish church. The priest is an important legitimizing factor that has helped radio schools survive in the rural areas where the power structure is generally oppressive to campesinos. Fourth, the radio schools by being mostly

private and church sponsored have been free of identification with the government and its policies.

There are, however, some negative features that also must be faced regarding radio schools. Several have already been mentioned above. First, the heavy emphasis on literacy seems to be a misdirection of effort. There is a much wider range of information/education concerning rural areas that may well need to precede literacy and may be best conveyed by radio and through the monitor of listening groups who presumably would be literate. Second, radio schools often do not involve themselves in community development, claiming to be strictly educational. The Freire critique of such a "banking" kind of education would suggest that the education learned in radio schools be applied to real problems of campesinos. There is a tension here, of course, between attacking real social problems and remaining in business. The experience of MEB in Brazil suggests that careful consideration of consequences of social action are necessary. Third, until now the radio schools have remained relatively small and their impact on rural life limited. This may be partly due to lack of proper financing but also may come from poor planning and management of the existing projects. Fourth, radio schools may have lost their charisma for real change in rural life and may be seen only as another half-hearted attempt by the power structure (this time the church and not the government) to give campesinos the minimum of social services so that they are satisfied with their position in society. There is some evidence, moreover, that even in rural areas the relatively better off are the most likely to benefit from such services. Finally, the major efforts of radio schools seem to be focused on the mass media messages without giving sufficient attention to feedback from rural groups to better reflect their needs and interests in

the messages.

The future of radio schools in Latin America will partly depend on their ability to respond to the real needs of campesinos. If their goals incorporate these needs, as they should, then the radio schools should play a vital part in the future of Latin America. However, even if there is a real need, radio schools may have to change to meet those needs. An ability for critical self-examination and evaluation is one of the primary tools for improvement. Evaluative research can help in this task by posing difficult but important questions concerning effort, performance, adequacy, efficiency, and process. Radio school leaders and planners should be willing to answer these questions. They should also have the courage to act upon the results and make necessary changes in their efforts so as to make the radio schools help meet the needs of education and change in Latin America.