EDUCATIONAL RADIO: AN APPROACH TO INFORMATION DISSEMINATION TO FARMERS IN RURAL COMMUNITIES.

by

Ndubuisi Goodluck Nwaerondu.

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ABSTRACT.

The purpose of this study was to investigate how educational radio has been used to disseminate agricultural information to farmers in rural communities; and to recommend appropriate guidelines for its potential uses in the agricultural extension services of Nigeria and other developing countries. The study was conducted in Manitoba, Canada between October 1985 to August 1986.

The study employed descriptive qualitative methodology and the research design included two data collection techniques: Structured in-depth interviews and review of the literature. The sample consisted of fifteen communication experts in Manitoba who were interviewed to ascertain the views and practices of broadcasting information to farmers in Manitoba rural communities. The interview data were summarized, returned to the participants for verification and qualitative validation, and then analyzed using the procedures and variations of content analysis.

The major findings of the study indicated that there are two leading purposes of disseminating information to farmers in Manitoba rural communities; and that the interviewed Manitoba communication experts do not use radio to educate but to make farmers aware, to remind and to provide

information. With respect to the how, the study revealed that Manitoba communication experts: (1) plan radio programmes cooperatively and sometimes, in consultation with the target audience; (2) produce radio programmes by following four most important steps; (3) deliver information by unconsciously following the good folklore practice of 'Introduction-Content-Summary'; and (4) evaluate radio programmes informally but with orientation towards feedback.

In terms of developing countries, the study confirmed McAnany's five strategies of use for radio. These strategies have been used extensively in the agricultural extension services of many developing countries. The how or strategy of these uses depended upon many factors and attributes. Because of these factors and attributes, it was concluded that any potential guidelines for educational uses of radio in the agricultural extension services of a developing country has to be culturally bound, politically bound, contextually bound, purposely bound, needfully bound and organizationally bound; and that any recommended guidelines must be tentative and subject to adoption, modification and adaptation to each developing country's circumscriptions.

Based on the findings and conclusions of the study, a framework and some recommendations for educational uses of radio in the agricultural extension services of Nigeria and other developing countries were formulated. Finally, suggestions were made for further research.

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DEDICATED TO

MY MOM & DAD

NMANWANYI CHRISTIANA

&

NWAERONDU P. ISAIAH

U K A S O A N Y A .

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Chapter I

INTRODUCTION AND STATEMENT OF THE PROBLEM.

> The drums were still beating, persistent and unchanging. Their sound was no longer a separate thing from the living village. It was like the pulsation of its heart. It throbbed in the air, in the sunshine, and even in the trees, and filled the village with excitement.
> - Chinua Achebe Things fall apart, 1958.

> For it is the special glory of radio that it transcends boundaries, annihilates distance and creates a stronger sense of national unity and international brotherhood.
> - Canadian Broadcasting Corporation, 1941.

1.1 OVERVIEW.

The mission of this study was to investigate how educational radio has been used to disseminate agricultural information to farmers in rural communities; and to recommend appropriate guidelines for its potential uses in the agricultural extension services of Nigeria and other developing countries.

The data reported in this study were collected in the province of Manitoba, Canada, during January, 1986. The study employed descriptive qualitative methodology.

The researcher anticipates that the results of this investigation will assist to provide a conceptual framework

for the educational uses of radio in the agricultural extension services, especially, of developing countries. Secondly, that the recommended guidelines will be useful for the agricultural extension services of Nigeria as well as other developing countries.

1.2 ORGANIZATION OF THE STUDY.

The purpose and plan of this study is delineated in chapter I. Specifically, chapter I is used to give an overview and background to the study, to provide the statement of purpose and conceptual framework for looking at the problem under consideration, to spell out the significance of the study, to identify the problem and provide rationale for the chosen methodology, to specify major underlying assumptions and to define the main terms used.

Chapter II is used to review the related literature. In chapter III, the methodology employed in soliciting participants, in designing and testing the structured interview questions, in collecting data and in analyzing the collected data, is described.

Chapter IV is used to provide a summary of each interview. Chapter V is used to provide a collective general summary analyses of the interviews. In this chapter, the opening section is used to identify the procedures and

biases involved in carrying out the analysis. The succeeding sections of the chapter are used to describe the backgrounds of the respondents, the purposes and plan of educational/information radio, how radio programmes are produced, delivered, evaluated and the problems encountered during these processes; and the respondents' recommendations for educational uses of radio in the agricultural extension services of Nigeria, and other developing countries.

Chapter VI described the processes of five selected projects from developing countries. Finally, chapter VII is used to provide a general summary of the study, namely: A summary of the design and procedures, a summary of the major findings and conclusions. The last three sections of the chapter is used to provide a framework and recommendations for educational uses of radio in the agricultural extension services of Nigeria, and other developing countries; and recommendations for further studies.

1.3 BACKGROUND TO THE STUDY.

Perhaps, nothing is more important to national or rural development than the rapid transfer of useful ideas and information from one person to another. The dissemination of ideas and information may be affected by many factors, but people do constantly learn about things that are taking place around them through the communication systems (Effionayi, 1973). In Nigeria as well as other developing countries, the dissemination of useful ideas and information

can be affected by several factors such as age, education, culture, languages or dialects, and the social systems.

In 1974, less than five percent of the developing countries' total hours of radio programming were defined by UNESCO as educational (Gunter & Theroux, 1977, p.288). In Nigeria, particularly, all the radio stations "stay on the air for about eighteen and half hours a day", but only about two hours of broadcasting programmes per day are "specifically meant for rural communities" (Moemeka, 1978, p. 200). Moreso, the Nigerian Broadcasting Corporation (NBC) "reaches every nook and corner of the regions" (Erinle, 1965, p. 9),

Further, in the developing countries, nearly seventy percent of the population 'depend directly upon agriculture for their living' (Coolidge, 1983). In 1976, the estimated population of Nigeria was about seventy million, of which about eighty percent are in the rural areas and engaged in subsistence agriculture (Osuhor & Osuhor, 1978). Most of these people cannot read and write; the estimated literate section of the society was twenty-six percent in 1973 (Osuhor & Osuhor, 1978, p. 63; Omolewa, 1984, p. 61).

According to Moemeka (1978),

> a large proportion of farmers, petty traders, ... possess transistor radios, however, the broadcasting company has not made use of this situation for promoting rural education. (p. 200).

Since about eighty percent of Nigeria's population live in rural areas, engaged in subsistence agriculture, and most are illiterate, it appears that the promotion of rural education as well as the education of rural farmers is a necessity in Nigeria. Fortunately, "a large proportion of farmers, ..., possess transistor radios," the Nigerian Broadcasting corporation can reach them, but has not done so educationally. Therefore, the promotion of rural education and the education of rural farmers should be given a priority, especially if Nigeria intends to increase its economy, productivity, as well as the literacy level of the society.

With the economic and social development concerns focused on solving farming problems among the peasant farmers in Nigeria, Effionayi (1973) suggests that:

> specific communication systems are needed that are compatible with the literacy levels of rural farmers if they are to derive maximum benefit from the many agricultural programmes which the various Nigeria state governments are pursuing.(p. 32).

Subsequently, educational radio is the most available communication systems which may be 'compatible with the literacy levels of rural farmers.' Therefore, it is necessary to examine and determine how this educational radio can be used to educate or disseminate agricultural information to farmers in the rural communities of Nigeria.

Already,"educational [radio] broadcasting has become a force for progress." (Ezeomah, 1983, p.61). And Schramm and

his colleagues (1967) feel that "a radio broadcast fed into a supervised forum group, with adequate arrangements for feedback from the forum to the source of the programmes, is an effective way to carry development information into a community and encourage innovations." (p. 89). It was on this basis that this study was conceived and deemed necessary.

1.4 STATEMENT OF PURPOSE.

The purpose of this study was to investigate how educational radio has been used to disseminate agricultural information to farmers in rural communities; and to recommend appropriate guidelines for its potential uses in the agricultural extension services of Nigeria and other developing countries. To fulfill these purposes, the researcher attempted to accomplish the following specific objectives.

1. Examine how educational radio is used to disseminate agricultural information to farmers in rural communities of Manitoba, Canada.
2. Examine how educational radio has been used in the dissemination of agricultural information to farmers in rural communities of selected developing countries.
3. Recommend appropriate guidelines for the potential uses of educational radio in the agricultural extension services of Nigeria and other developing countries.

1.5 CONCEPTUAL FRAMEWORK.

This section considers the views adopted in this study toward several aspects of the topic, namely, the society, the processes of using radio to educate or disseminate information and their relationships.

The conceptual stance of the study are drawn from the general systems theory and communication theory. The assertion that the educational processes of using radio is a system in which the subsystems are not interrelated nor interacted but a means in which the recipients are passive is rejected. Instead, it is viewed as a suprasystem with interrelated systems and subsystems in which interaction occurs between the systems and subsystems; and in which the recipients are active and participative. Figure 1 below shows the relationship between the systems and subsystems. In this instance, the process of using educational radio is viewed as "a science of organizing and organization." (Bittner, 1977). This concept views the approach to information dissemination as a planned, integrated complete design for the uses of materials, media and personnel (input) in order to accomplish a predetermined purpose (output); and that each of the component parts of the system (planning, production, delivery and evaluation) are interrelated with each other and provides continuous feedback for modification and improvement of the system. Based upon the above concept, it is believed that a well

planned, designed, produced and coordinated educational radio programmes with interrelated systems and subsystems will accomplish its predetermined purpose.

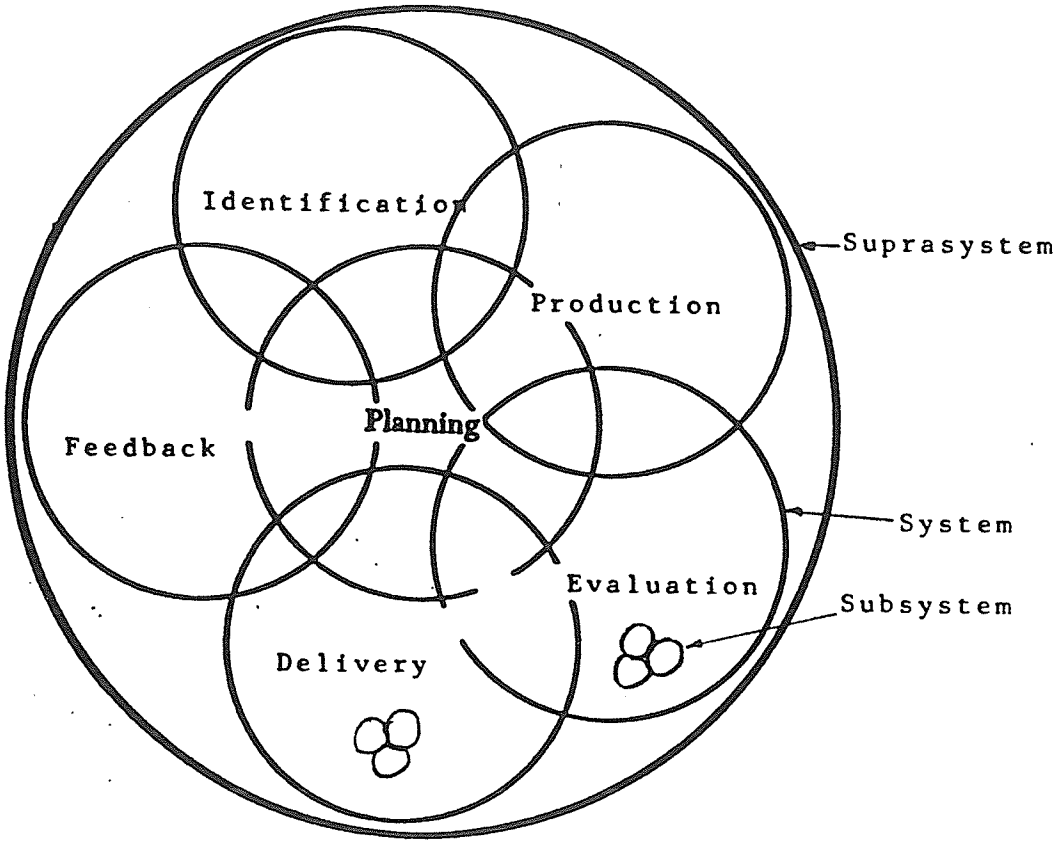

Figure 1: Systems-Subsystems Relationship.

Secondly, the concept that communication in general and educational broadcasting in particular is a one-way process of 'sender-message-channel-receiver', and that learning occurs through this process, is rejected. Instead, it is viewed as an interactive and participant oriented multidirectional phenomenon with no distinguishable beginning or ending. It moves in a spiral form and provides

continuous learning, feedback, modification and improvements of the communication process. In the former, it is believed that information is transmitted and acquired without retention while in the latter, learning occurs with retention.

Finally, the concept that the individual, a community or society and the reality they experience is determined by what they hear, see, and touch; and conversely, that what they hear, see and touch determine how they will think and behave is rejected. It is believed that how an individual, a community or society experience such reality (e.g. whether they see it with a binocular or optical vision) will determine its acceptance, adoption or rejection, and the modification of behavior. This concept strongly contends that the reality an individual, community or society experiences is not solely determined by what they see, hear and touch but also, how they see it, hear it and touch it.

For the purpose of this study, what is most important is the set of concepts and basic framework for conceiving of organizing and organization of educational radio projects and programmes. Hence, the processes of using radio to educate or disseminate agricultural information can be conceptually recognized as a suprasystem with systems and subsystems. The systems, in this case, are the various phases such as planning, production, delivery and evaluation that are carried out within a suprasystem; while the

subsystems are the different activities that are performed within the system. Applying this scheme to the processes of using radio to educate and disseminate information, the researcher was able to develop a set of structured interview questions for the study.

1.6 STATEMENT OF THE PROBLEM.

1. Based on the experiences of selected agricultural extension agents/communication experts, how do the agricultural extension services of Manitoba, Canada use radio to educate or disseminate agricultural information to farmers in the rural communities?
2. According to selected literature, how do the agricultural extension services of developing countries use radio to educate or disseminate agricultural information to farmers in rural communities?
3. Considering the educational problems and diversity of Nigerian people and culture, how can Nigeria (and other developing countries) use radio to educate and/or disseminate agricultural information to farmers in rural communities?

1.7 SIGNIFICANCE OF THE STUDY.

Although there have been many studies on the educational uses of radio in both developed and developing countries, few have attempted to place these events in a larger theoretical context. Furthermore, most writers seem to believe or think that the uses of educational radio do not follow any general organizational construct (Coobs, 1974; Byram & Kidd, 1983; Kidd & Etherington, 1978). It is the researcher's belief that this study will contribute to the identification of a conceptual framework of how to use educational radio to disseminate agricultural information to farmers in the rural areas of Nigeria, and other developing countries.

The decision to focus this study on the province of Manitoba, Canada on the one hand, and some selected developing countries on the other hand, is based upon three premises. First, this province and countries have a variety of experiences in the educational utilization of radio in the agricultural extension services. The extent of these uses and how they are being used is of great interest to the researcher. Second, Nigeria is one of the developing countries of Africa where the illiteracy rate stands at about eighty percent (Omolewa, 1984); and where about eighty percent of its population are in the rural areas and engaged in subsistence agricultural (Osuhor & Osuhor, 1978). The experiences, procedures and useful outcomes of Manitoba and

the selected developing countries should provide useful data for this study. This data will, in turn, contribute to the identification and recommendation of appropriate guidelines for the potential uses of educational radio in the agricultural extension services of Nigeria. Third, the pragmatic fact that the researcher is located in Manitoba, Canada and could not afford to travel to the selected developing countries for live interviews. However, it is hoped that the researcher's personal experience and knowledge of Nigeria, the experiences of selected Manitoba communication experts in Manitoba and in some developing countries, and the findings from the selected literatures from developing countries, supplied sufficient data and evidence to attain the stated objectives of the study.

1.8 METHODOLOGY AND RATIONALE.

This study employed a descriptive qualitative methodology. It is an accepted practice that how a study is designed and conducted should be determined by the purpose of the investigation (Sowell & Casey, 1982, p. 37); and the use of information to be derived (Henderson et al., 1983). Descriptive qualitative methodology is used for studies in which researchers seek explanation as their goal (Sowell & Casey, 1982, p. 37); and the development of knowledge of a particular area of interest as their objective (Best, 1977, p. 118).

The statement of the problem and purpose of this study suggests a descriptive qualitative methodology. Since the researcher is seeking explanation of how radio is used, the descriptive approach seems more appropriate. Further, a descriptive study is "concerned with conditions or relationships that exist, opinions that are held, processes that are going on, effects that are evident, or trends that are developing." (Best, 1977, p. 116). In this study, the researcher is especially interested in the opinions that are held, processes that are going on and the effects that are evident in the dissemination of agricultural information, using radio.

Descriptive study is not generally directed toward hypothesis testing (Ary et al, 1972, p. 286; Isaac & Michael, 1978, p. 18), and "does not require any manipulation of variables" (Sowell & Casey, 1982, p. 37). Since this study is not testing any hypothesis nor manipulating any variables, it becomes appropriate to employ a descriptive qualitative methodology. Further, descriptive data are usually collected through a questionnaire survey, interviews, or observation (Gay, 1981, p. 153). This study utilized structured in-depth interviews and literatures to collect data; and hence, qualifies itself as a descriptive qualitative study.

1.8.1 Sources.

This study employed two techniques in the collection of information: structured in-depth interviews and review of the related literature.

1. Structured Interviews: In order to obtain human viewpoints, the researcher conducted a series of structured interviews with the agricultural extension agents/communication experts in the province of Manitoba, Canada.
2. Review of the Related Literature: This attempted to include relevant and related publications, journal articles, projects/programmes evaluation reports and dissertations available at the University of Manitoba, and other Manitoba libraries. Publications from UNESCO, World Bank, and United Nations were useful and major source for the review. Information and some publications were collected from other agencies such as Canadian International Development Agency (CIDA), Canadian University Services Overseas (CUSO), Canadian Association for Adult Education (CAAE), Manitoba Department of Agriculture, and through the University of Manitoba interlibrary loan services.

1.8.2 Population and Sample.

A population is the "group to which the researcher would like the results of a study to be generalizeable." (Gay, 1981, p. 434). For this study, the population includes all individuals (communication experts) who are using, or intend to use, radio for education of illiterate and neo-literate adult farmers and/or for dissemination of agricultural information to farmers in rural areas.

A sample is the "number of individuals selected from a population for a study." (Gay, 1981, p. 435). The sample for this study were fifteen agricultural extension agents/communication experts who have used radio for information dissemination in Manitoba, Canada. These agents/experts possess a wealth of experience as information disseminators, and some were currently involved in the dissemination of agricultural information, using radio. Former agents of the Canadian Farm Radio Forum and school broadcasts were included.

To identify the sample for this study, a list of the agricultural extension agents/communication experts in Manitoba, Canada, was provided by Vern McNair, Director of Communication, Manitoba Department of Agriculture. Secondly, names of former Canadian Farm Radio forum and school broadcasts were supplied by Jim Rea of the Canadian Broadcasting Corporation (CBC) and Jack Giles of Ducks

Unlimited respectively. It is anticipated that the results of this study will enable the researcher to recommend appropriate guidelines for the potential uses of educational radio in the agricultural extension services of Nigeria and other developing countries.

1.8.3 Instrumentation and Validation.

A structured interview guide was developed for this study. An interview guide "indicates what questions are to be asked and in what order, and what additional prompting and probing will be permitted" (Gay, 1981, p. 166). The guide ensured consistency in the collection of data. It was validated through a pilot test as well as a field test (see design and procedures). The content of the guide reflected the problem questions and the specific objectives of the study.

1.8.4 Data Collection and Analysis.

The interviews were administered in person by the researcher. With the aid of the interview guide, the researcher recorded the data (information) manually as well as on a magnetic cassette tape.

A variant of content analysis, the objective, systematic, and quantitative description of the manifest content of communications (Sax, 1979; Gay, 1981), was used for this

study. The purpose of content analysis is to describe the practices or conditions; and to discover the relative importance of, or interest in certain problems. (Best, 1977). In this study, the researcher discovered the practices and conditions of disseminating information to farmers in rural communities; and described "the relative importance" of these practices and conditions as they may apply to the Nigerian and other developing countries' situation. Hence, a variant of content analysis was the most appropriate method of analysis for this study.

1.8.5 Assumptions.

"An assumption is any important 'fact' presumed to be true but not actually verified." (Gay, 1981, p. 71). Based on the above definition, the researcher assumed that:

1. The materials - books, journals, dissertations, etc. - used for this study were written by people who were directly involved in those projects/programs, especially, in developing countries.
2. Description of information obtained from the interviews and literatures will be adequately free from observer bias.
3. The problems encountered in disseminating information to farmers in rural areas of most developing countries is applicable to the Nigerian situation.

4. The recommended guidelines will be reasonably applicable or adaptable in the agricultural extension services of Nigeria and other developing countries.
5. The identified population and sample in Manitoba is true and complete.

1.9 DEFINITION OF TERMS.

Agricultural Extension: The diffusion of agricultural and related knowledge concerning rural life through demonstrations, extension meetings, directed group study and discussion (Good, 1973, p.229).

Agricultural Extension Agent: See communication expert.

Broadcast: Something sent out by radio or television; a radio or television programme of speech, message, news, music, or the like (Barnhart & Barnhart, 1984, p.252).

Communication Expert (used synonymously as Agricultural Extension Agent): refers to those individuals who, partially or in totality, use radio to spread agricultural information to farmers in rural communities.

Dissemination: The act or process of scattering or state of being scattered widely; a spreading abroad; diffusion; of information (Barnhart & Barnhart,1984, p.609).

Education: The aggregate of all the processes by means of which a person develops abilities, attitudes, and other forms of behavior of positive value in the society in which he or she lives; the art of making available to each generation the organized knowledge of the past (Good, 1973, p. 202).

Educational Broadcast: Any programme intended primarily to present an educational message (Good, 1973, p.71).

Educational Extension: Organized programmes of education offered to students and other citizens away from the campus; includes formal classes in various communities at night or on saturdays, radio and television programs, lectures, demonstrations, and other forms of instruction (Good, 1973, p. 230).

Extension Agent: A change agent; One who assists farmers in carrying on educational programmes normally to improve rural life; One who supplies farmers with relevant information and in turn listens to them (Good, 1973).

Farm Radio Forum: A group of neighbors who meet once a week during the Farm Forum season (from November through March), to listen to the National Farm Radio Forum broadcast and to study and discuss the topic of broadcast. The Forum reports its conclusions and may also follow up with other action (Ontario Archives, 1953).

Information: Knowledge given or received of some fact or circumstance (Barnhart & Barnhart, 1984, p.1084); the act of animating or inspiring; training, discipline, instruction; communication or reception of knowledge or intelligence (Webster, 1966, p.1160).

Innovation: The introduction of a new idea, method, or device in the rural areas, and in the agricultural extension services; promotion of new ideas and practices in education and teaching (Page & Thomas, 1977, p.175).

Illiteracy: Complete inability to read and write one's native dialect, as well as other languages; deficiency in cultural knowledge (Barnhart &Barnhart, 1984, p.1052).

Neo-literate: Someone who is newly literate, that is has only recently gained basic literacy skills; a person who recently acquired a complete ability to read and write.

Programme (used synonymously as program): A brief outline or explanation of the order to be pursued or the subjects embraced in a public exercise, performance, or entertainment; a prospectus, or syllabus (Webster, 1966, p. 1812).

Radio Forum: A radio programme adapted to the discussion of current problems in which speakers present prepared papers, after which members of the studio audience participate by asking questions, raising objections, etc. (Good, 1973, p.466).

Rural Community: Rural Community: The people in a local area who live on dispersed farmsteads; a village of less than 2,500 population that forms the center of their common interest (Good, 1973, p.504).

Rural Development: The process of raising the standard of living and the quality of life in areas of agricultural production.

Rural Education: Those phases of education which deal with the peculiar conditions, opportunities, and problems of people on dispersed farmsteads or villages of less than 2,500 population; an organized body of knowledge and

theory dealing with the principles and practices of learning and teaching in rural communities (Good, 1973).

Chapter II

REVIEW OF RELATED LITERATURE.

2.1 INTRODUCTION.

The purpose of this chapter is to set the current research into perspective to show the 'state-of-the-art' of the topic. This means to review previous research and evaluate what they have or have not accomplished to solve the present research problem. To achieve this objective, the chapter reviewed the historical development of radio, formal and non-formal educational uses of radio, and the impact of educational/information radio in developing countries. A summary and implications of the review is provided.

2.2 THE BEGINNING: HISTORICAL UNDERPINNINGS.

The concept of "radio" evolved almost 110 years ago when a German physicist named Heinrich Rudolph Hertz utilized an 1864 theory of James Clerk Maxwell that electrical impulses travel through space at the speed of light. Hertz discovered the "electromagnetic waves" passing through the air. He used an oscillating "spark" to demonstrate the production and transmission of these 'electromagnetic waves' which were then received by a special grid a short distance away. From

this experimentation, the name Hertz became synonymous with "radio frequencies." Such terms as "megahertz" and "kilohertz" which represents a position on the electromagnetic spectrum are named after him (Blakely, 1979; Bittner, 1977).

About ten years after the application of Hertz's discovery, an Italian inventor named Guglielmo Marconi furthered the principle of 'electromagnetic waves' by developing a device called the "wireless." This device was capable of receiving 'spark' signals over long distances. By 1898, the 'wireless' transmitted signals from the "Eiffel Tower" in Paris to receivers across the Bristol Channel in England. In December 1901, Marconi gave the "transatlantic transmission" which marked the era of radio and broadcasting (Bittner, 1977; Hall, 1971)

With the development of equipment to send voices via the wireless, the concept of the 'radio' was born. In 1909, Dr. Charles David Herrold constructed a small transmitter and sent newscasts to friends he provided free receiving sets. From then onwards, the medium and its hardware is marked with exciting new development. During the 1920's, the invention of the triode vacuum tube amplifier became the "magic lamp" of radio, and with the AC plug-in, radio became a widespread household convenience. After the transistor was invented in 1948, radio became even more widespread. Today, through formal and non-formal educational and

information ventures as well as entertainment, radio plays a vital role in nearly everyone's life throughout the world. It is now a highly cost-effective way of educating and broadcasting information throughout the entire world (Blakely, 1979; Ruggles et al., 1982; Sweeney & Parlato, 1982).

2.2.1 Formal Educational Uses of Radio.

Formal education, on one hand, is a hierarchical, structured and chronologically graded system which runs from primary or elementary school to the university (Nyirenda, 1981; Ingle, 1974). Within the formal educational systems in both developed and developing countries, radio has been used variously as the sole medium and as a supplementary medium. These uses depend upon the purposes and needs of each school, country or nation. Although very little research exists on the uses of radio in formal education, the following sections attempt to underpin its historical development and review some of the existing research in both developed and developing countries.

2.2.2 Developed Countries.

In Canada, the interest in educational broadcasting was very high. Experiments were initiated in Manitoba as early as 1925, in Nova Scotia in 1928 and Saskatchewan in 1931. The Nova Scotia Department of Education was the first to

establish planned series of school broadcasts (1928-1929) which was continued and developed into a regular system integrated with the school curriculum of the province (Canadian Teachers Federation, 1956). This school broadcast proved successful.

> School choirs have been heard on the air, teachers and administrators have described the work done in their schools; and thus radio has contributed to a pooling of knowledge and a stimulation of progressive ideas in education. (CBC, 1941, p. 3).

In 1927, an experiment in the use of educational radio was carried out in the schools of Kent, England. The report concerning this experiment concluded with the statement that it had been successful, and that it was apparent that the function of radio was (and still is) to provide imaginary experiences for children on which their own teachers may profitably build. The success of the Kent experiment led the British Broadcasting Corporation (BBC) to establish a regular series of programs to British schools (Wilkinson, 1971).

In 1933, in the United States, the school of the "Air of the Americas" began broadcasting countrywide programmes every school day and continued to do so for many years (Wilkinson, 1971). The aim was to help the nations of North and South America to a better understanding of one another's culture, history and ideals. These programmes proved successful and useful. According to the CBC (1941):

> . . . there [was] evidence that teachers and educators throughout the Dominion but more

> especially in the Province of Ontario and in the English-speaking parts of Quebec, find the programmes of the 'School of the Air of the Americas' useful. Appreciation of these programmes [came] from certain Boards of Education, Home and School Associations, Children's Libraries, the Junior Red Cross and a number of individual teachers. (p.11).

In Nova Scotia and in an effort especially to assist teachers in rural school, a series of daily fifteen-minuted lessons based on prescribed "course of study" was instituted. "These lessons, presented by selected teachers from the schools of the city of Halifax, were well received by teachers in all sections of the province, (especially rural communities) who found them helpful in their classroom work . . ." (CBC, 1941, p.3-4).

In addition to the radio lessons based on the prescribed "course of study", three programmes of a supplementary nature were presented each week. These programmes were designed for reception in all rural, village and urban schools. Schools in New Brunswick and Prince Edward Island, as well as a large adult audience in the Maritimes, listened to Nova Scotia programmes.

In British Columbia, broadcasting to schools started in 1936 with an experiment in "Music Appreciation." In 1938, the first series of school broadcasts on the Pacific network of the CBC was given. During the spring term of 1941, in addition to broadcasts in Music, Social Studies, Languages and Science, an experimental series, entitled 'Art on the Air' was given.

> The result of this attempt to teach art by radio proved most interesting; as was shown by the display held in the Vancouver Art Gallery of the work done by pupils in country schools. This included many free drawings made by children as a direct result of listening to broadcasts. Teachers also displayed considerable interest in the social studies series, "the Road to Democracy," in which basic democratic concepts were dramatized in their historical setting to show the children clearly how they had developed. Each historical drama was followed a week later by a dramatization of the same problem in terms of human behavior as it might concern a group of boys and girls in a modern junior high school. Active class discussion resulted from these broadcasts, leading to an improved understanding of the ways of democracy. (CBC, 1941, p. 5-6).

Following successful experimentations of the past, a group of some 250 lectures were broadcast over the French network during 1941-42, under the name of 'Radio College.' The lessons were designed only to supplement regular classroom work, and to vitalize the pupils' interest through new modes of presentation , such as talks, dialogues, dramatic sketches, musical soloists and ensembles. Each broadcast was divided into two parts, the second half being an application of the first (CBC, 1941; Canadian Teachers Federation (CTF), 1956). The interest in the "Radio College" series by both the school authorities and the audiences were very high. It was ascertained that the broadcasts were heard in the most remote parts of the Quebec Province.

> Radio College has been welcomed enthusiastically in all quarters, and in the educational and general press (CBC, 1941, p. 9).

2.2.3 Developing Countries.

It is not surprising that educational radio has appeared as a dominant instructional and informational medium in developing countries. This is undeviating because of the installed transmitters in local areas which has enabled radio to disseminate information in local dialects. Researchers at the institute for Communication Research of Stanford University have compared the effectiveness of instructional media in various international centres and concluded that 'there is nothing in the research evidence to cast doubt on the proposition that a motivated student can learn from any medium.' (Bittner, 1977, p.48).

From 1958 to 1959, an extensive field study was conducted in Thailand to evaluate students learning from educational radio in schools. The experimenters, representatives of the Ministry of Education, chose schools at random from those receiving the radio programmes. Controls were chosen from those schools most similar to the experimental schools. The second and third grade students were tested on music and social studies; while the sixth and seventh grade students were tested on their ability to understand and write English. The experimenters found the radio teaching approach to be more effective in social studies and music at the second and third grade levels. The results of the sixth and seventh grades English lessons were inconclusive (Xoomsai, 1962).

In 1972, an experiment was conducted on the Mexican Radioprimaria which used radio to expand the three grade primary school course to six grades, using only four teachers. Three teachers controlled the first three grades in the traditional way. The fourth teacher taught grades four, five and six students in one classroom and with the aid of radio lessons. Some educational radio programmes were grade-specific while others were directed to all three grades. The contents of the programmes were taken from the primary school curriculum and related directly to the prescribed class textbooks. Tests were given before and after the broadcasts to a random sample of radio and non-radio sixth grade students. The results indicated that Radioprimaria students gained as much as those who were taught in the traditional way without radio (Spain, 1973).

Although formal research has not been conducted, there are many other developing countries where radio has been used successfully in formal education (Ingle, 1974; McAnany, 1976; Hawkridge, 1977). Some of these are included in the section 2.3: The impact of educational/information radio.

2.2.4 Non-Formal Educational Uses of Radio.

Non-formal education, on the other hand, is any organized educational activity outside the established formal education system which provides instruction/information for various target groups such as adults, young people or both

(Nyirenda, 1981; Ingle, 1974). Historically, radio was not only used for formal educational purposes; it was also used for non-formal education and other information dissemination activities. Such activities include Farm Radio Forum, rural development programmes, agricultural extension and innovative schemes.

In the beginning, the use of radio in non-formal education started in Canada in the late 1930s and spread to developing countries in the early 1950s. The sections that follow reviewed and underpinned the historical perspectives of the Canadian Farm Radio Forum and the non-formal educational uses of radio in some developing countries.

2.2.5 Canada: National Farm Radio Forum.

> Farm Forum is a vehicle that any organization may use for educational purposes. -Ontario Farm Radio Forum, 1953.

The "Farm Radio Forum" began in Eastern Canada in January 1941 as an experiment in rural adult education. Before its beginning, there was a year of experimentation with listening-group programs, and some years of experience with study groups in various parts of Canada (Faris, 1975; Miller, 1966; McKenzie, 1950; Kidd, 1950; Nicol, 1954; Sim, 1954). Before this period, the use of radio for adult education had been tried out in Great Britain, United States and other countries; and "this also played a part in shaping Farm Radio Forum." (McKenzie, 1950, p. 172).

An early experimentation that had a bearing on the development of 'Farm Radio Forum,' was tried out in Ontario in the fall of 1937.

> This experiment demonstrated that a discussion group programme organized around a regular radio broadcast was a technique that promised great possibilities. (McKenzie, 1950, p. 172).

Two other experimental programmes in adult education by radio were tried out on a "bigger scale in 1940," and led directly into 'Farm Radio Forum.' They were 'Inquiry into Co-operation' and 'Community Clinic.' These programmes were made possible by the joint efforts of the "Canadian Broadcasting Corporation [CBC] and the Canadian Association for Adult Education"[CAAE] (Kidd, 1950; McKenzie, 1950; Nicol, 1954).

"Inquiry into Co-operation was a series of broadcasts planned and presented for listening groups" (McKenzie, 1950, p. 173). The broadcasts were on a national network of the CBC and consisted of straight interviews and discussions. Study materials was prepared for each broadcast and mailed to all groups that registered (McKenzie, 1950; Nicol, 1954). Although, Inquiry into Co-operation was a limited programme from the standpoint of both time and radio coverage, the result showed that radio could be used to stimulate discussion groups with some degree of success.

> The audience response to [the] broadcasts was considered sufficient proof of the value and possibilities of using radio to stimulate group discussion,.... (Nicol, 1954, p.43).

'Community Clinic', on the other hand, was a series of twelve broadcasts presented regionally in Quebec by the CBC in cooperation with the Macdonald College Rural Adult Education Service of McGill University. The broadcasts dealt with a variety of "farm problems" and used different techniques (mainly dialogues) on such topics as rural education, nutrition, health, farm youth, marketing and government price control. Again, Nicol (1954) expounds,

> the 'Community Clinic' series was probably more important in establishing working relations between the Canadian Broadcasting Corporation and an organization [CAAE] actively engaged in adult education, in stimulating the organization of listening groups for radio broadcasts, and in increasing the amount of supplementary study material which was available in useful form for rural adult education. (p. 44).

The results of the experiment were reported to the Canadian Broadcasting Corporation, the Canadian Association for Adult Education, and Macdonald College, and "it was directly as a result of the experience gained in 'Community Clinic' that the Farm Forum project was proposed." (Nicol, 1954, p. 44).

In the fall of 1940, as a direct result of the above experiments, plans were made for the first "Farm Radio Forum" series of broadcasts that was transmitted on the Eastern Canada network under the joint sponsorship of the CBC and the CAAE (McKenzie, 1950; Nicol, 1954; Faris, 1975; Kidd, 1950). In the fall of 1941, "Farm Radio Forum" added the adjective 'national' to its title (Miller, 1966); and the Canadian Federation of Agriculture (CFA) came in as a

third sponsor (McKenzie, 1950). On Monday, November 10, 1941, the first official broadcast of National Radio Forum was heard from 9.00 to 9.30 p.m. And 'Monday nights' became the Farm Forum nights. (Schwass, 1976; Faris, 1975; Miller, 1966; Kidd, 1950; Nicol, 1954; Sim, 1954).

The aim of the "Farm Radio Forum" was clearly defined.

> It was agreed that the aim of the series [was] to make people face their problems. It would be unwise to assume that people [were] merely receptive and asking for an advisory service of this kind. We should not tell people what they ought to do, but rather it [was] important to let them find out for themselves what needs to be done. An attempt should be made to make them realize that they must assume responsibility and take action themselves towards a solution of the problems facing them. (Nicol, 1954, p.46).

Correspondingly, Schwass (1976) argued that the broadcasts were designed to do three things:

1. Present authentic, social and economic background material;
2. Translate such material into terms that would appeal to the imagination and interest of farm listeners;
3. Serve as a link between listening groups spread over the wide area .... (p. 43).

The first two years of the farm forum's operation were based on issues raised in the "mythical Sunnyridge farm community" and took the form of dramatization (Faris, 1975). The four major objectives of the forum were expressed by the forum's slogan "Read-Listen-Discuss-Act." Emphasis was placed on the last two objectives as weekly 'listening groups' were encouraged not only to discuss farmers'

problems, but also to take remedial action in their community (Faris, 1975).

> Projects, including promotion of elimination of warble fly campaign, rural electrification, community centres and the development of cooperative medical services and stores were encouraged by the 'National Forum' and [was] often assisted by provincial organization fieldmen who doubled as forum organizers. (Faris, 1975, p. 99).

On the whole, the emphasis in "Farm Radio Forum" was on the forum's slogan "Read-Listen-Discuss-Act." The central question of this section is: what did the "Farm Forum" accomplish? As Kidd (1950) emphasized, through study and discussion, farm people were able to approach their problems more intelligently, and worked together towards their solution. Further, the groups were encouraged to carry out action projects in their own communities.

In support of Kidd, Schwass (1976) noted that:

> Most delegates felt that the forums helped to interpret the farmers problems to the Federation and were effective in developing problems. 'A few, but not very many, expressed appreciation for the value of the forums in developing a strong local organization in the country, based upon action programmes and education, as a means of cementing together the national organization.' (p. 60).

Further, McKenzie (1950) summed up the Farm Forum's accomplishments in rural Canada as follows:

> It has:
> (1) Increased neighbourliness;
> (2) Promoted a better understanding among farmers of the economic and social problems they face;
> (3) Improved national understanding among farmers;
> (4) Given the farmers a voice;
> (5) Encouraged community projects;
> (6) Developed farm leadership. (p. 177).

Correspondingly, the Ontario Farm Radio Forum (1953) pamphlet supported some of the above accomplishments with some additions. It outlined that the 'National Farm Radio Forum' had:

1. Influenced public opinion
2. Increased neighbourliness
3. Been educational
4. Broaden the horizon
5. Led to community projects. (p. 2).

Finally, Nicol (1954) summarized the accomplishments of the Farm Radio Forum and provided the following:

> Some Forum . . . sponsored improvements in school buildings and grounds, purchased new equipment, provided hot lunches, or obtained bus services. (p. 85).
>
> Many Farm Forums . . . sponsored the improvement or the building of community halls or centres and purchased equipment for them. (p. 86).
>
> Six Forum groups sponsored the building of a hospital in Millville district. (p. 88).

In looking at these accomplishments province by province, and Forum by Forum, Nicol (1954) outlined the achievements of each individual forums as well as province wide. Some of these achievements include:

> We[St. Mary's Forum, Magrath, Alberta] gravelled our market road and are working on extension of telephone service .
>
> We [Brockley Forum, P. E. I.] made improvements to the school and grounds. This included painting school, shingling roof and erecting new fence around grounds. (p. 85).
>
> We [Highland Forum of Lion's Head, Ontario] built a new community hall at a cost of $19,000. The building is up and in use. (p. 86).

> We [Lone Star Forum, Manitoba] sent two boys to folk school at Morden.
>
> We [Corn Valley Forum, Saskatchewan] decided among our members to apply for a travelling library. It consisted of 100 books . . . There were no less than 30 books out continuously and once as high as 73 books.
>
> We [Matsqui Forum, B. C.] were co-sponsores with the department of Agriculture in an agricultural engineering field day. (p. 87).

Thus, the accomplishments of the National Farm Radio Forum were virtually unlimited, multidirectional and multidimensional. It ranged from the promotion of literacy and social change to community and rural development; and to educational and agricultural innovations. An intensive overview of these accomplishments can be seen in Nicol, Shea, Simmins and Sim (1954). Canada's Farm Radio Forum.

2.2.6 Developing Countries: Farm Radio Forum.

> Radio Farm forum has beyond any doubt proved itself a success as a medium for transmitting knowledge. (Neurath, 1959, p.101).

'Farm Radio Forum', a radio discussion programme aimed at rural audiences, was started in Canada in 1941. After ten years, its sponsors , the Canadian Broadcasting corporation (CBC), the Canadian Federation of Agriculture (CFA) and the Canadian Association for Adult Education (CAAE), invited UNESCO to cooperate in carrying out an evaluation of the programme and its effectiveness as an instrument of adult education (Abell, 1968; Coleman & Opoku, 1968; Mathur &

Neurath, 1959; Nicol et al., 1954). The lessons learned from Canada were then introduced in India early in 1956, and in Ghana in 1964, with the initiative and sponsorship by UNESCO. The radio programmes for rural forums have concerned itself with the problems of agriculture, rural development, rural education, innovations, self-government and literacy. Such forums have now been introduced in many developing countries. By 1968, a total of about 15,000 was reported (Nyirenda, 1981; Waniewicz, 1972).

Although not exhaustive, the pages that follow reviewed some of the Farm Radio Forum projects that have been conducted in developing countries.

In a study sponsored by UNESCO, Paul Neurath (1959, 1960) studied the effects of Farm Radio Forum project at Poona, India. He compared 145 forum villages with non-forum villages. The forum lasted for ten weeks with a total of twenty programmes. Each forum had twenty members who came together twice a week to listen to a thirty minutes programme on subjects such as agriculture, health, and literacy. Forum members were interviewed before and after the project, as were samples of twenty adults from each of the control village. Each forum was visited and observed four times during the project. It was found that forum members learned much more about the topics under discussion than did adults in villages without forums; and that adults in the non-forum villages with radios learned more than

those without radios. The illiterate members of the forums learned more than the literates.

Abell (1968) conducted research into the effect of group listening to rural radio forums in Ghana. Like Neurath's study, Abell's research was financed by UNESCO. Abell selected the 'Eastern Region of Ghana' for the experiment. Sixty experimental forums were organized in forty villages, while forty more villages were designated as controls. Twenty programmes were broadcast once a week from December 6, 1964 to April 18, 1965 exclusively. Five programmes dealt directly with agricultural problems while the rest took up the problems of family living, national policy, and relationships with government. Each forum met on the day of the broadcast and exchanged ideas on the topic, then listened to the broadcast and discussed it. After the last session, forum members were interviewed on what they had learned from the broadcasts. The study demonstrated that forum members learned more than the non-forum members.

Further, Jain (1969) conducted a study on the effect of rural radio forums. He selected a number of villages in one area of India and formed in each one, a volunteer group of adult farmers. All the groups listened to a twenty-five minute tape recorded broadcast on a topic of current rural interest; some followed it up with group discussion or decision making or both, while others were required to just listen and take no further action. Tests were conducted

after the broadcasts. the The results showed that group listening followed by group discussion was more influential in changing beliefs and attitudes towards innovation than was group listening without discussion. Group decision was found to be an important factor as well.

In 1956, the "Maharashtra Radio Forum" project was carried out in India. The purpose was to determine if radio forums would work in India with rural audiences who were largely illiterate, rarely exposed to radio, and unused to organized group discussion; to stimulate discussion, increase participants knowledge and if possible, have the activities result in decisions and actions to improve village life. (Bordenave, 1977; Mathur & Neurath, 1959; Sitaram, 1969). An evaluation showed that some action was taken by village groups, but that many group action decisions were never implemented because the necessary materials were not available. Further, forum members learned a great deal more than non-forum members. In amount of knowledge gained, illiterates did as well as literates.

In Benin Republic, radio was used to educate rural peasant farmers in 1960s. The processes involved organization of small listening groups, called 'Radio Clubs', formation of national and departmental committees, use of village chiefs as presidents of the radio clubs and use of animators as group leaders. Group discussions were carried out after listening to the broadcasts and reports on

group discussions were provided by the animators. After one and a half years of experimentation, an investigation was carried out to collect reactions of the peasant farmers. As a result of the investigation, the administration of the Agricultural Radio programmes and organization of the radio clubs was reformed. A year later, an evaluation was carried out. The results of the evaluation revealed that rural radio is an effective instrument of information and education among the rural peasants. As a resulted, Anyanwu (1978) concluded that:

> Through education from the radio, the peasants have grown to understand how to work better, even with the use of new implements which also require new techniques for the development of agriculture. The success achieved in this direction has demonstrated that through collective listening, discussion, and the use of audio-visual aids, the radio can contribute substantially to the process of transformation of agricultural traditions, as well as some social and economic attitudes in general. (p.15-16).

Punasiri and Griffin (1976) summarized the Farm Radio Forum Pilot project of Thailand. The purpose of the project was to strengthen existing agricultural service; to obtain qualitative data on the value of radio farm forums in facilitating communication between the farmer audience and extension service. The programmes included interviews with specialists, discussions from listening groups, announcements, and the answering of questions from the groups. The evaluation found that the two-way flow of information between the farmer and extension workers had

improved. Retention of information and overall learning were greatly improved (Punasiri & Griffin, 1976).

2.3 THE IMPACT OF EDUCATIONAL/INFORMATION RADIO.

For the past few decades, radio has played an important role in developing countries' improvement. Beginning with nationalist independence movements in Asia and Africa and continuing through the post colonial era of political, social and economic development, "radio has been the only way to reach large groups of the world's population." (Sweeney & Parlato,1982. p.2). Although the types of programmes transmitted had varied considerably, given the different political, social and ideological complexions of its programmers, the emphasis given to radio has been very consistent. According to Sweeney and his colleague (1982),

> Radio has been used to support social change, land reform, community development, and commercial enterprises. It has been used to promote literacy, smaller families, better nutrition and the entire range of consumer products that characterizes more developed market. (p. 11).

While the role of radio in support of social programmes is still evolving, there is a considerable body of experience, research and findings in using the medium to support educational, agricultural extension, rural development, innovations and health programmes. Sweeney and Parlato (1982) has the most comprehensive evince in the field. They "reviewed 88 programs, projects and experiments

with communication components (... refered to as projects) in developing countries." (p. 9). These projects 'grouped by type of radio strategy' with the country and sector identified is depicted in Appendix A.

Although radio has been widely used in educational, agricultural extension, rural development, innovation and health programmes, communication experts disagree on exactly what radio can and cannot accomplish (Sweeney & Parlato, 1982). The systematic review of research and projects about the impact of educational and information radio identified four major functions that radio can perform in developing countries.

1. Education: Radio can teach.
2. Communication: Radio can provide information.
3. Innovation: Radio can produce action and change.
4. Dialogue: Radio can elicit feedback and aid in the participatory process.

2.3.1 Education: Radio Teaches.

Evaluations of communications programmes, projects and experiments have repeatedly shown that radio can teach; it can present new concepts and information (Galda & Searle, 1980; White, 1976; White, 1977; Leslie, 1978; Jamison & McAnany, 1978; Byram, kuate & Matenge, 1980; Hall & Dodds, 1977; McAnany, 1976). Sweeney and his colleague (1982) assert that approximately twenty out of the forty-seven case

studies included in their evince reported on the impact of radio. They concluded that

> . . . radio plays an effective educational role, both as the sole medium or in conjunction with print and group support. (p. 13).

In a project for teaching mathematics by radio to school children in primary grades in Nicaragua, students who were taught through radio lessons achieved significantly higher scores in the final evaluation than those taught traditionally. Rural students, tested against rural control groups, benefited more than urban students tested against urban control groups (Galda & Searle, 1980). The project evaluators hypothesized that radio lessons were particularly effective in raising the level of knowledge of those who know least, which in this case, is the rural students.

In the Dominican Republic, radio was the central medium of instruction for students of 'Radio Santa Maria's School,' which provided eight years of primary education in four years. Students listened to the broadcast lessons at home and had weekly contact with a field teacher who corrected their questions (White, 1976). A 1975 survey of Radio Santa Maria showed that 20,000 students were enrolled, most young, unmarried adults. In a comparison of standard test scores, Radio Santa Maria students did as well as those conventionally educated. Students test results correlated with competency of field teachers, suggesting that reinforcement of radio programmes is desirable (White, 1976, 1977).

After one year of operation, using a format which combines entertainment humor and education, Kenya's nationwide weekly radio program, "Giving Birth and Caring for Your Children," was measured effective in educating the audience about modern child care practices (Hostetler, 1976; Jamison & McAnany, 1978). The results indicated that more than one-half of those interviewed listened for the educational content; while more than one-third listened for the entertainment. Survey showed general recognition of the major theme (child care), and a high recall on topics covered by the program.

In 1971, a major nationwide health education campaign was conceived and planned. "Man is Health" was conducted using radio with listening groups and trained leaders. "Approximately 1.5 million people participated, one-half million more than the government estimated." (Sweeney & Parlato, 1982, p. 52). The Campaign targeted rural illiterate people. The study groups showed 47% improvement between the pretest and post-test on specific points of knowledge regarding health. Some control groups showed a 19% improvement. However, the national broadcast character of the campaign affected the control group and hence, the results (Hall & Dodds, 1977; Hall, 1978; Bordenave, 1977).

In Botswana, a civics education project was organized by a community college to provide villagers with basic information about the government and its procedures about citizens rights and responsibilities. Although, there was much discussion about

participation, the planning and creation of materials was carried out by extension agents and government officials. The radio programmes were heard and discussed by listening groups. The project revealed a definite increase in people's knowledge and awareness of government and of ways people can participate in development processes (Byram, Kuate & Matenge, 1980).

2.3.2 Communication: Radio Provides Information.

In a media experiment for family planning in the Songdong Gu area of South Korea, a post campaign survey of 3,045 women showed that radio ranked first as a source of information, both in terms of other mass media and information imparted by home visits and group meetings. (Park, 1967; Sweeney & Parlato, 1982).

Gueri, Jutsum and White (1978) evaluated a six week long 'Breastfeeding Campaign of Trinidad and Tobago. The purpose of the campaign was "to provide mothers with facts on breastfeeding to aid in making a reasoned decision to nurse their babies; to create awareness of desirability of breast milk in the entire population." (Sweeney & Parlato,1982, p.53). The result showed a highly significant relationship between levels of breastfeeding knowledge and frequency of exposure to mass media (Gueri, Jutsum & White, 1978; Jelliffe & Jelliffe, 1978).

> Campaign organizers concluded that campaign had significantly 'raised consciousness'(increased awareness) among a variety of groups: politicians, administrators, health workers and

the general public. (Sweeney & Parlato, 1982, p.53).

The Academy for Educational Development (A.E.D., 1980) discussed 'Health Education Radio Dramas' of Sri Lanka. Two radio series on family planning and health were developed in both the major languages (Tamil and Sinhala) of the country. The evaluation survey showed that while the majority preferred entertainment, a strong 39% preferred educational materials. A substantial majority of those interviewed could recall some of the health messages, and indicated they found the materials valuable (A.E.D., 1980).

In Korea, "Care Mass Media Nutrition Education Campaign" programme was designed to improve the nutritional knowledge of Korean adults. Although "much attention was devoted to message preparation, but not enough to evaluation." (Sweeney & Parlato, 1982, p. 46), more than 85% of those interviewed heard the programs, or had heard others talk about them. Eighty-three percent of urban and sixty-eight percent of rural respondents recalled some part of the messages. (Higgins and Montague, 1972; Leslie, 1978).

2.3.3 Innovation: Radio Produces Action And Change.

The ability of radio to motivate listeners to take action, modify behaviour and undertake activities not specifically tied to available products or services has been reported in several of the literatures reviewed thus far. In

some cases, evaluation findings indicate that radio alone can bring about results (Ray, 1978; Cooke & Romweber, 1977); while in others, radio has achieved results when used in conjunction with some form of interpersonal support, whether that be discussion/study groups, printed materials or contact with extension workers. (Merrick, 1981; Cerqueira, 1979; Bordenave, 1977).

While most communication and education experts agree that radio can play an important role in inducing change, the ability to bring about such change using radio alone remains controversial. Sweeney and his colleague (1982) feel that

> established theories of communication hold that human interaction is necessary at some point in getting individuals to adopt innovations. (p.16).

Since most of the evaluation studies reporting change in behaviour were based on self-reported action by those interviewed, rather than by independent observation, the potential of radio has been particularly difficult to ascertain on this issue.

Notwithstanding this difficulty of ascertainment, the following is a review of projects, reports and publications on change and action produced by radio in developing countries.

In 1973, a five-year "Basic Village Education" project was carried out in two geographic areas of Guatemala. One of them was a Spanish-speaking farm area that was quite

developed. The other was an Indian area and was more traditional. The purpose of the project was to change the farming practices and improve production through a constant flow of information (Ray, 1978). Reviewing the evaluation, Sweeney and Parlato (1982) concluded that:

> For the Spanish-speaking farm area, radio alone was an adequate source of information, much of which was translated into action. For the less developed area, a mixture of radio and home visits by a field worker and an agricultural specialist worked best. (p.16).

Thus, radio can introduce new ideas and deal with problems in traditional areas; but personal contacts may be required for behaviour change. In better developed areas, however, radio alone can introduce new ideas and some behaviour change can be expected.

In the Philippines, a nationwide "Masagana 99" project was inaugurated in 1973. The purpose was to increase rice production; to spread information, and to educate the public (Merrick, 1981). Radio was used as the principal medium to present agricultural information, especially, that related to increasing rice production. After a three-month saturation campaign of short messages on 250 radio stations and daily agricultural programmes, an evaluation showed significant increases in rice yields and income generation. The project was judged a success for the whole nation as well as for the farmers (Merrick, 1981).

In 1956, the "Maharashtra Radio Forum" project was carried out in India. The purpose was to determine if radio forums would work in India with rural audiences who were largely illiterate, rarely exposed to radio, and unused to organized group discussion; to stimulate discussion, increase participants knowledge and if possible, have the activities result in decisions and actions to improve village life. (Bordenave, 1977; Mathur & Neurath, 1959; Sitaram, 1969). An evaluation showed that some action was taken by village groups, but that many group action decisions were never implemented because the necessary materials were not available. Further, forum members learned a great deal more than non-forum members. In amount of knowledge gained, illiterates did as well as literates.

In Nicaragua, a health education campaign using radio spots was designed to educate rural mothers about the problems of diarrhea and to teach proper techniques of treatment. A post-project survey, and final evaluation studies showed that approximately 65% of the intended audience (or 70,000 mothers) heard and remembered the message. Approximately 25% of mothers who heard and remembered the message "acted upon" the advice (Cooke & Romweber, 1977).

In 1975-76, a "Mass Media Nutrition Advertising Campaign" was instituted in the Philippines. The purpose was to test the ability of radio alone to change food patterns; to test

use of radio and modern advertising techniques to change attitudes, knowledge and behaviour related to infant nutrition; and to get Filipino mothers to enrich infants' rice porridge with oil, vegetables and fish. (Cooke & Romweber, 1977). A final evaluation showed that 50-75% of the respondents heard and remembered one or more of the messages. Women who said they added oil to the porridge increased from 0% to 23%. Those who reported they added vegetables rose from 5% to 17%, and those who added fish rose from 17% to 27% (Cooke & Romweber, 1977).

A study of nutrition education in rural Mexico compared the effectiveness of mass media group (radio with posters and pamphlets) with direct education group (teachers and audio-visuals) in transmitting nutrition concepts. The experimental design included three geographic areas with similar characteristics, all in the same state. Villagers in one area were taught by radio. In a second area, the method was direct education via a live teacher. The third area was a control. Knowledge of nutrition concepts was evaluated immediately after instruction and three months later. One year later, changes in diet were studied. The evaluation showed that nutrition concepts were learned equally well using mass media and face-to-face method of education. Both groups reported a positive change in food consumption habits. It was observed that radio messages were more uniform than direct education, as messages were received in

identical format by all listeners. Also style of presentation and content did not vary as they did from teacher to teacher (Cerqueira et al., 1979; Sweeney & Parlato, 1982).

2.3.4 Dialogue: Radio Aids In The Participatory Process.

Radio has been used effectively in a number of kinds of programmes to advise populations of new government policies and to encourage discussion, feedback and eventual support for new measures. Radio has also been used to promote community development, innovation and other programs in which self-help and community participation are essential. (Byram, Kuate & Matenge, 1980; Hoxeny, 1976; Cassirer, 1977; Punasiri & Griffin, 1976). Although radio has been used frequently for such purposes, only a small number of the projects have been formally evaluated (Sweeney et al, 1982). The following are some examples discovered thus far.

In the "Radio Farm Forum Pilot Project" of Thailand a simple study was used to determine the best listening time for farmers. Also, evaluation was an integral part of the project. The study concluded that the crucial element of radio forums was the opportunity they afforded members to exchange experiences and ideas and to participate in group problem solving. The two-way flow of information between farmer and extension worker was shown to improve greatly. Retention and overall learning also improved greatly due to

high interest in content of broadcasts and opportunity to discuss. Messages were reinforced by various communication channels. Agricultural broadcasting was made relevant to farmers' problems (Punasiri & Griffin, 1976).

In Senegal, a "Radio Pilot Project" was instituted to provide food producers with agricultural information; to encourage feedback from food producers; and to allow them to express their opinions about government policies and activities. The project focused on topics of major concern to farmers: production and marketing of ground nuts; responsiveness of government agencies to farmers' needs; problems of debt financing at village level; and other relevant social problems. Some broadcast materials were produced at village level with farmers and listening groups. Results indicate that feedback in the form of letters and taped comments for broadcast has had direct impact on government policy (Cassirer, 1977).

Faced with land degradation due to increased human and livestock populations, the government of Botswana sought to involve the public, particularly rural people, in learning about and commenting on land use policies. Radio was used to explain the policy and to obtain feedback from the population. Radio programmes were broadcast twice a week during a five-week period, and over 3,500 listening groups were organized. After each broadcast, listening-group leaders sent reports on the group discussions to the project

organizers. The information was used for future broadcasts, answering questions on the air, and project analysis. The programme evaluation showed that citizen awareness of overgrazing increased and that the adult public participated in defining the problem and proposing solutions (A.E.D, 1978).

In 1979, Botswana inaugurated a similar five-week educational radio campaign, "Understanding Government", with broadcasts and listening groups. The purpose was to provide villagers of the Kalahari Desert region with information about the government, and ways people can participate in the development process. Questions from the group were used as part of the radio programme. The post-campaign evaluation report indicated that 10% (or 5,000) people in the project area attended group sessions, and there was an increase in people's knowledge of the project (Byram, Kuate & Matenge, 1980).

In 1972, radio (Mensaje) school programme was instituted in Ecuador. The purpose of the project was to provide feedback from, and active participation by student listeners; to promote community development by having listeners describe what they were doing for the benefit of other listeners; and to heighten listeners' selfworth by having them create materials for general broadcast (Hoxeng, 1976). Under the program, cassettes were sent to listening groups, whose members collaborate with others in the

community in preparing materials that were aired on a special weekly broadcast. The programmes had promoted community development by enabling listeners to learn what other communities were doing (Hoxeng, 1976, Sweeney). Sweeney and his colleague (1982) summarized the findings as follows:

> Rural people were clearly able to produce radio programmes on their own and were interested in listening to each others' productions, even if they were not of studio quality. 'Unscientific analysis' indicates that project hypotheses and objectives had been realized to a considerable extent. Rural people had something to say that their peer found useful.(p. 40).

2.4 SUMMARY AND CONCLUSIONS.

In general, radio has had a long history. In particular, it has been used in various formal and non-formal educational/information activities. These activities are unlimited and had taken place worldwide. In the literature, there is a consensus that radio is a rich resource of education and information, especially, in rural areas where population is scattered over vast distances and methods of access are difficult.

The literature on formal educational uses of radio revealed that when used to supplement regular classes with, and sometimes without, a teacher, it provides imaginary experiences to students; it vitalizes students' interest through different modes of presentation; it results in

active student participation in class discussions; and it leads to improved understanding of the subject. In total, the literature seemed to conclude that radio has contributed to a pooling of knowledge and a stimulation of progressive ideas in formal education.

For non-formal educational uses of radio, the literature suggests that:

1. Group radio listening followed by group discussion is more influential in changing attitudes and beliefs towards innovation.
2. Radio forum members learned much more about the topic under discussion than non-forum members.
3. Illiterate radio forum members learned more than literate members.
4. Two-way flow of information improves learning and retention of information.

From the literature, it can be concluded that through study and discussion of radio programmes, communities in general and rural people in particular were able to approach their problems more intelligently and work together towards their solutions.

The literature on the impact of educational/information radio showed that radio has been used to support social change, land reform, community/rural education, and promotion of literacy and better nutrition in developing

countries. It has also been used to teach, to communicate and inform, to encourage innovations and dialogues. The literature revealed that radio has enabled a person to find alternative ways of living, raised a family's economic status, motivated the illiterate to become literate, and has increased the aspirational level of farmers. Thus, it can be concluded that the educational and informational impact of radio in developing countries is unlimited, multidirectional and multidimensional.

2.5 IMPLICATIONS OF THE REVIEW.

The reviewed literature displayed some implications for the uses of educational radio in the agricultural extension services of a developing country. In a capsule form, the literature disclosed that:

1. Human interaction is necessary for adoption and adaptation of any innovation.
2. A mixture of radio programmes with home visits by agricultural extension agents and other related specialists is a necessity for effective and affective communication.
3. Organization of small listening groups (forums) where members get together, listen to radio programmes, carryout discussion, react based upon their discussion and provide feedback to the organizers through group leaders is inevitable because of its

relative effectiveness. This is absolutely important for any non-formal educational uses of radio, especially, those for illiterate and neo-literate adults.

4. The use of committees where each segment of the society is represented during planning, production, implementation/delivery and evaluation of radio programmes appeared more desirable.
5. Feedback - two-way communication - mechanism should be implicit in the whole system. In this case, information and reports sent by group leaders should be used for future broadcasts - to answer questions from the group and provide feedback.
6. Various forms of programme production such as drama, panel discussion, interviews, etc. should be used for vitality.
7. Radio should be used in conjunction with other media such as prints, posters, slides, etc. for adequate coverage of subjects and for reinforcement purposes.
8. Study materials should be prepared in advance and sent to forum members for readiness. In this situation, the idea of 'Read-Listen-Discuss-Act' may be employed.
9. And last, but not least; reinforcement must be an implicit factor for a better understanding and longer retention.

These suggestions appear necessary for any formal and non-formal educational uses of radio; for the accomplishment of the educational objectives; and for effective utilization of radio as a mass medium in the agricultural extension services of a developing country. These implications are further explored and explicated through the "reflexivity" literature in chapter VI

Chapter III

DESIGN AND PROCEDURES.

3.1 INTRODUCTION.

The purpose of this study was to investigate how educational radio has been used to disseminate agricultural information to farmers in rural communities; and to recommend appropriate guidelines for its potential uses in the agricultural extension services of Nigeria and other developing countries. To accomplish this purpose, the study focused on:

1. How radio is used to educate or disseminate agricultural information to farmers in rural communities of Manitoba, Canada;
2. How educational radio has been used in the dissemination of agricultural information to farmers in rural communities of some selected developing countries; and
3. How Nigeria and other developing countries can use radio to educate and/or disseminate agricultural information to farmers in rural communities.

The design and procedures followed for this study were that of qualitative methods ascribed in part by Lincoln and

Guba (1985), Miles and Huberman (1984), Carney (1983, 1972), Bogdan and Bilken (1982), Patton (1980), Glaser and Strauss (1967); and modeled in part by Woodley (1984). This chapter explains the design and procedures followed to complete this work. It also revealed some of the problems encountered and measures taken to minimize involved biases.

3.2 SELECTION OF PARTICIPANTS.

To identify participants for the study, a list of agricultural extension agents/communication experts in Manitoba, Canada, was supplied by Vern McNair, Director of Communications, Manitoba Department of Agriculture. Further discussions with him revealed that most agents/experts do not use radio to disseminate information. As a result, the list was scaled down to those experts who use radio mainly to spread information to farmers in rural communities. Also, names of former Canadian Farm Radio Forum experts and one educational broadcaster were supplied by Jim Rea of the Canadian Broadcasting Corporation (CBC) and Jack Giles of Ducks Unlimited respectively.

After the identification process, participants were solicited through a letter (Appendix B), followed by phone calls. Of the eighteen potential solicited participants, sixteen of them agreed to participate. The interviews were then scheduled such that each one was done a day and at the interviewe's convenience. Mostly, the interviews were

carried out at the interviewee's residence, place of work and hotel rooms. The interviews took place during the month of January 1986.

Although sixteen communication experts agreed to participate, only fifteen of them were interviewed because of the distance involved. Those interviewed were ten present day communication experts, four ex-communication experts and one educational broadcaster. These participants possessed a wealth of experience as information disseminator.

3.3 DESIGN AND VALIDATION OF INTERVIEW QUESTIONS.

The design of the structured interview questions used for the study was influenced by the purpose of the study, the conceptual framework and review of the related literature. Based upon these influences, a six section preliminary structured interview questions, referred to as an "interview guide" (Gay, 1981) was designed. The sections focused on the backgrounds of the respondents; the purpose and planning, production, delivery and evaluation of radio programmes; and recommendations for the uses of educational radio in the agricultural extension services of a developing country, with particular reference to Nigeria.

The preliminary designed interview guide was validated through a pilot test. The pilot test took the form of

examinations by university professors, ex-communication experts and fellow graduate students. The purpose was to ensure objectivity, communication, use of appropriate words/language and the accomplishment of the purpose of the study. During this process, it was discovered that the inadvertent academic jargon used would not be understood by the respondents. As a result, the preliminary structured interview questions were modified, improved and then field tested.

The field test took the forms of interviews and recommendations for improvement. In this case, five ex-communication experts were interviewed, recorded and analyzed. The purpose was to further improve the interview questions and to determine the analytical structure to follow during analysis. The consequences of the field tests and its analysis enabled the researcher to make final changes to the structured interview questions. It also revealed additional probes which were used during the interview, and the methods employed for data analysis. The questions were then modified to suit the ex-communication experts. This was done by changing the tenses. The final structured questions used for the interview is displayed in the Appendix C (present tense) and Appendix D (past tense).

3.4 COLLECTION OF DATA.

Before collection of data, the researcher was required to get permission from the University Ethics Committee. In order to obtain this permission, three copies of the thesis proposal and the developed interview guide was submitted. Upon deliberation, the committee approved it and requested that each participant grant the researcher permission to audio-tape the interviews. A letter of permission (Appendix E) to audio-tape the interviews was written and each participant signed it before the interview began.

The interviews were administered in person by the researcher. During the interviews, 'field notes' (Miles & Huberman, 1984; Carney, 1983; Guba & Lincoln, 1981) were taken while the whole interview were recorded on magnetic tapes. With the aid of the interview guide, each participant was asked the same questions with variations in probes, depending on the responses received; and it was possible to ensure consistency in the interview format as well as the collection of data.

3.5 ANALYSIS OF DATA.

To analyze the collected data, each interview was first listened to and compared with the field notes. The whole interviews were then transcribed and read at least three times while listening to the audio-tapes. During this

process, "memos" and "analytical notes" (Carney, 1983; Glaser, 1978) were taken.

Applying Carney's modification of Geertz's 'thick description', the collected data was focused by summarizing each individual interviews. This was necessary "to make the information gathered more easily manageable [and] to sort out the main ideas" (Oberg & Dufresne-Tasse, 1986, p.15). Although greatly reduced in volume, the individual summaries took into account the tone of the interviews and the content of the dialogues, while focusing on the structured questions.

Although it was necessary to synthesize the original data down to make it 'more easily manageable' for general analysis, this process posed three main dangers. The first danger was the possibility of oversimplification of communication experts' responses to the structured interview questions. This could be done by merely allocating responses to answer specific questions either arbitrarily or intuitively by the researcher. Though it was important for the researcher to make sense of what was said in the interviews, it was equally important not to adopt restrictive ways of interpreting the responses (Woodley, 1984).

The second danger inherent in reducing a large mass of information into a workable quantity was that of treating

answers to specific questions in isolation. This domain presented perhaps the most perplexity in that one could either oversimplify by considering specific answers out of context from the background comments or from the balance of the interview; or even by constructing artificial linkages between questions and disassociated responses; and by attaching undue significance to certain responses. The third problem was the difficulty of knowing if the rewritten responses of the interview accorded sufficient emphasis to the points made by communication experts after the interview had been summarized and analyzed.

In order to guide against these problems, the summaries were, as much as possible, quoted. They were also divided into sections to reflect the structure of the interview guide. Secondly, as a respondent check, triangulation, iteration, verification and qualitative validation (Lincoln & Guba, 1985, 1981; Miles & Huberman, 1984; Carney, 1983; Bogdan & Bilken, 1982), each participant was sent a copy of their summary analysis. Appended to this were a copy of the interview guide (Appendix C or D), a summary validation letter (Appendix F) and a summary validation questions (Appendix G) which asked the following:

1. In general, does the analysis accurately represent your views and practices as communication expert?
2. Are the key elements/practices identified correctly and appropriately?

3. Does the analysis capture the major elements of your practices (Purpose and planning, production, delivery, evaluation and recommendations.) as communicated during the interview?
4. Comment

Of the fifteen letters sent, only ten replied and three of them made minor changes. These changes were corrected immediately.

As a follow-up, the researcher contacted the remaining five communication experts by phone. Upon talking to them, they reported that they were basically in agreement with the summary analysis of the interview, and that any comments they might have made were very minor. They had not replied because they received it late and because of the statement in the letter which stated that if they did not return it by a certain date, the analysis will be assumed to be correct and valid.

Although substantive problems were encountered in reducing the original transcripts to a more easily manageable and workable size, there was almost unanimous agreement among the respondents that the analysis and synthesis had been accurately performed. It was very important to have this verification and qualitative validation by the respondents as the general summary analysis in chapter V was based largely on the transcript summary analysis.

The general summary analysis presented in chapter V was carried out by identifying recurrent themes and areas of emphasis in communication experts' responses to the structured interviews. To facilitate presentation of the raw data, "displays" - tables and summary charts - (Miles & Huberman, 1984) were constructed for specific coded questions and sections respectively. The questions were coded on the basis that they were soliciting specific responses while the summary charts were constructed by focusing on the noted patterns and major themes of each section (e.g. How do communication experts plan their radio programmes?); and by identifying the views of each communication expert for that particular theme. This type of summary charts acted as the "analytical 'ladder of abstraction'" (Carney, 1983, p.13) and thus, permitted the identification of recurrent themes and areas of emphasis during the interview.

The validated interview summary analyses presented in chapter IV were each studied very carefully. The coded questions were categorized, percentages of agreement were calculated and recorded as displayed in the tables of Appendix H. The statements and sentiments corresponding to each sections were depicted in the summary charts. The presented tables and summary charts were consequently a further distillation of the original research data and their development was guided by the qualitative validation and

verification of the individual interview summaries. These tables and summary charts noted the major themes and sentiments of communication experts responses to the purpose and planning of educational/agricultural radio programs, production, delivery and evaluation of radio programs, and recommendations for the uses of educational radio in the agricultural extension services of a developing country.

The summary charts contain both direct quotations and sentiments expressed by each participant. In some cases, ideas were expressed repeatedly or with many words that it was not possible to provide direct quotations because of the restricted space of the charts. For this reason, although each idea on the summary charts is designated by a dash (-), not all of these are in quotation marks. Those which are not in quotation marks are the researcher's interpretation of the respondents views about a specific theme or section. Using this method of documentation, it was possible to develop summary charts for each section and the fifteen respondents which not only reported the actual phrases of the respondents, but which also allowed for the presentation of frequency, emphasis and sentiments in the responses.

In some areas of the summary charts, the number of ideas/themes varied from one, two and more in some interviews to blank spaces in other. There were a variety of reasons that can be attributed to this. First, in some instances during the interview, it was possible that

communication experts had considered the questions put to them in relation to their practices, but did not have enough time to provide a well thought out response. In some cases, some communication experts chose to avoid specific replies to certain questions, while some seemed to be under time constraints. Second, some communication experts asked for clarification about certain questions during the interview. It appeared that the structured questions did not follow their pattern of thinking or practices. Thus, for those not answering specific questions it did not mean that they had no thoughts on the subject rather their thoughts did not follow the structural construct of the questions.

Third, there was no way of measuring the impact that the interview environment or the interviewer himself had on the respondents. It was possible that certain communication experts might not have felt comfortable during the interview and as a result, withheld specific responses to certain questions. This could probably be a means of reducing their vulnerability to criticism, ridicule, or the possibility of reducing their credibility. Although the blank spaces may at first glance appear to indicate incomplete results, such is not necessarily the case. Since the questions dealt with the 'how' rather than the 'what' of communication, it was felt that forcing individuals to respond to questions outside their practices would have destroyed the relationship within the interview and thus, invalidate the results.

In order to answer the second major problem of the study, the idea of 'reflexivity journal' was borrowed (Carney, 1983). Based upon the focus of the study, five major projects were selected from developing countries and described. These descriptions can be found in chapter VI. Finally, summary, conclusions and recommendation were made and placed in chapter VII.

Chapter IV

AS IT IS: WHAT COMMUNICATION EXPERTS SAY.

4.1 INTRODUCTION

The purpose of this chapter is to focus the collected data by summarizing what each individual communication expert said in the interviews that were conducted. Although greatly reduced in volume, the individual summaries presented in this chapter have taken into account the tone of the interviews and the content of the dialogues, while focusing on the structured questions. Although it was necessary to synthesize the original data to make it easily manageable and workable for general analysis, this process posed three main dangers.

1. There was the possibility of oversimplification of communication experts' responses to the structured interview question. This could be done by merely allocating responses to answer specific questions either arbitarily or intuitively by the researcher.
2. There was the danger of treating answers to specific questions in isolation. This domain presented perhaps the most perplexity in that one could either oversimplify by considering specific answers out of

context from the background comments or from the balance of the interview; or even by constructing artificial linkages between questions and disassociated responses; and by attaching undue significance to certain responses.

3. It was difficult to know if the rewritten responses of the interview accorded sufficient emphasis to the points made by communication experts after the interview had been summarized and analyzed.

In order to guide against these problems, the summaries were, as much as possible, quoted. They were also divided into sections to reflect the structure of the interview guide. Secondly, each interview summary analysis was sent to their respective respondent for verification and qualitative validation. Such verification and confirmation of data acted as a response check, triangulation and iteration (Lincoln & Guba, 1985; Miles & Huberman, 1984; Carney, 1983); and thus a qualitative validation of the data.

What follows is a summary of each interview in totality. As it is, most of the summaries are direct quotations of ideas/themes and practices of each communication expert. In order to understand these summaries fully, the reader should first read through the structured interview questions depicted in Appendix C and/or D.

4.2 INTERVIEW #1: SUMMARY ANALYSIS.

Personal Data: Communication expert #1 has been an instructor of journalism at Red River Community College (RRCC) for seven years. She was a "a broadcast journalist, radio and television primarily, [and] some print" for ten years. She used to collect the returns - letters and opinions - from farm forum, review them, prepare and "then broadcast five minutes radio summary of what farm forum had concluded on each farm issue every week." As a journalist, communication expert #1 had experience in Africa and India for three weeks each. In these countries, she had the "opportunity to talk to cabinet ministers and politicians and a broad range of people."

Purpose and Planning: Ccmmunication expert #1 thinks that the purpose of farm forum broadcasts was "to engender, [and] to stimulate debate" on various agricultural topics and problems of that time; to inform farmers as well as to elicit their ideas and opnions. According to her,

> ... farmers were very important people and their opinions counted. So it was a two-way street - not only were they informed by the radio broadcast, but their opinions were traded, so I would assume that the purpose of those broadcasts was to engender, to stimulate debate on ... all kinds of things.

She thinks that the goals of the broadcasts were determined through the "cooperative effort" of the Canadian Broadcasting Corporation (CBC) and the Canadian Universities.

She indicates that "farmers [and] Farm families" were the target audience. She assumes that the target audience were "indirectly" involved in the planning process. According to her, "they [farmers] did register their opinions in writing every week and those could be considered in planning the next season." She claims that forum members were "proactive audience as opposed to most television or radio listeners who just listen; farmers responded." She feels that farmers - the target audience - knew about the broadcast by "listening to CBC radio" because "The CBC did a lot more promos on their own radio network in those days so they would promote a show; they did commercials in those days on CBC radio ..., during the commercial break, they would promote other programmes, so I would assume it would be from listening to CBC radio that people would find out."

Production: Communication expert #1 produced her radio programmes by: preparing the scripts, going down to the CBC studio, "read[ing] it and the technician recorded it." The information she used for her programmes was collected from "letters from farmers." She thinks that the seasons of the year did not affect or determine the kind of information given to farmers "because it was not the how to do program; it was issue and political, there were other CBC programmes that would talk about planting and fertalizer and those things; it would be great closely tied to seasons,

Delivery: Communication expert #1 thinks that the ideal broadcast time is the noon hour because "farmers come in for lunch and listen to the radio." She gave an example where a farmer listen to radio while on the tractor and said: "for him anytime was a good time to broadcast, but noon hour tends ... to be good ..." She claims that her programs were in the "evenings." The length of the total Farm Forum programs range from half an hour to one and half hours but her portion,"my five minute portion, was simply talking." She thinks that the CBC and the University were involved in the delivery process. She claims that the programmes were used in conjunction with "prints": "There were kits sent out." She contends that they used print because it was "cheap and easy." She explains

> This is not a high profile program; it's not a big budget; there would not have been the money to put up films or television shows, in fact, television wasn't even invented then; it wasn't here.

She feels that the majority of the target audience listened individually but "there were a few small groups in existence who would meet in farm homes, listen to the show [radio programme] and discuss the content." She asserts that feedback was the basis of her participation: "The farmers wrote in every week and expressed their opinions and experiences, reacted to what had been discussed. According to her, the arrangement for feedback "was full circle."

> They [Forum members] listened to the broadcast, they discussed it, they told me what they thought; I reported back [to] all of them what we discussed.

Evaluation: In terms of evaluation, communication expert #1 feels that "It wasn't such a very sophisticated world then. I suppose they were evaluated by broadcast measurement devices - number of listeners; ... I evaluated the programme[s] by how many responses I got in; how many letters I got in from farmers." She claims that farmers were "listening in an active way" and as such, "they learned a great deal across the board on those issues." She explains her experience this way:

> I learned that farmers are well informed; I suppose it's a function of the marketplace, but they seem to know what the crops are doing in Russia and what's going on in Ottawa. I learned that they were through that process very well informed and then when I was a professional broadcaster after I graduated from University; I had a certain fondness for doing shows on agricultural topics because I know that the audience out there was responsive, intelligent and well informed and it was quite gratifying to do open line radio with those people phoning in.

Recommendation: In her recommendations, communication expert #1 maintained that "it should be a Nigerian who's delivering the educational" programs. She gave an example of her friend who "went to India to teach dryland farming ... [but] got no cooperation at all for about a week" because he was not using the right words and language. As a result, she thinks that the person doing the educating, and broadcasting "has to be someone ... who knows those little naunces" of the society. She warned that we should not "import someone to do" it. She suggested using the Farm Forum approach - "depending on the postal system and the literacy rate" of

Nigeria - so that farmers can report back in writing. She thinks that the "open line radio" - "where people could phone in and talk on the radio in response to questions" will be helpful. She suggested organization of "small groups in villages [who would] sit, listen and discuss" radio programs. She thinks that the major pitfalls are the "kind of arrogance in people who are agricultural experts: They tend to say [that a topic] is too complicated, you'll never understand it. They are impatient." According to her, "it's a pitfall to get an expert who can't talk in plain understandable language." She made a case that "too much expertise, too much jargon would get in the way of people understanding ... the experts." She cautioned that the programmer must "translate the experts' fancy talk into ordinary, understandable language, and persuade the experts that it was not too complicated to understand agricultural issues." She raised many questions that need to be investigated before the implementation of this kind of program. She asked:

1. How common are radios?
2. How many households have radios?
3. And how about the choices of radio stations? Just one or lots?

She feels that it would be a problem if a housewife wants to listen to music while the husband wants to listen to agricultural shows - especially if there are lots of radio

stations and one radio in a household. She indicates that the "programs would have to be awfully interesting" if there is competition.

Communication expert #1 thinks that people with "the education and the experience and, most importantly, knowledge of your own country" will be capable of solving these problems. She also suggested the use of "consultants." Finally,

> It's got to be a Nigerian that's doing it in the most interesting possible way in view of the fact that there's competition.

4.3 INTERVIEW #2: SUMMARY ANALYSIS.

Personal Data: Communication expert #2 has been a "broadcaster" for thirty years. He is the executive producer for Manitoba Education. His major duty is to organize the production of video and audio tapes to assist the curricular. He acts as a "focal point between the needs of the curriculum consultants and the creative society. He is constantly in touch with writers, producers, actors, directors, film makers and coordinates the needs of the curricular. He brings the curriculum needs to the creative community and supervises the production of materials.

Purpose and Planning: Communication expert #2 claims that the purpose of broadcasting depends upon who the "audience is." His goals are determined through contacts

with the curriculum consultants - who work in the field and find out the needs. He draws a dichotomy between his work and agriculture extension. He contends that communication must be two way:

> You send information out but you also have to get information back; so it's very important that there be such mechanism whereby you can get back information.

Communication expert #2 affirms that the Government policy "decides on the goals" of broadcast. He said that the topics of his broadcast are determined by a two-way process. According to him, "It's a matter of saying what information do you need and we will provide it. And follow-up by saying, is that what you wanted? If not, tell us." He contends that a committee is in charge of determining the topic of broadcast. The committee sets priorities and decides what is most important relative to affordability and practicability. He makes a case that they can only produce few programmes a year. He thinks that "no one's ever going to be completely happy" with the priorities but argues that someone has to make the decision.

Communication expert #2 affirms that the determination of the content is very important. He determines the content by: stating who the audience is; what the main points are; and what the behavioral objectives are. He then prepares a 'broadcast brief' present it to the creative community, the consultants and experts who will decide what the important points are, and the content will be refined afterwards. He

claims that the target audience "will vary" and warned that "it's very, very important that you know exactly who it is." He thinks that the target audience should be involved in the planning process, and feels that "it's very important to find out as best [as] you can what relative information your audience wants." He contends that the programme must be meaningful.

> It's an absolute fact of broadcasting that unless the programme means something to the audience, they won't watch it, they won't listen to it; it has to be meaningful.

He found that the most successful way of informing the target audience about their programmes is by direct mails to principals, teachers, librarians; indicating when the programmes will be on, and its relative value to them. He said that they used to send out schedules and posters but now they don't. According to him, "it's a very difficult problem to get the information out." The major problem he encountered during planning was "dealing with people who don't understand broadcasting" - They want to do too much in a program. He attempted to solve this problem by arguing with them, as well as educating them.

Production: Communication expert #2 used to produce his programs in his studio; that the production was done by four producers and three technicians. He indicated that now, the programmes are contracted out and produced by private producers. He suggests that "it's very important that each

programme be produced by a producer." He defines a producer as someone who takes all the necessary ingredients and organizes it and somehow gets the programme done. He suggests involving writers, educators and actors, depending on how complicated the programme may be. He stipulates that "the two most important people in any production are the producer to organize it and the writer who does the script. Everything else comes from that." Communication expert #2 asserts that the writer is important because he collects information. "The writer[s] does the writing and the research; they ask the questions, they do the interviewing, that whole aspect." He thinks that the seasons of the year affects the kinds of information given to farmers. He holds the view that there are two major problems in all productions: "the problem of money" and "the problem of time." He makes a case of how expensive it is to produce a program and concluded that "There just never seems to be enough time to get the programme done in time for it to be useful." According to him, they attempt to solve these problems by "working as efficiently" as they can.

Delivery: Communication expert #2 thinks that the ideal broadcast times to farmers should be in the evening. He thinks that the programmes should not be longer than "half an hour" because it is difficult to get people's attention for longer than half an hour. He claims that the delivery must be done by a "broadcast system." This, he argues,

varies with the kind of broadcast system in each country or province. He feels that the broadcasts should take the forms of discussions, lectures, debates, interviews, documentaries, dramas and a combination thereof. He suggests having interesting people with something nice to say. He agrees with other interviewees that the broadcast should be used in conjuction with other media: "printed material." He claims that every educational broadcast should have an accompanying package of printed material - questions and answers - that they can come back to and reinforce. "It's really quite important."

Communication expert #2 thinks that farmers should listen in small groups - "classroom size." He contends that "there needs to be more than one person ..., especially if you want to get discussion going." He strongly feels that there should be a feedback mechanism. He thinks that the major problem is getting people to participate. According to him,

> It's just an ongoing problem to get people to participate, to listen, that's a matter of letting them know when it's going to be on and whether it's relevant, getting them involved in it, etc.

Evaluation: In terms of evaluation, he thinks that "It's really very important." According to him, the only way to find out how effective his programmes are is the number of requests for duplication and/or number of letters received. The only way he evaluates his programmes is through criticisms by his clients - the curriculum

consultants. He claims that the size of audience aimed at is about 800 schools, but those actually reached is "very small." He hopes that the target audience learned what he wanted them to learn. He thinks that if the objectives are clearly stated and the programme well done, then they should learn those things. For him, he learned "An awful lot." He learns the subject while producing a program; he "really" gets a "sense of the importance of education;" he "really" becomes aware of the importance of his work: "to communicate to other people who don't know those things and it's a good feeling." He is "totally, absolutely convinced about the value of broadcasting, ... it is the greatest thing in the world in terms of reaching out to people, it really is." He claims that the major problem encountered during evaluation is that of logistics, management and finances. He explains: ... you have so much money and you spend all your money on production and you don't spend any on evaluation and if you spend money on evaluation, you haven't got any money for programming. As a result of these problems, he suggests a system whereby listeners could contribute to the programmes and be involved in its evaluation; a system whereby contacts will be established in the community for two-way communication. He claims that it will help to develop the programmes as well as "find out whether the programmes have worked or not."

Recommendations: Communication expert #2 feels "that it's very important to reach a very wide audience." The pitfalls he thinks should be avoided includes "loosing contact with the audience; loosing contact with the needs of people;" and becoming "self indulgent" - loosing "sight of the fact that you're ultimately communicating with people out there ...." The major problem he forsees for the uses of radio in a developing country is "convincing people who ultimately control your fate in terms of budgets and staff and so on that this is really important." Finally, communication expert #2 thinks that "people like yourself" - who are "zealous", "self-convicted", "enthusiastic" and "highly motivated" in terms of perceiving the importance of the program will be capable of approaching these problems.

4.4 INTERVIEW #3: SUMMARY ANALYSIS.

Personal Data: Communication expert #3 has been retired for ten years. Before his retirement, he was a farm broadcaster for thirty years. He spent the last twenty six years with the Canadian Broadcasting Corporation (CBC) as a farm commentator and later, as a supervisor. As a communicator, his job was "to gather and disseminate information of interest and value" to farmers. "... to gather and disseminate information about agriculture to primarily the farm people and to the general audience as well."

Communication expert #3 has had numerous experiences in developing countries. He had been to latin America, Costa Rica, El Salvadore and Guatemala to "observe" the United Nations (UN) World Food Program. He was in Barbados for a month to help the Canadian University Services Overseas (CUSO) and the agricultural society on the island "set up a radio and television service that would suit their purposes ..." In 1975-76, he was in Pakistan, India and Sri-Lanka for the World Food Program of the UN "to observe some of the projects that they had over there ..." He also had the opportunity of working with many agricultural broadcasters from developing countries who had come to Canada "to observe our [Canadian] methods of broadcasting ..."

Purpose and Planning: According to Communication expert #3, the goals of disseminating agricultural information were to provide farmers with "up-to-date market [and] technical information that would help them in their farming practices and marketing decisions ..." These goals were determined by the "policy of the CBC farm broadcast department ..." He states that the supervisors and assistant supervisors in cooporation with "the agricultural department" were in charge of determining these goals. He claims that the topics of the broadcasts were determined through "sugar coated pills" - going through a pile of information and "pick what [they] thought would be the most important information of the day to farm people." Thus, the farm broadcaster at each

location was in charge of determining these topics of broadcasts. Also communication expert #3 and his colleagues determined the contents of broadcasts by trying to "get as much ... timely information, right up-to-date," as possible. He strongly contends that the target audience - - "people who made their livings off farms" - were involved during the planning process. They were involved through a "committee of the top echelon of agriculture" which included a cross-section of all parts of agriculture and they would tell the CBC what they wanted from it ..." He feels that these farmers know about the programmes through advanced advertisement, promotions, farm papers, news paper and through agricultural representatives. He asserts that the major planning problem "was walking into the studio and doing the broadcast, ..., the problem was to take it off the paper [script] and put it on the air." He claims that the problem was solved "by doing it." According to him, "... by experience you met your daily problems, you solved your daily problems, and did the broadcast."

Production: Communication expert #3 contends that it was the responsibility of the producer to get them "on" and "off" the air. "The producer was in charge of the programs' production technically," and he offered advice on presentation, but the content was the responsibility of the farm commentators (broadcasters). The producers were also assisted by some technicians. The programmes were produced

primarily in the CBC studio and sometimes during "national farmers' meetings" and conferences. The information used for production was collected in a variety of ways. He thinks that "farmers learn by looking over the fence and see how their neighbours do things. Thus, the extension agents talked to leading farmers in the region about their new techniques and innovations and put it on the air. Other information was collected from Universities and experimental farms. Communication expert #3 follows "the seasons of the year." He contends that the seasons of the year determine the types of information given to farmers. He gave various examples: Now, when it's 30 below zero in Winnipeg today, we wouldn't be telling them about growing tomatoes or a lot of other things; we would try to have some of the information topical about how to keep the calves warm, or how to keep the baby lamb warm, ... Finally, he encountered several problems during production. These problems ranged from insufficient budget to "people higher up in the echelon" who thought that they knew broadcasting better, telling him what to do and how to do it.

Delivery: Communication expert #3 is convinced that the noon hour is the 'ideal time' for farmers to listen to the radio broadcast because farmers have "their big meal" and "a rest" at noon. Alternatively, he thinks that 6:00 to 8:00 in the morning would be advisable, but contends that the ideal time "depends on the area and on the farming practices." For

Farm Radio Forum, the actual broadcast time was Monday night at 9 o'clock, local time. The actual length of the programme was 30 minutes - 25 minutes discussion and 5 minutes provincial report. Communication expert #3 feels that a variety of different specialists should be involved, but claims that the "number one man" was the "farm broadcaster," followed by the technical and production people. He feels that the programme forms should vary. He suggests "discussions", "debates", and "interviews." According to him, the format would be:

> ... to tell [farmers] what you are going to tell them, then you tell them, and then you tell them what you already told them.

He thinks that farm papers, newspapers and posters were used in conjunction with radio broadcasts. He claims that farmers listen to the daily broadcasts "at home or on their car radios or on their tractor radios or in their workshops or wherever." For Farm Radio Forum, he affirms that farmers got together in small, and sometimes, large groups and listened to "the discussion type programs." For some special programs, the small and large groups met at a central location and "they might have a hundred people there, and at that time they might put on some other type of a program."

Communication expert #3 asserts that the "weekly reports" and the "letters" received were the arrangements for feedback from the audience to the broadcast station/producer. Alternatively, he thinks that they get

"feedback best by talking with people and being invited to sit down and have a coffee with them or sit down and have a meal with them. This is where ...," he proclaims, "we kind of knew what they [farmers] wanted and we tried to provide that information." Communication expert #3 claims that the major problems encountered during delivery was "nervousness." And to solve this problem, "don't think you're talking to a thousand people or five thousand people or a million people, just think you're talking to one person, ..."

Evaluation: Communication expert #3 contends that "You never know" how effective your programmes were, but claims that their programmes were very effective, especially, the program: "This Business of Farming" which had the highest audience rating of 51%. He indicates that the effectiveness of their programmes were judged through "audience ratings." Also, they checked their effectiveness by talking to farmers, from people talking to them and from the reactions they got when they went to the country. For him, the programmes were aimed at "All the farmers on the prairies [rural communities]" and "to as many people as wanted to turn" their radio on. The audience actually reached was "A fair percentage." He thinks that farmers "learned new techniques, some old techniques; they got up-to-date market information that would be difficult to get from other sources." Communication expert #3 met more people and talked

to more people; he had a good working relationship or rapport with a wide cross-section of specialists. His major evaluation problem was to answer all the letters received, and he did it by working very hard.

Recommendations: In his recommendations, communication expert #3 made the following suggestions:

1. "Keep it [the program] simple and talk to them in their kind of language."
2. Convert the "technical jargon" into everyday, understandable language.
3. "talk to them in a friendly kind of way and make the odd mistake, ..."
4. Design and direct the programme to the target audience.
5. Deliver the programme by telling the audience what you want to tell them, tell them, and then, tell them what you have already told them.

He cautions: "don't talk over and above the head of the audience, be with them." Finally, communication expert #3 foresees availability of radio sets as a problem. He thinks that the farm broadcasters in corporation with the producers, programme directors and the person that controls the budget will be capable of solving any emerging problems. In sum, he suggests having a good working relationship with the people one works with; and with people above and below the hierarchy.

4.5 INTERVIEW #4: SUMMARY ANALYSIS.

Personal Data: Communication expert #4 was a "farm journalist, farm broadcaster and also farm programme director of Radio Southern Manitoba" for fourteen years. Before his resignation on December 31, 1985, his job was to gather information, "to write it and make sure you've got the proper information" and to disseminate the information.

Purpose and Planning: Communication expert #4 was the "chief cook and bottle washer" - "one-man department." He thinks that the goals of disseminating agricultural information to farmers in rural communities was "to communicate and then to understand the farmer." Although he did not state what to communicate to farmers, he claims that it can only be done by spending "a lot of time developing contacts, developing credibility and then trying to get the information ..." He feels that the goals are determined by experience and he learned his job basically by doing it According to him,

> Basically you listen to the rural community, you find out from industry people and then determine what you feel are the goals for the audience you have before you.

Although the final goals were determined by the general manager and himself, they sought ideas and opinions of "fellow journalists and the rural community" they were directing their broadcasting. In terms of determining the contents and topics of broadcasts, communication expert #4

follows "the current information, the current news" and "the seasons of the year." Some of the actual contents were determined through "farm meetings," "good news stories, feature information" in which a farmer tells stories of his/her accomplishments. He claims to be "solely in charge of determining the topics" while the community (farmers) aid in determining the contents of broadcast. He feels that there were various target audience: "the farmer - the producer - [and] the producer's family." Other target audience includes "the farmer's wife," "the general public," and "the industry people" which he referred to as "the old grain trade."

Communication expert #4 thinks that the target audience was involved in the planning process "but not directly." He contends to have sought ideas and information from industry people "informally" and because of his established relationships, the industry peopleand the audience "were quite open with" him. "They could tell [him] what was going, and what wasn't going." He maintains that the target audience knows about the programmes through promotions on their radio stations; through "personal promotion - telling people directly off-air," through "the farm newspapers," and through :the local rural community papers." He claims that they "didn't have any major problems" during planning, rather they tried to have a "steady improvement in [their] broadcast[s]."

Production: Communication expert #4 produced his radio programmes in a specific way. He went out in the field - "to a farm meeting, to the farmer's yard, the farmer's tractor, whatever the case" - to conduct interviews; he conducted telephone interviews; he wrote up (edited) the information by taking "the best of that interview, go to the production studio and then put it together on tape." Communication expert #4 was mainly involved in the production process. He claims that his programmes were produced "Anywhere" - "whether it was Brandon or Winnipeg or Chicago or wherever, ..." He strongly contends that his production information was collected

> ... by doing interviews, by taking notes wherever [he] was talking to people and just keeping that information and using it to the best of [his] ability.

"Absolutely", he concedes the seasons of the year "really determined the content" and the kind of information to be broadcast. He recognizes the fact that "Radio is immediate" and his major problem was "Trying to get the information" on immediately. A second major problem was finding a person to interview, "talk to" and after being successful, the person is "unwilling to talk." A third problem was "the limiting time factor" of radio. To this effect, he cautions, "You have to be careful that you don't water [the information] down, ... so that you lose the meaning of the story." Finally, he claims that these problems were solved through "the credibility" he had developed in the industry.

Delivery: In terms of delivery, communication expert #4 claims that the 'ideal time' is different "for different farmers and is dependent upon the time of the year." "The ideal time, ..., would be anywhere from 6:00 to 8:00 in the morning and from 12:00 to 12:30 extended to 1:00 during the lunch hour." His actual broadcast time starts with "the farm almanac at 5:30 in the morning and ... goes through until 7:00 A.M. That's interspersed with farm news, regular news, sports, farm market informatiom, farm calender, upcoming events, and a current farm newscast." Other actual broadcast time is "between 12:00 [noon] and 2:00 P.M." He thinks that the actual length of programmes were very short; his "actual time probably was about fourty-five to fifty minutes" of agricultural information a day. According to him, "the ideal time for an individual slotted programme would be five minutes, but if you're going to use markets combined with it, twenty to twenty-five minutes is the other overal package."

Although he "had involvement [by] a lot of the newspeople at [the] station",communication expert #4 claims that he "was involved mainly" in the delivery process. He contends that the programmes took the forms of "interviews, some discussion," "commentary", and "regular farm news stories". He claims that "print" is used in conjuction with radio "but only on very specialized subjects and occasions". The print is also used "to promote an event, promote a meeting, to

promote something, ..." He thinks that "All farmers are individualists and independents". Thus, they listen to radio programmes "individually". "Secondly", he concedes, "there would be some 'family circles' that would listen, but by far, the majority would be individually". In terms of arrangement for feedback, he claims that the audience "knew that they could tell [broadcasting station/broadcaster] when they liked [the program], whether it was good information or whether [they] were missing". He also claims to "get some organized feedback" through dialogue by getting together "with small groups of farmers informally mostly, [and] sometimes formally, ..." but not on a regular basis. Communication expert #4's major problem during delivery was "lack of time. "He thinks that lack of time causes "a bit of lack of professionalism in putting together the program". He attempts to solve the problems by working

> harder at it. Concentrated more and ... instead of rushing on with information, [he] just made sure that [he] had researched it and written it and put it together well so that [he] wouldn't run into those problems.

Evaluation: In terms of evaluation, communication expert #4 feels that his programmes were very effective. He contends to "measure the success of a radio station by the number of listeners" it possess. He claims to have done evaluations in a variety of ways: firstly, "self-evaluation", secondly, "your boss's evaluation and thirdly, informal evaluations by your audience and friends

that you counted on doing that." He thinks that the total "radio audience" aimed at "was about 100,000 a week"; and that "95% of all the people in Manitoba can get [their] signal". He feels that "it's awfully difficult to determine ... the actual number" reached, but claims that they got "a good chunk." He feels that the target audience learned "current news, weather and market information". Also, "they learned reliability and ... when to get" the information. He strongly claims to have learned so much: "about agriculture", "about information", about "how things happen", about "how everything was really put together and how it worked and then ... to love people." He claims that "to get a consistent evaluation" was the major problem encountered, and as a result, they [the radio station] "were just careful how those kinds of evaluations were used."

Recommendation: Based on his experience, communication expert #4 made the following recommendations:

1. To develop "credibility", to know the "audience" and to know "what they want".
2. To use "expertise" and "get down to basics" in such a way that they will "understand it".
3. To "go down to the farmer" and "ask him how he did it"; "go to the expert" and ask him, 'how do you suggest it?' And then "put those two programs side-by-side".

4. To 'always keep your nose down', "don't look down on the people you are serving".

In sum, Communication expert #4 cautions

> You've got to learn your audience, you've got to go back there and not try and ram down their throats theories and things that work in Canada because what may work in Altona may not work in Steinbach.

Communication expert #4 thinks that the major pitfall to be avoided is to "turn off" the audience. Again he cautions: "..., you be careful that you don't turn off your audience before you've even started". He seems to forsee the possession of "good equipment", and the use of radio as a "propaganda thing" as a problem. He thinks that "people who are genuinely interested in getting the information to the producer" - farmers - will be capable of solving these problems. Finally, He thinks that the only way to resolve these problems is "to work at it."

4.6 INTERVIEW #5: SUMMARY ANALYSIS.

Personal Data: Communication expert #5 has been a "journalist" for thirty years. He spent ten years with a private broadcasting station, and twenty years with the Canadian Broadcasting Corporation (CBC). At the time of the interview, he was a "senior news editor" and the "legislative political reporter in Manitoba" for CBC. He was also a "senior producer and editor" which involved major news, special events and major world conferences, such as

the Commonwealth conferences. His major duties include "editorial lineups" - editing for the CBC major radio newscasts. Besides his experiences in the "Commonwealth conferences", communication expert #5 has "worked in Singapore and Jamaica" as "Senior producer and editor" of major newscasts.

Purpose and Planning: Communication expert #5 claims that his goal(s) of diseminating information is to provide farmers with "economic trends as [farmers] might be effected by government actions." He determines the goal(s) by talking and getting feedback from "farmers and agents"; and by asking: "what do these people need to know from me, and how can I mold or fold that into my political oriented stories ...? He claims to be "self-assigning." Thus he is in charge of determining the goal(s) "through [his] experience and background"; determining "what topics are going to be broadcast"; and the contents of broadcast.

Communication expert #5 claims to have two types of target audience: "the farm audience" and the "urban" audience. These "target audience, basically, [are not] involved in the planning process unless they are farmers ..." He asserts that the target audience knows about CBC broadcasts "because it has been traditional in the CBC to put aside that time of day for the farm audience." Although, if they are doing a "special program", the target audience will be informed through promotions. Finally, communication

expert #5 feels that his major "problems are deadlines." He thinks that "that's a personal problem, one of logistics, [but] not one of content."

Production: In terms of production, Communication expert #5 explained in detail, the production process of two major radio programs: "Sunday Magazine" and "Sunday Morning." In a nutshell, the production process follows these steps:

1. "Make up a list" of topics.
2. Conduct research on them.
3. "Decide what [the] major topics were likely to be."
4. "Send out telex messages" to "foreign correspondants" and "national reporters across the country and to any freelance reporters across the country or around the world, depending whether it was a national or international story."
5. Request their advice and contributions.
6. Collect advice and contributions through the "broadcast circuits."
7. "Edit ... to maybe a 15 - 18 minutes section, based on pacing, interest, entertainment value ..."
8. Broadcast.

Alternatively, they "do the programme live, with telephone reports." Communication expert #5 asserts that the programmes are produced in the CBC studio; and the information is collected "through staff members, reporters,

foreign correspondents and also freelancers." He feels that the seasons of the year effect and determine the kinds of information given to farmers. "For instance, in every spring, you're going to be looking for a flood story. In every summer, you're going to be looking for a drought story. Every fall, you're worried about, too much snow, ... Seasonal stuff."

Delivery: In terms of delivery, communication expert #5 thinks "that the ideal broadcast time[s] would be between 5:30 and 7:30 in the morning for agricultural information." He believes that "the noon to two o'clock period", which is his actual broadcast time, "is the best." In his own case, the lenght of programmes "varies. It's not a hard and fast thing." He concedes the "farm specialist" as one who is mainly involved in the delivery process. He thinks that the broadcasts are basically "discussions, ..., and interviews." He feels that "There are no formal arrangements ... for feedback although, I do get a chance to talk to a lot of farmers and agents. I get from them, informally, at least, some idea of the things that interest them and the kind of information they want to get from me."

Evaluation: In terms of evaluation, Communication expert #5 has "no way of evaluating those things [his programs], ... [has] no way of knowing how effective they are." He has "no idea" of the size of audience aimed at or actually reached. He explains: "Basically, in the news

department, we really don't care." He "doesn't know" what the target audience learned fron his program(s). "All [he] really knows is that they continue[d] to listen." But did not state how he came to know that the target audience continued to listen. Lastly, communication expert #5 guesses that the target audience learned "the sort of basic survival information, if you will, that they need." They learned "what kind of political decisions are being taken ..., that might affect them ...."

Recommendations: Communication expert #5 suggests getting "a radio into the hands of everybody." He feels that the "pitfalls to be avoided in any sort of broadcasting are talking down to [the] audience." Secondly, taking "it for granted that everyone understands the code words [technical jargons] involved." Finally, he cautioned: "stay away from taking it for granted that people know what you are talking about."

4.7 INTERVIEW #6: SUMMARY ANALYSIS.

Personal Data: Communication expert #6 has been "media specialist or communication specialist" for thirteen years. Her job as communication specialist is "to make Manitoba farmers, specifically, aware of government policies and programmes that might be of use to them and also to provide them with knowledge of technical information, production information, that kind of thing. Tools that they can use in

their farm business." Her major duties include "regular radio programming," "television programming," "newspaper and press releases, feature stories," and training of "other extension workers" as well as "assist[ing] them in doing audio-visual presentation to farmers." She performs these duties by conducting "interviews with farmers, preferably, industry or extension staff ...," by talking to "most knowledgeable" individuals, "pick up the information ... and script it ...." Thus, she suggests: "try and use a farmer to say what you want said."

Purpose and Planning: Communication expert #6 thinks that "the first and foremost goal" of disseminating agricultural information is to improve farmers' "farm management ability so that they can enjoy a better lifestyle ...." Thus, "everything we do is directed towards trying to help those people have a better quality life." She thinks that the goals are determined "first and foremost, by observation of the situation, deciding what the needs are .... Mostly [by] observation and discussion with the farm community." She feels that "the current minister of agriculture and his government has the final say," but contends that the goals are determined through "a joint effort." She explains:

> But really, I would say its a joint process, very much between the actual government, civil service and the producers themselves who will be affected. Industry is involved.

Communication expert #6 claims that the topics and contents of the broadcasts are determined by its timeliness and importance to farmers. "Sometimes, things are very timely. Sometimes, the topic is decided because a new programme has just been announced or there has been a weather crisis, ... a foot of rain on the ground. Is there any hope of getting the grain off the fields? Certainly, that decides [what] the topic of the broadcast is going to be for that specific time. Otherwise, they would tend to be determined" by listening and asking, "what are people interested in now? What would be topical? ... sit down with the beef specialist and say, what have you been doing a lot of these days?" She claims that "whoever is doing the interview" is in charge of determining the topics and contents of the broadcats. According to her, they are determined "arbitrarily by the person doing the interview. We would decide what were the key things."

Communication expert #6 feels that the target audience varies. "It can be a general farm audience. It can be directed at a specific segment say the beef producer, the dairy producer, the rape seed grower, the alphalfa seed grower. It varies with your message whether it is something of interest to the general farming community." She strongly feels that the target audience is "informally involved" in the planning process. "There isn't a formal planning process, but through general discussions with ... producers

and extension staff who would be responsible for that specialty," they are involved. She notes that the "Country Comment has been on the air for years in Manitoba. Some people have listened to it forever, [and] it's generally placed in the farm broadcast periods. So, if they [farmers] are to listen to a farm broadcast on a station, they are going to catch the program." That's how farmers know about her broadcasts. Also, some special programmes are "advertised" and "promoted heavily by the radio station ...." The major problems she encountered during planning is "other people that [she is] working with. ..., they never want to make a committment to [planning] and they never want to put the time to do it .... It can always be put off." She strongly contends that the solution to this problem is "flexibility."

Production: Communication expert #6 produces her programmes as follows: "Determine the interviews, do the interviews, listen to them, time them [and] ... edit." She indicates that the "audio technician," who "takes care of all the actual editing [and] re-recording," and the secretary who "types out the inserts ..." are all involved in the production process. "Its a three person thing." She feels that the interviews could be recorded at any place: "... somebody's kitchen, a barn, a feedlot," the editing takes place in the office and "the actual recording of the master tape and dubbing is done ... in the studio." The

information used for production is collected through "on site interviews with producers or extension staff or industry people, [and] some studio interviews, if you 're dealing with specialist ...." "Definitely," the seasons of the year affect the kind of information given to farmers, she claims. She "indicates that interviewing" somebody who is afraid, ... a person who is nervous" may be a major production problem. Further, she claims that the "distance" to travel is a problem. To drive "well over one hundred miles to do [an] interview for a tape that is going to last for two and half minutes." But she "can't solve" this problem, rather she tries to "get better mileage out of the trip by spending the day with the local staff," other farmers and writing a press release.

Delivery: Communication expert #6 feels that the ideal broadcast times to farmers would be "very early in the morning and somewhere around the noon time from, ..., 12.30 to 2.00." She claims that "Most farmers have their radios on when they 're having breakfast." Also, "they are very much trained for the noon slot farm broadcasts." Thus, her actual broadcast times ("the regular Country Comment runs generally in the noon slot.") are "early in the morning [and] at noon." In terms of the length of her radio programs, "... the Country Comment is 21/2-3 minutes. The special programming, like the home study programs, those are five minutes. Impact kind of things would be at a maximum, ninty

seconds, preferably less, news items, that sort of thing ...." The programmes are short "Because time is money for broadcasters. Because we have found out ... that the farmer is highly unlikely to sit and listen for ten minutes." She indicates that they are using radio "primarily as an awareness rather than, ..., as a full education medium." She feels that "the farm broadcasters, their programme directors, and the news directors and all of the aforementioned production people from the interview unit" are involved in the delivery process.

The forms of her programmes are "straight scripts" and "interviews." Straight scripts are used, especially, if "it is a very complicated subject and ... would be extremely difficult to cover in an interview situation." Communication expert #6 uses radio and print to "support each other." She does "a radio item as an awareness ... and put[s] a more extensive press release out. It gives a good deal more information, if possible, and [she] back[s] ... up ... a technical process ... with some sort of a handout sheet that gives all detailed technical information on the how to [do] in the simplest possible form, preferably, with diagrams and illustrations." In some cases, she uses "a radio item as an awareness item, ..., for a particular technique, method, message that [she wants] to get across. Then, have a farm meeting" with the "target audience" and some ... leading technical people ... who have got the information to deliver

...." These technical people uses "some posters." She uses "lots of slides ... for audio-visual presentation. "The field extension staff" and a "lot of video tapes" are also used. Thus, communication expert #6 uses a variety of media - prints, posters, slides, extension staff, press release and video tapes - in conjunction with the radio broadcats. She claims that farmers listen to the broadcast "individually or at lunch with the wife at the table." Although there are "no formalized structure for getting feedback from the target audience," she claims to "get lots of [feedback], mostly, because people will walk in the office or phone ... and say, 'I heard this on Country Comments or ... on CBC, What have you got about it?'" According to her, farmers do listen and respond. "Just make a mistake, its a great little pill for feedback."

Evaluation: Communication expert #6 doesn't "have formal evaluation techniques" but thinks that the broadcasts are "quite effective." She evaluates her programs by "asking [farmers] where they get their information" on an "informal basis in a local area." Also, She claims that the Manitoba Department of Agriculture, Communication branch "has done surveys, asking [farmers] where they get their information." Further, she contends to get "more ... informal feedback from staff and farmers." In terms of 'size of audience', she is "trying to hit all the farmers in three (Interlake, Eastern and Central) regions." She claims that "the Country

Comment programme would be aimed at trying to reach every farmer in Manitoba" however, she concedes that "that's impossible." "The biggest thing" she thinks farmers learn from her programmes is "where to get information." She indicates to have learned "thousands of things. Its a tremendous experience for me." She has had "the opportunity to talk to provincial specialists, international researchers, scientists, [and] farmers who are doing things on their farm. The opportunities are absolutely endless."

> The knowledge that I have picked up, both general and specific, ... is just marvelous. Its better education, in some ways, than going to university for fifteen years because you 've got such a broad spectrum. It's just great, the opportunities and the people are so terrific.

Her major problem during evaluation "is the evaluation itself. There is no way of doing it statistically and accurately. ... they tend to evaluate the effectiveness - how effective the information has gotten out [but] not how it got there." The "only evaluation that matters to me" is finding out if "something change[d] on their farm or their operation because they heard that program." Unfortunately, she knows of "no way of getting that kind of specific information." Hence, "don't have [an] answer to" the problem.

Recommendations: Communication expert #6 thinks that radio "is basically a way of creating awareness and starting thought." She feels that "it must be backed-up, somehow, by person-to-person contact [and] by demonstrations." She gave

a long metaphorical example which, in part, can be interpreted thusly:

1. Tell them what you want to tell them;
2. Show them what you told them;
3. And everyone could do it.

According to her, "its a great way of getting people thinking. Its a great way of ... becoming aware of changes they can make, of techniques that are available to them, of people that are available to them, ... But it has to be backed up by more." She thinks that "Trying to put too much information" in a programme is a pitfall to be avoided. Another is "timing for [one's] convenience, for the broadcasters convenience, rather than for the audience convenience." In reflection, she recommends keeping the programmes "short and concise [because] people's attention spans are not that great." And to "better know when [the target audience] are prepared to listen." The "biggest problem" she foresees for the uses of radio in a developing country is:

> ... encouraging people to actually start to listen to it; to actually think of it as ... something they want to do on a regular basis to get information.

She strongly contends that these problems can be solved by

> Someone who has a good relationship with the target audience. Someone whom they trust and respect. Ideally, someone who isn't head and shoulder above them.

According to her, they "have repeated[ly] found ... that the best extension worker is the well-respected farmer in the community. If there is a natural leader or someone who tends to be respected as the guy who has done the best job with whatever he's got, that person is the most capable of encouraging people to make use of that new resource. If you are the person who is initiating the things, its up to you to find that person[s] and get them on your side." In terms of approaches for problem resolution, she recommends the use of:

1. ... extension advisory groups ... formal organizations consisting of people from [the] target group.
2. ... those individuals in the community to try and identify what is most important to be said.
3. Community involvement.

She feels that "the person who is actually doing the programming" should get out in the community and become known "so that people [will] feel comfortable with him, or so that he or she is one of them. Finally, communication expert #6 concludes the interview by indicating that "knowing your audience is the biggest thing. [That] you can't really know them unless you 've spent time with them, seeing where they are now because you always have to start from there."

4.8 INTERVIEW #7: SUMMARY ANALYSIS.

Personal Data: Communication expert #7 has been a "media specialist for twenty-two years." His job as a media specialist is to extend practical agricultural information, as well as government and departmental policies to rural farmers. His major duties include the production of radio, and some television programs; and publication of press releases. Communication expert #7 performs his duties by planning and coordinating, by direct interviews with farmers, and by editing and preparing the radio programmes that goes to rural Manitoba.

Purpose and Planning: Communication expert #7 claims that the goal of disseminating agricultural information is to improve farmers' "income and standard of living in rural manitoba." He thinks that the goal is determined through "planning processes with staff", but concedes that his director and other regional directors are in charge of determining the goals. He contends that the topics of broadcasts are determined in two ways:

1. Through identifying the major concerns of the production people (farmers) in each region and interpreting them to determine the topics.
2. Through "unplanned" events - topics determined as a result of emergency - e.g. crop disease.

He claims to be in charge of determining the topics, and sometimes, with the assistance of a specialist in that particular area, e.g. crop specialist. He affirms that the contents of broadcasts are determined through "consultation" with some individual such as "specialists, agricultural representatives and/or farmers." But contends to be in charge of determining these contents. He has two kinds of target audience: "farmers in most cases", and "in some cases, the urban people." He claims to occassionally involve the target audience in the planning process through "surveys" and by sending "questionnaires" to them. He feels that some of the target audience knows about their broadcasts through "promotions by the radio station."

Production: Communication expert #7 produces his radio programmes by: 1. Conducting interviews and recording them on tapes. 2. Editing and scripting the interviews. 3. Re-recording/re-taping the interviews to produce the final product. Communication expert #7 and a technician (who puts the tapes together) are the only people involved in the production process. According to him, the programmes are produced "initially in the field and put together in [his] office." The information used for production are collected through "straight interviews with farmers and agricultural production people." He strongly feels that the seasons of the year effect the kinds of information given to farmers. For example, we cannot provide information on "winter

feeding of beef during July" (summer) nor can we provide information on "forage harvesting" in January (winter). His major production problem is to decide on the appropriate person to interview. He claims to solve this problem through "experience" and "consultation" with extension agents and farmers.

Delivery: He feels that the ideal radio broadcast time to farmers is "between 12:00 to 12:30." Examples of actual broadcast times are between 6:00 to 7:00 p.m., 7.00 to7.30 a.m. and 1.00 p.m. He claims that the lenght of his programmes are between two to three minutes, because it is convenient for the radio station. He feels that any time longer than three minutes "may not be desirable." He claims that, since the broadcasts are "pre-taped items", himself and the technicians are involved in the delivery process. He contends that the programmes take the form of "interviews and scripted commentary." He claims to use television (filmed items) and press releases (print) in conjuction with the radio broadcasts. He thinks that the "majority of farmers" listen individually while in their cars, tractors and barns. He feels that there should be some kind of arrangement for feedback from farmers.

Evaluation: Communication expert #7 claims that there are "no documents to say how effective" his programmes are. He evaluates his programmes through "general feedback from staff and the target audience." He supposes that the size of

audience aimed at is "all Manitoba farmers." In terms of what the target audience learned, he thinks that "they're kept aware of timely agricultural production and management information to the extent of [their] programme topics." He concedes to have gained "more practical understanding of agriculture and its problems ... a better understanding of what the on-farm problems are ... and also the complexity of those problems." He feels that "trying to get an accurate evaluation is probably the main problem." Also, trying to find out "what people really feel about the programmes and how they can be improved and be more effective" as other problems. Finally, Communication expert #7 feels that these evaluation problems can be resolved by "Asking perhaps more relevant questions in the evaluations and the questionnaires", and by trying to "avoid biases."

Recommendations: Communication expert #7 recommends keeping "the radio messages [programmes] fairly simple and understandable." He thinks that the pitfalls to be avoided is being "too specific. Be fairly general. Yet detailed enough that they can get guidance in a particular practice", he suggests. According to him, we should not "lead people to think that [the] message is the ultimate and final answer rather that they are guides and suggestions." Finally, he feels that the programmes "should be presented in such a way that the user can relate his own situation to it and not get trapped into ... he has to adjust and adapt the practice to suit his own particular situations."

4.9 INTERVIEW #8: SUMMARY ANALYSIS.

Personal Data: Communication expert #8 has been a "farm news broadcaster" for twenty-one years. His job as a communicator is to "gather agricultural information from various organizations that are directed to farmers and to put the information in the simplest form possible and transmit to the listening audience." According to him, his major duties are, "... gathering newsworthy agricultural information, putting it together in the simplest form possible so that the listening audience can understand it and putting it on the air." He claims to perform his duties - gather the information "By attending various agricultural conventions, talking to the farm people that are directly involved in farming."

Purpose and Planning: Communication expert #8 thinks that the goal of disseminating information is to provide farmers with "information of what is upcoming." He claims to be in charge of determining the goals, the topics and the contents of broadcasts. He contends that "The farm community - The rural listener" are the target audience, and they are involved in the planning process. According to him,

> ... indirectly they are ... because the target audience is the farm community and the farm community is a member of these agricultural associations and when they hold their meetings and the information that comes out of these meetings, they determine. It's their comments.

He feels that the target audience knew about their programms "mainly through the habit of promotion of the programme itself..., through the habit they get to know they're on." He claims not to have encountered any problem during planning.

Production: Communication expert #8 contents that the programmes are produced by "Taking the small tape ... and a microphone out into the area, talking to the people, just carrying out interviews." He then takes the interviews and "organize them at the studio ... and prepare them for the air." He claims to be the only person involved in the production process, and that the programmes are produced in their station. He collects information for production by "Circulating the rural community [and] Talking to the people." "Definitely," claims communication expert #8 that the seasons of the year affect the kinds of information given to farmers. For example, "During spring season you talk about moisture conditions, ... fall season, you're getting into your harvest situation. ... And in the Winter, it varies greatly ... " His major production problem is "everyday problems. We have our breakdowns."

Delivery: Communication expert #8 thinks that the ideal broadcast times "could vary in some areas" but should be "anywhere from 6:30 to 8:00 and 12:00 and 1:00." His actual broadcast times are : "6:45 in the morning " for a five minute farm market; 7:25 for a five minute farm news; and

"During the noon hour, between 12:05 and about 12:10, depends on the length," for farm markets and "about ten minutes of farm news following that." He claims that his programmes are "five minutes each" in the morning and about "fifteen minutes during the noon hour. He concedes to be the only person involved in the delivery process. And that the forms of the programmes are "Largely interviews", "strictly written copy" (scripts) and some commentary. He feels that his programmes are not used in conjunction with other media, but seems to say: "Just occasionally." He thinks that the farmers listen "Individually." According to him, there's "No definite arrangements" for feedback, but he claims to get feedback "just from contact with people."

Evaluation: Communication expert #8 evaluates his programmes from the comments of the "listening audience" and through "self-evaluation." He thinks that the size of audience aimed at is very large - "the population within our listening area...." But claims that "it's difficult " to say the size actually reached. He feels that what the target audience learned from his programmes "depends on the topic." He feels that the whole programme is "an educational process." Thus, he claims to have learned whether he is "improving or going backwards."

Recomendations: Communication expert #8 recommends "Keeping the information direct, simple and putting it across in the simplest form so that your listening audience

can understand it." He thinks that a pitfall to be avoided is "Getting too technical on a topic."

4.10 INTERVIEW #9: SUMMARY ANALYSIS.

Personal Data: Communication expert #9 is the "general manager of the Keystone Agricultural Producers, ... a lobbyist on behalf of the farmers in the Province of Manitoba." He has been in "this sort of business for just about thirty years." He was involved in the former Canadian Farm Radio Forum. His job at that time "was simply a representative of the farm organization office working with the Farm Radio Forum Board." As major duties performed, he "supervised the operation of Farm Radio Forum and ... [sets] up workshops to help people that operate[d] Farm Radio Forums."

Purpose and Planning: Communication expert #9 thinks that the goals of disseminating agricultural information were "to get farmers to examine and look at farm policy questions."

> There were two kinds of information on Farm Radio Forum. There was some technical information in the sense of technical farming but I think the more important part of it from Farm Radio Forum point of view was the broader discussions on economic and social policies and possible solutions to issues.

Communication expert #9 strongly contends that these goals were determined "primarily by consensus." And that "the Farm Radio Forum Board, nationally ", the provincial staff units

and the "liason with the farm groups" were in charge of determining these goals. He thinks that the topics of broadcast were determined by the Board in consultation with the CBC radio, but the Board "had the final say." He feels that the contents of the broadcasts were determined by "the people that were operating Farm Radio Forum [The Board] and the Canadian Broadcasting Corporation [CBC]."

Communication expert #9 claims that the target audience was "farmers" and people in the "rural areas." He argues strongly that the target audience were involved in the planning process. He provides two major kinds of involvement:

> One is, the Farm Radio Forum groups had a representative body in which they had some voice in what happened and then there was the consultation with the existing farm organization as well.

He claims that the target audience knew about the programmes in two ways.

> There was a brochure issued giving the dates and times and subject matters, and then the radio itself, CBC, Canadian Broadcasting Corporation did spot announcements.

Communication expert #9 did not conceive any major problems during planning but feels that the difficulty was to "keep it up-to-date and current with the issues." He explains: "With the decision in the month of September for the following winter season we found that sometimes we got to January and then we would cancel the programme and put a new one in because there was a new issue. So I guess, that's

the biggest problem. To keep it up-to-date and current with the issues." He claims to solve this problem by "leaving some flexibility in the programming."

Production: Communication expert #9 indicates that the programmes were "panel discussions:, "some dramas" and "some straight talks ." He concedes that "the national staff of the Farm Radio Forum and the Canadian Broadcasting Corporation staff" were involved in the production process. He claims that the programs "were produced nationally in different parts of Canada and sometimes ... in the province or in a region." He seems to indicate two types of programming: the "national" and the "regional or provincial." He thinks that the information used for production was collected by

> ... going to the sources of people who have a good deal of information. Whether that was agricultural extension people, or whether that was university people, or government, or private.

He thinks that the seasons of the year affected the kinds of information given to farmers. kinds of information given to farmers. Also, he "wouldn't say there were any major problems"

Delivery: Communication expert #9 states that the ideal broadcast time is in "the evenings", and the actual times was "Monday evening at 8:30." He thinks that most of the programmes were "thirty minutes" long. He claims that those involved in the delivery process "varied, depending on what

the subject was and what panel, or what presentation, ..."

He contends that the forms of the programmes varied.

> ... there were panel discussions, there were debates, there were lectures, there were interviews. You know a whole variety of presentation.

He recalls that the broadcasts were used in conjunction with "the print[ed] media." He explains why:

> ... I think that print media is quite important because there was often quite an additonal piece of information provided which really helped round out the programme if you wanted to get more detail.

Communication expert #9 claims that "almost all" farmers listened "in small groups of farm families." He thinks that "there were three, four or five families coming together' while others listened individually. In terms of the arrangements for 'feedback' from the audience to the broadcast station, he expounds:

> They had a discussion Kit and often had forms or questions posed to them and they answered them as a group and provided answers back, at which time summaries of the answers from all the discussion groups, ... were broadcast five minutes at the end of the show. saying ... ' on the subject of international trade, 43% of the group reporting said they favoured this ...'

"It was a very informative feedback from the groups all around", he argues. Comunication expert #9 feels that the major delivery problem was the "difficulty [of] getting people to get together on an evening ..." He claims that "there was some intentions" to solve this problem "but ...in those years, the 50's, we didn't have tape recorders like we have today." He explains,

> ... there were some attempts to tape it and play it later and so on, but we really didn't have the technology in those days to do it.

Evaluation: Communication expert #9 claims that the Farm Radio Forum programmes "were excellent" but thinks that "they ran into a problem because of ... the whole changing society, it didn't quite fit. But at one time, we were quite effective." He seemed to claim that "there was no evaluation at all", but feels that the weekly report and "a big evaluation at the end of each season" was done. These evaluations, he contends, was done by having the "representatives of all areas ... come together and talk about it." He indicates that "the farm audience at one time was 30,000 and ... got up to reaching half a million." He thinks that "there was a lot more learning and information going on than [they] realized was happening." He claims that farmers learned "how the system works, ... and national perspective on things ..." He concedes to have learned more in "terms of the organization and carrying out of the broadcasting and the feedback." He thinks that the major problem encountered during evaluation was "trying to figure out whether [they] were doing the things that the farm population wanted [them] to do." But he indicates that "you never solve it, you just keep struggling with it." He feels that the the only way to solve the problem is "to perfect [the] evaluation procedures and to ensure [that they] were getting as good a meeting as [they] could." He evaluates:

"Obviously, we didn't do all that well, becauses if we had really been doing it, probably Radio Farm Forum would not have died, it would have changed to something else."

Recommendations: Communication expert #9 claims not to know the Nigerian "situation well enough" and thus, did not recommend any approach. After some probing by the interviewer, he suggested going "back to [the] whole Farm Radio Forum thing." He thinks that the pitfalls to be avoided is starting a programme without committment by farmers. He advises as well as cautions:

> ... start by asking questions of the farmers. ... if such a program was provided would they want to participate? You don't start the programme until you get a fairly good committment out there that they want it.

In terms of problems foreseen for the uses of radio in the agricultural extension services of a developing country, he raises the question: do "farmers have ... radios?"

4.11 INTERVIEW #10: SUMMARY ANALYSIS.

Personal Data: Communication expert #10 is "an agrologist, a member of the Manitoba Institute of Agrologists ..." He is "the principal of the Agricultural Extension Centre, an adult education centre for rural people," in Brandon, Manitoba. He has been with "the Manitoba Department of Agriculture for thirty years, ... the last seven" years as a principal. Before this position, he was "either an extension agent or county agent, agricultural

representative for three years and ... a media specialist in communications, radio, televison, film production for Manitoba Agriculture" for "about twenty years." His job as a communicator includes "using the radio and other media to reach farm people, primarily to inform them of upcoming courses ... at the centre ...," to organize and coordinate interviews for "the farm media," to "promote workshops and other things like that." He has had some experience in developing countries. He was "in charge of a youth project" in the Carribean Island of St. Lucia, ..., where he worked with the "local people ... for about a month in 1967." In 1972, he was in Nairobi, Kenya for a month as a "Commonwealth foundation exchange partner with a farm journalist from Kenya." Finally, he was an employee of the "united Nations, the Food and Agrculture Organization (FAO) for a year in 1978-79.

Purpose and Planning: Communication expert #10 indicates that "there are a number of goals for disseminating agricultural information to farmers in rural communities.

> First, it's to inform people of other available information, ... tell them about events that they could attend, where they could pick up information on their own. Number two, there is quite a lot of direct information on how to grow, how to farm, basic information. Now is the time to plant ... now is the time to spray ... Thirdly, there is also good information and it's sought after by farmers as to what the prices are today, what the market is like, when you should sell your wheat because the market is such and such, or what the prices are of your livestock, and so on.

Also, he thinks that, in the early days, there were programmes that basically were entertainment programs, with a rural flavor to them," but today, "entertainment is not a role of the agricultural media per se." He claims that these goals are "determined basically by the requirements of the farming public. ... by sort of a trial and error basis." He feels that " the programme directors and the farm directors" on each radio station are in charge of determining these goals - "because of the revenue." He claims that the topics and contents of broadcasts are determined by "what is topical today," and "by mingling and talking with farmers on a regular basis." He feels that "the farm director or the person in charge of the programs" - "usually the farm broadcaster is in charge of determining the topics and contents of the broadcasts."

Communication expert #10 contends that "the target audience is obviously the farmer and his family." He feels that the target audience are "not very often, hardly ever" involved in the planning process. According to him, "they're involved if the farm director chooses to send out a questionnaire" or asks them to 'phone in and tell me how you feel about this'. He thinks that the target audience knew about the broadcasts through promotions. He claims that the major planning problem is "time. ... just getting the time to get the information put together," and that this problem is solved by "Working fourteen hours instead of twelve hours a day."

Production: Communication expert #10 "really doesn't have a programme of [his] own," but produces radio items by recording them on a cassette or a "reel-to-reel recorder." He is the only person "involved in the production process because there's nobody else around ... to do it." He thinks that "a portion" of the programmes (items) are produced in his office (Brandon) while the rest are done either at the radio station and/or "the Department of Agriculture" in Winnipeg. He feels that the whole information for production is "in [his] head." He claims to have "done it for twenty years, so [he] doesn't have to collect it." After much probing, he concedes to "record it on a reel record tape or a cassette tape and ... mail it to Winnipeg." He strongly contends that the seasons of the year "really affect the kind of information" given to farmers. According to him, There's no use talking about snow removal in the livestock yard when it's the middle of July." He thinks that "equipment problems" are the major production problems encountered, and he claims to solve this problem by "doing it right the first time and trying to be more careful."

Delivery: He feels that the "ideal broadcast times for farmers" are from "7:00 to 8:30 A.M. and certainly from 12:00 until 1:00 P.M." He claims that it is "changing because more and more farmers have radios in their tractors and their combines and they listen to the radio all day long." He does not "have a programme per se" and thus, do

not have 'actual broadcast times'. He feels that the items (programmes) he produces "are rarely more than two minutes" because they form "part of another program." He claims that the "farm radio broadcaster" is involved in the delivery process. According to him,

> The programmes are in the form basically of interviews. Rarely debates, sometimes discussions, not very often lectures.

He thinks that the "interview format" is mostly used because "it's been proven that that can be the most informative or the most interesting way of getting information across."

Communication expert #10 claims that his radio items are not used in conjuction with other media, but he "sometimes records items and take slides to go along with them and that finds its way into television." He thinks that farmers listen, "almost invariably, [in] family circles or individually." He feels that the arrangements for feedback from audience to broadcast stations "really doesn't exist." Finally, his major delivery problem is not "getting enough time to do it." He attempts to solve this problem "by trying to allocate more time to it."

Evaluation: Communication expert #10 thinks that "it's difficult to evaluate" radio programs (items) because they may only be used as "a final reminder." He claims to be "a pretty good judge" and as such, does "self-evaluation." He feels that the size of audience aimed at are those served by the farm radio station"; but claims to "actually hit 10,000

people or 15,000 people or whatever. But it's rather difficult to know for sure" the size actually reached, he confesses. He concedes that farmers learned what the interviewee - "the farmer has to say or the research person has to say ..." He claims to learn new information while giving it to the public. According to him, ... if I ask someone how to control weed in your lawn, the public hears it and they learn, but I learn too. Finally, his major evaluation problem is not "getting enough time to design an evaluation form."

Recomendation: Although Communication expert #10 concedes that "the agricultural extension services of a developing country are in a far better position to" recommend approaches, he suggests the following:

1. Stand back and let them do it themselves because they probably know best.

2. ... as much as possible, utilize the language of the people you are talking to and probably do not do radio programmes in English if in fact most people really relate better to a tribal language of some kind.

3. ... the programmes should try to be informal as opposed to ... [being] very dictatorial.

4. You've got to know who your audience is, and you've got to always keep them in mind.

5. ... gradually bring a good idea from a good producer, but bring it in as a single subject ...

He thinks that the pitfall to be avoided is using radio as a "political propaganda ... political message." In terms of problems foreseen, he raised two question:

1. ... what's the availability of radio in the communities you are trying to reach?
2. What's the attitude of the government?

He thinks that "getting trained radio anouncers and farm directors who can talk about farming and yet not sound like big government officials of some kind; who can relate well to the people in the country and still not preach to them" may be a problem. He thinks that "people ... who have chosen to learn more about farm radio from other countries ... are probably in the best position to go back and advice." According to him, "that's the best approach to resolve these problems. ... its presumptions for people, not from the country, to think that they know what the best approach to resolve problems in that country. Really, you know best."

4.12 INTERVIEW #11: SUMMARY ANALYSIS.

Personal Data: Communication expert #11 has been "the director of farm news at the CKX" radio-television station in Brandon, Manitoba, "for approximately two years." His job is "to provide the most accurate and concise news on the agriculture scene to producers" - farmers in Brandon; and to provide "market information on commodities." His major

duties include: the provision of "two television casts a day ... [for] approximately eight minutes ...; the provision of "a half-hour television show each week at 6:30 P.M. on saturdays and it deals specifically with agriculture and agricultural issues and how they relate to [the Brandon] area; and the provision of "five radio broadcasts a day with news." He claims to perform these duties in a variety of ways: by using the "human resources in the station ...; [by] tracking down leads, talking to people, picking up things and looking into them ... discovering news stories ...; [and by using] the news that ... comes off national wire service."

Purpose and Planning: Communication expert #11 contends that the goals of disseminating agricultural information are "to provide the information in both news and in the markets that are necessary" after getting a "good grasp on what they [farmers] need to know"; and to use "research institutions and universities' research stations, government agencies, taking their reseach and making it less complicated, and breaking it down into everyday language that makes producers more aware of it so it's easier for them to understand." He thinks that the goals are determined through discussion "with producers to see what their needs were"; and "in consultation with producers and farm organizations." The topics are determined "from a lot of other experts ... talked to ...." He claims that the contents are "a priority

- oriented thing" and are determined by asking, as well as answering the questions: "Which of these stories is going to have the most effect on farmers in this area?" He feels that the "Farm News Director," based on his experience and contacts with the agricultural community," is in charge of determining the topics and contents of the broadcasts.

Communication expert #11 asserts that the "agricultural producers" are their target audience, and are "very definitely" involved in the planning processes. He feels that they are involved "through producer organizations," and by going directly to a farmer who made a new discovery and "put him on the air and pass the message on through him." He claims that the target audience knew about their broadcasts because they "have been doing most of them at the same time for so long," but if they "do anything new, [they will] promote it just by using the advertising facilities of the station."

Production: Communication expert #11 claims that the radio "news stories" are read on the air "live," while "the condensed features" are "pre-recorded interviews." He contends to "do all the technical production and content, but concedes the fact that there are "two people in farm reporting." The radio programmes are "produced in the station at 2940 Victoria Avenue, in Brandon; and that the "radio editing [is done] in a radio editing suite or news booth, depending on whether they're taped or live." He

claims tho collect "about 70%" of the production information "through the resources in the station ... our reporters and connections ... The other 30% or so comes from the national news service on the BN wire." He contends, "very definitely," that the seasons of the year affects the kinds of information given to farmers. Finally, he claims to "have excellent facilities" and as such, did not encounter problems during production.

Delivery: Communication expert #11 thinks that the ideal broadcast times are "mornings" and "during the noon hour." According to him, ... any time between six and eight o'clock are the best times to reach farmers because a lot of them are either in the yards servicing equipment, getting ready to go to fields, getting the day's preparations underway where they're within range of a radio or they're actually in the house having their breakfast. His actual broadcast times varies, "based on the season." There are "three radio caps each morning at 6:55, 7:20 and 7:55; ... a 12:30 and 5:25 ... actual newscasts." Also, there are "regular market features, ... the Grain Market News at 10:00 A.M., ... the Brandon Pool Livestock Report .. at 12:07, the final closing grain prices at 2:00, and the closing livestock review at 5:35." The length of these programmes ranges from thirty seconds to ten minutes.

He contends that only two people - he and the assistant - are involved in the delivery process. He claims that the

radio programmes take the form of "straight read presentation ... Using ... voice clips from people involved in the news ..."; while the "Agriview" - a half-hour television show - uses the above form, plus "an interview segment where ... an important agriculture - related person" discusses a topic on the set; and the "feedback" in which they will "sit down with three farmers for approximately five minutes during the show and ... discuss whatever they want to talk about - whatever concerns they have, whatever is bugging them." He "obviously use other mediums" in conjuction with the radio broadcast but uses television to "repeat" the radio messages. He thinks that farmers listen to the broadcast in 'farmily circles' during meals and "individually while producers are in the fields, working in the yards." The major delivery problem is "making sure that we are passing on useful information, because ... we have a tendency sometimes to pass information on what is either useless or in some cases, insulting to our rural audience. He claims to solve this problem by making his workers "aware and understanding the importance of the information they're dealing with."

Evaluation: Communication expert #11 "really can't give ... a guage on how successful" his broadcasts are but thinks that they are "very effective." He contends to have evaluated his broadcasts using "a survey form at fairs," and the BBM (the national rating service) which tells "how many

listeners [a] radio station has." The size of audience aimed at is "something like sixty-five hundred farmers" while those actually reached is "approximately six thousand farmers in the age group of 20 to 45 ...." He claims that the target audience learned the "market information, ... upcoming events such as seminars, meetings, ... new development or new technology or whatever ..." He claims to have learned "a lot of technical data ... a very well-rounded concept of agriculture, particularly on a national scale." Also "It would be really hard for me to sit down and tell you exactly what I learn, but I find it really keeps me up-to-date on what's happening." Finally, he suggests staying "in contact with producers, with the farmers, the people that are doing the work, then you're going to know whether you're giving them what they want or not, if they're making use of what you're giving them."

Recommendation: Based on his experience, Communication expert #11 recommends the following:

1. "That the person who is giving agricultural information is from there, and understood and could relate to the people."
2. To "have a good working knowledge of all the basics ...."
3. To "use radio as an eye-opener," not so much as trying to get too technical.

4. To use "the print or personal contacts" when it gets "down to the technical parts and that type of thing ...."

He explains: "... in order to get the information across, I think you have to have someone who's from them and can understand and deal with that." He thinks that "the wrong person trying to put the information across is one of the most important" pitfalls to be avoided. Another is to give information that is not "relevant to the area." He foresees getting farmers to listen, and "... the follow-up ... [to have] materials available for them and accessible to them" as the major problems. Finally, he suggests: "When you start your programs, you have to make sure you're aware of what ... you're doing, because you could be talking all day, and if nobody is listening, it doesn't do anybody any good."

4.13 INTERVIEW #12: SUMMARY ANALYSIS.

Personal Data: Communication expert #12 is the "Farm Director for radio station CKLQ" in Brandon, Manitoba. He has been at this post for fourteen months. His job as a communicator is : (1) to cover "the news -- that is anything of a local nature or of an international nature that has an effect at the local level;" and (2) "to cover the market which is of a local nature, ..." His major duty is to " make sure that information [which] comes to the radio station that is of an agricultural nature ... [gets] across to the people."

Purpose and Planning: Communication expert #12 thinks that the goal of disseminating agricultural information is "to inform [farmers] what's happening elsewhere, and how that may affect them.

> Farmers have to realize what is happening on a world level -- what is happening for example in Europe that might be affecting them in terms of will they be able to sell this year, what prices can they expect, what's happening across the border to the south.

He claims that the goals are determined by "much a judgement call on [his] part - I have to determine, ... , I have to decide if it is important." And that he is solely responsible for determining these goals - "..., yes, I make all the decisions ." He concedes to determine the topics and contents of broadcast by filtering down "whatever is important...." and have an effect on the farmer at the local level. ... and then localize it for Manitoba ..." Again, he claims to be solely responsible for determining the topics and contents of the broadcasts. He feels that the target audience is "primarily the farmer, and secondarily, the consumer in the area encompassed " by their broadcast range. He contends that the target audience is not involved during the planning process. He feels that the target audience knew about the broadcasts because they

> are on at the same time each day. It's scheduled into the programming, and for the most part, it is by experience [that farmers] know when it's on. Although, at the end of each newscast, we do mention when the next [news]cast or markets will be at a certain time.

Though, not stated clearly, his major planning problem seems to be the time to plan and make the "judgement call[s]" on him.

Production: Communication expert #12 produces his radio programmes by interpreting the stories from the 'wire service', add the information collected at meetings - "news events, ... edit them for ease of reading and sometimes check to make sure that the information is correct ... and then give the voice clip to back that up." He claims to be mainly involved in the production process," and to a lesser extent ..., the person who is in the control room at the time" - the announcer. "The preparation work [production] goes on in the news room and the actual airing goes on in the news booth." The information used for production is collected through interviews and "voice clips [received] on an audio wire service..." He strongly feels - "Yes. Most definitely" - that the seasons of the year affect the kinds of information given to farmers. According to him, "If we're into the production season, the crops are in and such as last year when we started to have drought conditions then farmers want to hear not only what's happening here to their neighbour, but also what's happening to their neighbour across the border, in Canada or in the States. So one has to be seasonal, yes." His major production problem is not getting enough voice clips from the wire service, and the difficulty of tracking down "the people who are actually making the news."

Delivery: Commuication expert #12 thinks that the ideal broadcast times "would be around six or seven in the morning, and ... in the first half hour of the noon hour." His actual broadcasts are aired "between 6:30 and 7:00 and ... in the noon hour in the first half hour, between 12:00 ad 12:30." For him, "The average newscast is five minutes long and the average farm markets ... is three minutes" long. He claims to be the only person involved in the delivery process. According to him, the forms of the programmes are "Very similar to a newscast where a story is presented as information and it will include, if possible, not the complete interview but the major point[s]..." He asserts that the broadcasts are not used in conjunction with other media. He feels that farmers "most often [listen] individually and secondarily, they listen in as a family circle." He claims that farmers "do have the prerogative "to phone in but there's no formal arrangements for feedback from the audience to the boradcast station.

Evaluation: Communication expert #12 does not know how effective his broadcasts are because he has "never really had any feedback. It is basically a presentation of information and is not intended for getting action out of anyone," he claims. As a farmer, he concedes to "know what affects other farmers." He claims to "have a listening audience, ..., of about one hundred and seventy-five to two hundred thousand" of which "farmers might account for less

than a quarter of that." But he feels that the target farm audience is twenty-five to forty thousand possible listeners." He hopes that farmers learned "what's happening to other farmers that may have also been affecting them, how others are reacting to the same problems that they have." He claims to have "learned a bit more about international agriculture - trade and the politics that go on." The major problems encountered during evaluation is "Lack of feedback." He thinks that this problem can be solved by having "an open-line programme in which farmers could phone in and air their views."

Recommendations: Based on his experience, communication expert #12 recommends:

> ... to keep in mind that you are part of the global agricultural picture, and if you have access to news stories generated in the developed countries, use them for comparative purposes, or at least, use them to inform your audience of what is happening elsewhere, and that if they do have problems they're not alone.

He thinks that the pitfalls to be avoided are "to give a detailed explanation of ..." and to have too long a program. He claims that "it's much better to learn in person and [that] radio is fairly impersonal." He suggests using radio "to give an idea [of] --- and where one might go to learn more about it." He seems to foresee radio ownership as a problem.

> ... here, all radio stations are independently owned. In Europe, the majority are publicly owned -- owned by the state. So on that basis it depends on the government of the time. If they are trying to improve the agricultural conditions in the

> country, then there should be no problem. But if [not] ..., then it's kind of difficult.

Finally, he cautions that "radio is a limited vehicle as opposed to television." If information is "kept brief , you can pass on a lot of information to people, but if you try to stretch it out, you start to lose them."

4.14 INTERVIEW #13: SUMMARY ANALYSIS.

Personal Data: Communication expert #13 has been "an agricultural broadcaster for [the] CBC radio" for twenty years. AS a communicator, his "job entails broadcasting farm news and market information to rural people, not only farmers but people who live in rural areas in [the] province." And also, "to tell people who live in [the] urban areas what's going on in the rural side ..." of the province. "Basically," he performs these duties "through a daily broadcast which runs from twelve o'clock to one o'clock over the noon hour period, five days a week, Monday through Friday." Communication expert #13 has a variety of experiences. He has "talked to a number of people from developing countries when they came to Canada; [and] ... have been to a number of different agencies and meetings over the world and around the world over time."

Purpose and Planning: Communication expert #13 believes that the goals of disseminating agricultural information are to give farmers "accurate and timely information about

market materials, political news, and news in general that would be of interest to people in rural areas." He feels that these goals are determined by a "team ...[of] three people that work together to do this on CBC radio. We basically set our own goals." But he concedes that the "management are the ones that ultimately set goals ... but our practice is that we set the goals together and those goals are basically accepted by management." He asserts that the topics and contents of the broadcasts are determined by "set items" and by "the timeliness of the topical items." He explains:

> Such things as market reports and weather reports are set and they are in the broadcast every day at the same time. So those topics are set and determined, and they don't change fairly often. The other topics that are discussed, which do change from day to day, are the timeliness of the topical items. ... that would be something that would be determined by the news of the day. So whatever is going on today ..., what's ever in the news ... thats how we determine it.

He claims that "the producer of the program, and the two agricultural commentators ..." are in charge of determining the topics and contents of the broadcasts.

Communication expert #13 concedes that the "target audience on the noon hour period is bi-fold": "the rural area," and "the urban area as well. So our target audience is generally the people of Manitoba, but we care a lot more about the rural area than any other broadcast." He feels that the target audience are not involved in the planning process, but "occasionally, we do surveys ... of people in

rural areas ... to find out what their interests are." He claims that the target audience knew about the broadcasts

> ... through advertising and through word of mouth. And perhaps, most importantly, is that we have been doing this kind of broadcast for many years. And therefore, we have listeners who have been with us for years and years and listen to us all the time. In fact, in some cases, the habit of listening is passed down from generation to generation. Children on a farm listen with their parents, and when they grow up and become farmers, then they listen as well.

He feels that the major planning problem is "the diversity of goals and objectives." He claims to solve this problem "by going back to our main goals and our main objectives and seeing how these suggestions that are for change have been made and how they relate to that." And by "collectivelly" seeking answers to the question: "What is it that we 're trying to do?"

Production: Communication expert #13 did not state how radio programmes are produced. He claims that four people are involved in the production process. They are:

> (1) the producer of the programme who is overall in charge of the program as it goes on air. (2) two agricultural commentators ... [who] bring ... the expertise of being knowledgeable in agriculture. and (3) The fourth person is the technician who operates ... the radio console ... and his responsibility basically is one of quality of sound.

"The programmes are produced at [the] CBC radio studio in downtown Winnipeg, in a specific studio." The information used for production is "collected in a number of different ways ..."

1. ... we use such things as the newspaper that are available to us, both weekly newspapers from the country and the daily newspaper from Winnipeg as well as the specific farm papers.

2. We use wire services from Canadian press.

3. We also use the international wire service for collecting information and finding story lines.

4. ... we use the telephone for phoning people to find out what their specific answer to questions is, or sometime ... for searching out materials as well.

5. ... and we use the mail service for getting letters and whatever [is] sent to us.

6. ... we collect interviews on a cassette machine ... and ... edit the material and put it into a form that's presentable on radio.

Delivery: Communication expert #13 has "absolutely no doubt that the best time for our farmers is the twelve o'clock period, over the noon hour." Because, "... everybody eats their lunch at the same time and that's basically around the twelve to one o'clock period." Thus, 'the twelve to one o'clock period' is the ideal as well as the 'actual' broadcast times for communication expert #13. Although he does not "believe that farmers generally will sit and listen for a whole hour, [their] broadcast is built around an hour anyways." He indicates that the broadcasts are "forty to forty-five minutes" long "if you took out all the other things ..." He feels that "the producer", "the technician", "a staff announcer who's general job is just to

introduce items ... plus two agricultural commentators" are all involved in the delivery process. He asserts that the programmes take the forms of:

1. Mostly ... interviews.
2. ...packages called documentaries.
3. ... occasionally, ... discussion where we will have two people who have differing points of view to discuss the same issue.
4. Sometimes, they are commentaries where someone will deliver a four-minute monologue about the topic that he is dealing with.

He feels that farmers listen in "family circles or individually." He concedes that the feedback they "get would be really informal or unofficial feedback."

> We do have a phone number that we give out and encourage people to phone us and/or write us letters and tell us about whatever. We do therefore get some phone calls and some letters which are feedbacks, telling us ..., whatever they want to tell us.

Alternatively, "We do have a phone-in show which follows the noon farm broadcast. The phone-in show runs from one o'clock to two o'clock and we do get some feedback in that, during that hour."

Evaluation: Communication expert #13 believes that the CBC broadcasts are "very effective because [the] listenership remains constant and has for many years ... remain constant." He claims that their programs "are the largest listened to broadcast in rural Manitoba." He feels

that there are "a number of ways of evaluating our materials."

> The first way is a matter of judging how many people listen to you [through] ... broadcast measurement. The second way we do it, and that's the most formal, [is to] judge how effective we are by the meeting[s] we have out in the country, and generally, the feedbacks we do get formally or informally or any other way.

He also evaluates the broadcasts "from letters and phone calls" received; and by listening to, and understanding, farmers in rural Manitoba. He feels that "the entire population in the area [covered] ... will be approximately 900,000 people [that] could listen to us if they wanted to." The size actually reached, he claims, can be found in the "Bureau [of] Broadcast measures." "Obviously", he thinks that farmers "learned what they 're looking for. They learned the market information specifically, and hopefully, they were kept in touch with the on-going news that's affecting them in a daily sense, in a long term sense, for their farms in the rural communities." He strongly contends that "our broadcast is not specifically designed to try and make them a better farmer. Generally speaking, most of the time we believe that ... the levels of expertise as farmers, how good a farmer they are, is better than the level we will be able to instruct them." Personally, he claims to have learned "the same thing."

> Basically, this is not stuff that we know already; its stuff we have to learn as we do the material ... the item .... I may know nothing about an insect that's destroying the crops, ... or I may not even have heard about it before. So I have to learn it ... before ... telling the audience, so I learn a lot too.

He feels that their "evaluation process is so haphazard .... Perhaps, that's one of the major problems we have ..., our evaluation system isn't very good." He claims that "we don't have, and have not come across a better way of evaluating at this point ... that could be cost effective."

Recommendations: Communication expert #13 feels that his recommendations would depend upon:

1. "the state of agriculture in the country ..." [and]
2. "the state of radio - where is at ... "

He thinks "that radio can achieve a different objective depending on what the condition of agriculture is in a developing country and also the condition of radio." Further, he poses the question: "do all the farmers have radios? ... do they have receivers? And can they receive the material? ... If they don't [have, or listen to, radios], there's no sense doing anything." He strongly contends that "there has to be the will on behalf of the government, if that's government radio station, or the radio station people to want to do radio materials designed for and about farm people ... in rural areas." Also, he claims that "There has to be a desire on the part of the farm people to want to learn more, to want to do it better or different."

> If there is that, there is a role for radio to be part of government extension services. But in agririan society, it is possible and probably an effective way of spreading the material, the news around to many people in a short period of time.

In terms of pitfalls to be avoided, he recommends "Talk[ing] at the level of the listeners - farmers; and ... to be careful ... not to patronize - talk down on them." Secondly, "Appearing to be ignorant by telling the farm people what they already know. You have to know where ... your listener is at and his experiences in life and his experiences in farming." The problems he foresees for the uses of radio in the agricultural extension services of a developing country includes:

1. "Getting people to listen to the radio station that the news is on as opposed to the radio station that's full of music" especially if "there's more than one radio station."
2. The "time involved, ... you may have a listenership that listens at all strange hours of the day and you might have a problem trying to get them to listen to your ... time."
3. The "language problem."

He used the "French language network of the Canadian Broadcasting Corporation" as an example of the language problem. He expounds:

> ... if they want to try and do an interview with somebody about an issue and that person doesn't speak French, then they have a problem trying to get that material to the French listeners when the person that they 're talking to only speaks English.

As a result, "we end up not, as a nation and as groups within the nation, of not understanding one another and not 'hearing' and not being able to talk to that group." He claims that the "only way to solving [this problem] is to hire bilingual people who can translate for unilingual people what is going on." Alternatively, by "hiring ... people who are qualified but they 're qualified in different languages." Finally, he strongly feels that in Canada, "the radio people" would be capable of solving these identified problems. "It's their job to do it." He also feels that, "in your country, if that was run by the government, ... the government would have to solve the problems properly and correctly. You can't expect the farm people to solve that problem. It has to be by the radio" people.

4.15 INTERVIEW #14: SUMMARY ANALYSIS.

Personal Data: Communication expert #14 was "a secretary and a co-ordinator for the ... National Farm Radio Forum," for "Approximately 10 years." She explains her major duty thusly: "Being secretary, it was my responsibility to coordinate, establish and hold together groups in rural Manitoba. Each week, the programme came from the National in Toronto and these rural people would meet in their groups in different homes and there would be questions on the topic each week and these questions would be discussed and condensed and forwarded to me for condensation of the

various opinions of all the groups to be taped the following week as to what their findings were on the questions." She claims to have performed this job of 'condensation of the various opinions' by seeing "what the answer were from the various forms to each of the questions and give the "jist" of the opinions of all the groups."

Purpose and Planning: Communication expert #14 claims that the major goals of disseminating agricultural information was to enable "farmers in Manitoba, ... [to] relate to the problems in other provinces as compared to the problems in their own province." She seems to suggest that these goals were determined by "the overall national secretary ... [who] would condense and send out a sort of a dominion report in conjuction with the CBC, the farm organizations and any other groups that might be sponsoring or might be interested" in the programs. She concedes that a "national board with personnel from the various farm groups, the CBC and other sponsoring bodies" were in charge of determining these goals. In terms of the topics and contents of the broadcasts, The board would make the final decision"

> ..., however, we did have a national convention or conference each year and if somebody had some area they wanted to have discussed, they would bring them up at the national conference and these suggestions would go to the national board for their consideration.

Thus, "The board which was composed of the farm organizations who knew what the farmers, the rural people wanted to hear, the CBC and any other sponsoring groups" was

in charge of determining the goals, topics, and contents of the broadcasts. She thinks that the target audience were the "rural people," and that about "85% of the people who were interested would be farmers." She feels that farmers - the target audience - were involved during the planning process through farm organizations and elected board members. She claims that "Farm Radio Forum was a winter programme when farmers would be available to listen to their radios so they would know what the programme would be at least a month ahead, maybe longer ..." Otherwise, "they would have all that information through the provincial office ... but if they didn't have a group, they would just have to refer to their radio programme in the paper and see what was coming up." She had problems organizing and getting the groups to meet and talk. She attempted to solve this problem through interpersonal relationships.

Production: Communication expert #14 produced her programmes by condensing "all the reports" into a five minute period, "wrote it up" and taped it. She contends that "the farm broadcast personnel" was involved in the production process; and that the programmes were produced in the CBC studio , in Winnipeg. She feels that the information used for production was collected from the reports sent in by each listening group. She claims that the Farm Radio Forum "was a winter programme only; [that] farmers were too busy in the summer to listen to the radio." She feels that

the seasons of the year affected the kinds of information given to farmers. Her major production problem was the "time element" - getting the report on time from the forums so as to condense it into the "five minutes" programme on time. She claims to have solved this problem by "keep reminding the forum to send their reports in immediately."

Delivery: Communication expert #14 feels "that this was an ideal time for farmers, the time it was set, which was 8:30 to 9:00 P.M." According to her, "The chores were all done, supper was over, the kids were in bed. It seemed to be a good time to have that national program." She claims that the length of her programme "was five minutes, the other programme was twenty-five minutes." She thinks that "the production - CBC Farm Broadcast personnel, whoever tapes ... at CBC - were involved in the delivery process." The national programme took the forms of "discussions and interviews" while her programmes were "straight reporting [talks] of what the forums" said.

Communication expert #14 contends that "the broadcasts were used in conjuction with printed materials which was our Farm Radio Forum guide, ... because it brought out more opinions and more information about the subject matter." She feels that farmers listened "mostly in small groups and individually, ... you might have a family circle listening to it, or you might have a farmer listening to it by himself. She supposes that "the producers would ... look at

what [she] reported as sent in ... and ... ascertain whether or not that was an important feedback." In other words, her programme was designed to provide feedback to the forum.

Evaluation: Communication expert #14 thinks that "... a lot of families ... benefit from the broadcasts and those that didn't, probably were just not interested." She doesn't "really know" how and whether the programmes were evaluated but feels that she "would have evaluated it by the number of groups that were around and by the ones that reported." She claims that the target audience "learned different ways of farming, the various problems, nationally." They learned "What the farmers were thinking or doing in other provinces of Canada, [and] better methods, for themselves." She feels to have "learned how programs were produced, how they were assessed, ... In short, they "enlarged [her] knowledge of all farming ...."

Recommendation: Based on her experience, communication expert #14 thinks that "one of the most important things is to try and get smaller groups so that each person can have a little impact." She recommends the following:

1. ... to find out what your farmers have, some have cattle, ...
2. ... to find out first of all what they're interested in and what they want to talk about, what they want to learn.
3. To try to establish a good feedback from the groups.

She contends that a pitfall to be avoided is to "aim for a group that is too big," - "keep to the small groups." In terms of problems foreseen, she asks: Are there many radios there? Do all the farmers have radios? Do they listen to the radio? According to her, "You have to have a radio, you have to like listening to radio and you have to like talking about what you hear on the radio, discussing, ... You have to have people with an inquiring mind, who want to learn." Finally, she concedes that: the people in charge of your radio programming, your agriculture, that have control of suggesting or recommending. Your different farming organizations, ... should be able to find out from the grassroots, what they want, and report and in conjuction with the radio station, set up the programs.

4.16 INTERVIEW #15: SUMMARY ANALYSIS.

Personal Data: Communication expert #15 "spent most of [his] years in communication work, but ... technically, [he has been] an agrologist ... for thirty-five years." As a communicator, his job is "to plan and direct the communication efforts of the Manitoba Department of Agriculture." And from time to time, "to get involved in the actual production of some" programs. His major duty is that of "managing and directing the communication efforts of the Department and that includes the budget ...." Communication expert #15 performs this duty by "keep[ing] an

eye on what's going on within the Department that should be supported with a communication effort." And by watching the agricultural industry to "see what the needs are out there and then if we determine some needs outside the Department, go to people in the department to try generate more activities."

Purpose and Planning: Communication expert #15 claims that the goals of disseminating agricultural information are "to present timely and useful information to Manitoba farmers that will help them maintain or increase their net incomes; ... to help them make a better living on the farm ...; and generally, [to] support the total agricultural industry in Manitoba." He feels that these goals "maybe not in those words", have "been a goal of the Department of Agriculture for a hundred years probably, ... The goals, and somewhat more detailed goals than that, are reviewed from time to time by the Department, by top administration of the Department, and changes in priority are made from time to time too."

> When there is a change in goal or a change in direction in the Department, it's more or less a combination of what the Department people feel and what farmers feel. ..., with forty offices out in the country, there is a lot of feedback. ... So that's part of what determines [the] goals and the other part is what officials in the Department feel would be good for the people and the industry, ...

Thus, the goals are determined based on the needs of the farmers, the farming industry or agricultural industry and

the society at large. He claims that the goals are "primarily determined by the Minister of Agriculture and the excutive committee of the Department of Agriculture, [and it reflects the] stated needs of Manitoba farmers."

He claims that "about half of [the] topics are suggested to us by department specialists. ... The other 50% are generated by us, just because of what we see or hear going on in the department or outside, for that matter." He asserts that the staff assigned to do radio programmes "makes most of those decisions" - determines the topics - "depending on the season of the year." Also, the contents of the broadcasts are determined by "the broadcaster and the specialist."

He feels that the "target audience is every farmer in Manitoba if we can get them because we deal with every topic over a period of several weeks." He contends that it would be really nice idea" to involve the target audience during the planning process. He claims to "use farmers as often as we can in the programs, as interview[ees] and so on, but not really in the planning. That would be, in theory, a good idea." He feels that the target audience knew about the broadcasts because the "service has been on the air on almost all the rural stations for so long that they either know about it or they don't know about it." He claims that the major planning problem is

> an over supply of items sometimes, all important, and should get on the air but we only have five

> slots a week to get them on and then a month or so down the line, we may have several weeks where we don't have anything that's all that urgent so we put on things, ..., items that are less important. That is a bit of a problem, ...

Production: Communication expert #15 produces his radio programmes as follows:

> Normally we would record, we wouldn't worry too much about the time on those, we would try to get them fairly close to our programme time, we would edit them ....

He claims that the "broadcast fellow" who is doing the programmes and "an audio technician" are involved in the production process. He feels that

> two-thirds of [the] items are interviews that are recorded away from the studio. They are done on location, either in a lab at the university, in an office somewhere else in the department or whatever. ... The other third we would do in our studio ....

He strongly contends that the information used for production is collected through "interviews. However, we do some straight scripts too, ... We would probably get the information ... from specialist within the department or from university specialists. Get the information from them, write a script and record it and send it out that way. Our main source, ..., is from our department specialist." He strongly asserts that the seasons of the year affect the kinds of information given to farmers. "There are just all kinds of cases where it does depend on the season of the year." He has not encountered any major problems during production, but feels that "good recording equipment, ...

can be a problem ... [and] ... the biggest problem might [be] ... to get somebody who is capable of doing adequate radio work and who also knows enough about agriculture."

Delivery: Communication expert #15 thinks that the ideal broadcast time is "the noon-hour , from 12.00 noon until 1.00 because ... virtually all year round, most farmers are in the house at noon or part of noon hour. The next best probably is the early morning, but ... it's quite a bit less desirable than the noon hour because ... probably everybody in the country eats between 12.00 and 1.00 but they get up at a variety of hours." His actual broadcast times varies.

> We would like to have all ours at noon but because we don't pay for time, we have to take whatever time we 're given. Quite a number of them are at noon, but here's one at 6.00 in the morning and one at 4.10 in the afternoon. Great variety of time.

He feels that their radio programmes are "two and a half to three minutes [long] but most of them are about three." He thinks that 'the media specialist and the audio technician' are involved in the delivery process.

In terms of programme format, communication expert #15 indicates "that probably 80% of [their programs] are interviews and the rest would be scripted ones ... because its faster and easier." He claims that the broadcasts are "not directly" used in conjunction with other media but occasionally, "a press release" is used to provide background for a similar story. He explains:

> Many times, the radio fellow will go out to get a radio item and he 'll come back and with that same information, write a press release like, but it would happen incidentally.

Further probing revealed that they do use radio in conjunction with other media, however, they "don't use one to promote the other kind of thing, but they [media] are sort of running in parallel." He supposes that farmers listen to the broadcasts "mostly individually, either in the house or in the truck or in the barn or wherever, [and] some family groups." The arrangements for feedback from the audience to the producers/broadcast stations are "very informal and never really stated but we do get some feedback." He claims to get feedback

> Either by the listener contacting the radio station and those radio stations send those inquiries onto us, or the farmer contacting one of our agricultural offices out in the country and those department staff people let[s] us know.

Evaluation: In terms of evaluation, communication expert #15 claims to use the "'shot gun approach' of getting information out, ... instead of having [it] directed at a very precise part of the audience, ... you put a whole bunch out to a wide audience and hope it gets to people you want to get to." He feel that the programmes "have been on for more than twenty-five years on almost all the rural stations so that in any one week-day, there's about twelve opportunities for any Manitoba farmer to hear these items of ours and so it's sort of a blanket approach. [Which means] that we must get to a lot of farmers, but we don't have a precise measurement."

> We have a lot of very general feedback, mostly demand for services that we 've announced on these programmes that would indicate to us that the programmes are useful and effective.

We evaluate the programmes by surveys but haven't done any recently. We do check the size of audience form the official surveys every year. Each year, ... the Board of Broadcast Measurement in Canada measures the audience for all radio stations and television stations, ... When they put out their report, we go and study one of [them] and total up the ... measured audience ... on each of the stations, at each of those times when our programmes are on ...." That's how communication expert #15 evaluates his programs. He claims to aim their programmes at all "28,000 farmers in Manitoba", and actually reaches "about 34,[000] to 35,00 adults, eighteen and over, everyday on the average."

Communication expert #15 thinks that the target audience learned "about some new developments ... [and] where they can get further information." He expounds:

> ... I think what they can get from our programmes are some timely reminders , words on new developments and how to get further information on a lot of topics.

He claims to have "kept up on technical agriculture a lot better ... [and being forced] ... to be in the middle of developments and be up on all these things as much as possible and on a wide range of topics." He contends that the programme are too short to evaluate -- "three minutes item[s]" -- "So it's sort of hard to identify, so it's difficult to evaluate ..."

Recommendations: In terms of recommendations, communication expert #15 thinks that it is "sort of hard to be exact when you don't know about the country and their habits and so on." However, he is "sure in general principles, you have to do exactly the same things as here ...." Thus, he recommends the following:

1. ... to determine, ... where the possible outlets are, the [radio] stations.
2. ... to determine what time of day is the best time ... to catch most of them, when they might be listening.
3. ... to develop or be aware of your list of source materials.
4. ... to have the right kind of relationships with the radio stations you work with ....
5. ... to either be aware or find out ..., how long are people willing to listen to your kind of programme - educational programming.
6. When you 're starting out, you have to publicize somehow or other - make people aware of the service.
7. ... to make sure that you 're going the right way, the way the listeners want, ...

In terms of pitfalls to be avoided, he cautions:

> ... if it is something really new in a country that they hadn't had too much of it before, it would be pretty damn important to be out and get that feedback from the people early, or if there were advisory committees or whatever ahead of time, to suggest what kinds of topics should be handled and how they 're handled and either ahead of time or early in the service to make sure that this was what they wanted and they were going to, in fact, listen."

Also, he thinks "that in actually doing the programs, you should aim for as high a quality as you can technically, because the listeners undoubtedly compare it to the best technical programmes on the air and its good to have yours, if they 're educational and you want listeners to have them as close to that technical level as possible."

In terms of problems foreseen for the uses of radio in a developing country, communication expert #15 raised the following questions:

1. Do the people you want to get to all have radios?
2. ... when [is] the best time ... to get to the people you want?
3. Are there enough stations with enough coverage to the people you want to get to, ... enough broadcast stations?
4. And are they committed to this kind of programminig?
5. Will they be cooperative?

He thinks that "The person who is going to organize and set this [program] up should ... do a lot of studying and examining the situation before they actually get into gear in establishing a new service like this ... so that he has the answers to all these questions" raised above. Also, "co-operative broadcasters who are in the business on a full-time basis, ... could be a big help ... in solving these problems or at least in supplying the information ....

Tell you how big the problem was or maybe, tell you there isn't a problem." He feels that these two groups - the organizer(s) and co-operative broadcasters - are capable of solving the above identified problems as well as finding solutions to the posed questions. Finally, he cautions:

> the biggest mistake you could make would be to go dashing in with your own ideas and get to doing it too quickly without the proper background information. To move in and start programming without the proper kind of contacts and information collected.

Chapter V

AS IT MAY BE: GENERAL SUMMARY ANALYSIS.

5.1 INTRODUCTION

The purpose of this chapter is to identify recurrent themes and areas of emphasis in communication experts' responses to the interviews that were conducted. Focusing on specific questions as well as the five major sections (purpose and planning, production, delivery, evaluation and recommendations) of the structured interview guide, the presentation that follows is a general analytic summary of the raw data presented in the previous chapter. To facilitate this presentation, "displays" - tables and summary charts (Miles & Huberman, 1984) - were constructed for specific coded questions and sections respectively. The questions were coded on the basis that they were soliciting specific responses. On the other hand, the summary charts were constructed by focusing on the major themes of each section (e.g. How do communication experts produce their radio programmes?); and by identifying the views of each communication expert for that particular theme. This type of summary charts permitted the identification of recurrent themes and areas of emphasis during the interview.

The summary charts that follow contain both direct quotations and sentiments expressed by each participant. In some cases, ideas were expressed repeatedly or with many words that it was not possible to provide direct quotations because of the restricted space of the charts. For this reason, although each idea on the summary charts is designated by a dash (-), not all of these are in quotation marks. Those which are not in quotation marks are the researcher's interpretation of the respondents views about a specific theme or section. Using this method of documentation, it was possible to develop summary charts for each section and the fifteen respondents which not only reported the actual phrases of the respondents, but which also allowed for the presentation of frequency, emphasis and sentiments in the responses.

Three points are of particular interest when inspecting the summary charts. The first is the frequency of response: How many times did the fifteen communication experts mention a specific idea/theme. For example, how many of them said that a programme should be edited during production. The frequency, in this case, indicates the importance and indispensability of each idea/theme. Thus, the higher the frequency, the more indispensable the idea/theme. The second point is a comparison of ideas/themes from the former Canadian Farm Radio Forum experts (designated by *) to that of the present day communication experts. In this case, the

researcher is looking for similarities and differences, and raison d'etre. The third point is a comparison of other summary charts to the background and purpose charts and vice versa. For example, will communication experts' delivery methods accomplish the stated purpose? Or how experienced is this expert to make such recommendations?

This investigation had as one of its foci, the examination of how educational radio is used to spread agricultural information to farmers in rural communities of Manitoba, Canada. To carry out this investigation, a six section structured interview guide was developed and used to collect the data summarized in the previous chapter. Based on each section of the structured interview guide, this chapter focused on the following questions:

1. What are the backgrounds of communication experts (Table 1)?
2. What are communication experts' purposes of disseminating information (Table 2)?
3. How do they plan their radio programmes (Table 2)?
4. How do they produce their radio programmes (Table 3)?
5. How do they deliver their radio programmes?
6. How do they evaluate their radio programmes (Table 4)?
7. What are the problems encountered during these processes?

8. What are their recommendations for educational uses of radio in the agricultural extension services of a developing country (Table 5)?

In order to attempt to answer these questions, it was necessary to study the data presented in the previous chapter as well as the summary charts that follows. This was done by comparing the responses of each communication expert for each section, by counting the frequency of each idea/theme, and by comparing the responses from the former Canadian Farm Radio Forum to that of the present day communication experts. Although looking at each summary chart (e.g. Interview numbers/production) in isolation seemed to provide a fair degree of insight into the above posed questions, the information so derived was felt to be incomplete in that it represented a restricted view without reference to the other elements. Not discounting this approach as a valuable source of understanding, it was felt that a more fruitful method of examination was to investigate the summary charts in comparison. Thus, each summary chart was examined independently, and in comparison with the background and purpose charts. In this way, it was possible to obtain a fuller understanding of particular ideas/themes, and to get a sense of the pervasiveness of the individual ideas by comparing other (planning, production, delivery, evaluation and recommendations) charts with the background and purpose charts. It was by this method that

one was able to arrive at certain conclusions respecting the first major questions of the study: "How do the agricultural extension services of Manitoba, Canada use radio to educate or disseminate agricultural information to farmers in rural communities?"

It will be noted that throughout the pages that follow, quotations and ideas are referenced with a number sign followed by the number (e.g. #15). These numbers refer to the specific interviews. The quotations or referenced comments can be found in the specific interview summary and the respective section (e.g. production) presented in the previous chapter. This method of transcript referencing is employed throughout the balance of this work.

5.2 BACKGROUNDS OF COMMUNICATION EXPERTS.

In order to understand and appreciate the general summary analysis that follows, it is absolutely necessary to review the personal data of communication experts in the sample. This information is displayed on table 1. Three points are worthy to note. First is the number of years of experience as communication experts. Inspection of table 1 indicates that seven (46.7%) of the fifteen respondents had been in the field as a 'communication expert' for over twenty-one (22-32) years; four (26.7%) of them had been in the field for over ten (11-21) years while another four had been in the field for over one (1-10) year. In total, eleven (73.3%)

TABLE 1

Background Data: Summary.

Int.#	What Are The Backgrounds Of Communication Experts?
* #1	-Was a "broadcast journalist" for 10 years; -Presently,"instructor of Journalism" for 7 years. -Collected returns from FRF & broadcast 5 min. summary.
#2	-"Broadcaster" for 30 years. -Organizes & produces video- and audio- tapes
* #3	-Was a farm broadcaster for 30 years; -Retired for 10 years; -Gathered & disseminated "information.
#4	-Was a "farm journalist/broadcaster" for 14 years -Gathered & disseminated information to farmers.
#5	-Journalist for 30 years -Editor of "major radio newscasts."
#6	-Media/communication specialist for 13 years -Produces radio & TV programs -Trains extension agents.
#7	-Media specialist for 22 years -Extend "practical agricultural information" to farmers -Produces radio and TV programs.
#8	-"Farm news broadcaster" for 21 years -Gathers & disseminates "newsworthy agricultural info."
* #9	-General manager of Keystone Agricultural producers -Lobbyist on behalf of Manitoba farmers for 30 years -"Supervised the operation of Farm Radio Forum & set up "workshops to help the operation of FRF."
#10	-With Manitoba Department of Agriculture for 30 years -Principal of Agricultural Extension Centre for 7 years -Media specialist & extension agent for 23 years -Produces radio, film & television programs.
#11	-"Director of farm news" for 2 years -Provides television and radio programs.
#12	-"Farm Director for 14 months" -Broadcasts agricultural (news & market) information.

Table 1 Cont'd.

#13	-"Agricultural broadcaster ..." for 20 years -Broadcasts "farm news and market information."
* #14	-"Was secretary & coordinator for FRF for 10 years" -Co-ordinated, established and held groups together -Condensed & broadcast 5 min. FRF summary.
#15	-"Agrologist" for 35 years -Plans & directs communication efforts of Manitoba Department of Agriculture.

*** Ex-communication Experts.**

of them have worked as communication experts for over ten years.

Second is their vast experience, activities and major duties performed. These ranged from broadcast of farm news and market information (#3, #4, #8, #12, #13) and extension of "practical agricultural information" (#7) to supervision of Farm Radio Forum operation (#9) and the planning and direction of the communication efforts of the Manitoba Department of Agriculture (#15).

Third is communication experts experiences in developing countries. Table 6 (Appendix H) indicates that five (33.3%) of the fifteen respondents have had experience in developing countries. Of relative importance is the countries in which these experiences were gained. Such countries include: Kenya, Sri Lanka, India, Costa Rica, El Salvadore and Guatemala.

TABLE 2

Purpose and Planning: Summary.

Int.#	What Are Their Purposes?	How Do They Plan?
* #1	-To "engender" & "stimulate debate" -"Inform" & "trade farmers opinion."	-"Cooperative effort."
#2	-"Depends upon the audience."	-"Committee."
* #3	-Provide "up-to-date market [&] technical information." -Improve "farming practices and marketing decisions,"	- Cooperative effort.
#4	-Communicate; Understand farmers.	-Consultation. -Experience.
#5	-Provide economic trends	-Consultation. -Experience.
#6	-Improve "farm management ability. -Help have "better quality of life."	-"a joint effort/ -joint process."
#7	-Improve farmers' "income and standard of living."	-"Consultation." -Coop. effort.
#8	-Provide "upcoming" information.	-Consultation.
* #9	-Provide technical information. -Develop self-help programs. -"Examine farm policy questions."	-"Consultation." -Cooperative effort.
#10	-Inform about "available other info. -Provide information "on how to ..." -provide market information.	-Consultation.
#11	-Provide "news & market information." -Make farmers aware of research	-Consultation -Discussions
#12	-Inform farmers of "what's happening and how that may affect them.	
#13	-Provide "accurate & timely information about .... & news in general."	-Cooperative effort.
* #14	-Enable farmers to relate their problems to other farmers.	-Cooperative effort.
#15	-"Present timely & useful info. -"Help make a better living on ..." -Support the total agric. industry."	-Consultation. -Cooperative effort.

5.3 PURPOSES OF DISSEMINATING INFORMATION.

In order to determine the purposes, it was necessary to examine the row of each respondent with respect to their background, and then, with respect to other respondents. More specifically, it was necessary to compare and identify recurrent purposes for information dissemination. Inspection of table 2 indicates three major purposes for disseminating information, namely:

1. To provide "timely" (#13, #15), "up-to-date" (#3), "accurate" (#13) and "useful" (#15) information to farmers.
2. To improve "farming practices and market decision" (#3), "farm management ability", "quality of life" (#6), "income and standard of living" (#7), and to help farmers "make a better living on the farm." (#15).
3. To provide "technical" and "how to do" farming information (#3, #9, #10).

5.4 PLANNING FOR INFORMATION DISSEMINATION.

These purposes are planned for, and determined through "cooperative efforts" (#1, #3, #6, #7, #9, #13, #14, #15), through "consultation" (#4, #7, #8, #9, #10, #11, #15), through "committees" (#2, #6) and through "experience." (#4, #5). In this case, thirteen (86.7%) of the fifteen

respondents indicated that their planning is done through "cooperative efforts" of involved individuals and through consultation with experts and specialists in the field. Other factors supportive of the cooperative effort in planning is the high rate of agreement on the specific question: Is the target audience involved in the planning process? Table 6 (Appendix H) indicates that 73.3% of the sample involved their target audience during the planning process. Although mostly indirectly and informally, this involvement varied and ranged from registration of "their opinions in writing" (#1) and through a "committee of the top echelon of agriculture" (#3) to involvement "through general discussion with producers ..." (#6) and "through farm organizations and elected board members." (#9, #14).

Other points worthy of mentioning in this section include the notion of "meaningfulness" suggested by communication expert #2, and the idea of adding "entertainment programmes with rural flavor" (#10) to agricultural information. According to communication expert #2,

> It's an absolute fact of broadcasting that unless the program means something to the audience, they won't watch it, they won't listen to it; it has to be meaningful.

Although the notion of meaningfulness coupled with the idea of adding entertainment programmes with rural flavour to agricultural information have been explicated elsewhere in the literature (White, 1976; Abell et al., 1968; Mathur & Neurath, 1959), it appears as an interesting point for

integration into rural programming, and probably, for further studies.

5.5 PRODUCTION OF RADIO PROGRAMMES.

Perhaps the most fundamental practical question put to communication experts in the sample was "How are radio programmes produced?" Analysis of table 3 yields a variety of answers. However, the variety of the steps on the table appeared to be rooted in communication experts' backgrounds, practices, experiences and purposes of disseminating information. These steps ranged from two by expert #4 and expert #10 to seven by communication expert #5. Majority (63.3%) of those who responded fall into three-to-four steps of production. These steps can be summarized thusly:

1. Determine interviews or identify sources;
2. Conduct interviews or write scripts.
3. Record/tape interviews or scripts.
4. Edit and re-record/re-tape.

Employing Novak and Gowin (1985) concept mapping, these steps can be represented diagrammatically as in figure 2.

Further analysis and distillation of table 3 with the background comments and purposes in mind yields another approach to production of radio programmes. In a nutshell, this approach involves three major steps:

TABLE 3

Production: Summary.

Int.#	How Do They Produce Their Radio Programmes?
#1	-Prepare scripts, "read it & the technician recorded it."
#2	-Contracted out to private producers.
#3 *	-Producer's & technician's responsibility
#4	-Conduct interviews - field, telephone, etc.; -Edit.
#5	-Make up list of topics, - Conduct research on them -Decide what major topic likely to be, -Send out messages to correspondents, -Request their advice, - Collect advice & ideas -Edit.
#6	-"Determine the interviews" -Conduct the interviews, -"Listen to them" and "time"; - Edit.
#7	-Conduct interviews and record -Script and edit the interviews -Re-record/re-tape
#8	-Conduct interviews -"Organize them at the studio", - Edit.
#9*	
#10	-Record item -Give to radio stations.
#11	-Live broadcast -Pre-recorded interviews.
#12	-Collect information -Script and add voice clips -Edit by checking back for correctness.
#13	
#14*	-Write up the script -Read -Record/tape it.
#15	-Conduct interviews -Get information from specialist -Record -Write a script -Edit. -Record it.

1. Identification: In this step, the producer carries out a need assessment which provides guidelines as to: a) Who the target audience is; b) The needs of the target audience; c) The purposes and objectives of disseminating information; d) The means of achieving the stated purpose and objectives.
2. Research: Through consultation with experts in the field, corporate bodies and especially, agricultural organizations, the producer conducts a research to evaluate and validate the identified needs. This research should identify the sources of information as well as determine their availability.
3. Collection of information: Once the sources are determined, the producer can follow either route of the concept map (figure 2) to produce a radio programme.

In terms of information collection, communication experts in the sample used "a variety of ways." (#3). Such methods include: "letters from farmer" (#1, #14); "university and experimental farms (#3); "interviews" with agricultural specialists and farmers; through staff members, reporters, foreign correspondents and freelancers" (#4, #5, #8, #11, #13, #15); "on sight interviews with producers, or ... industry people" (#6); "straight interviews with farmers and agricultural production people" (#7, #12). Others are those outlined by communication expert #13 which includes "weekly

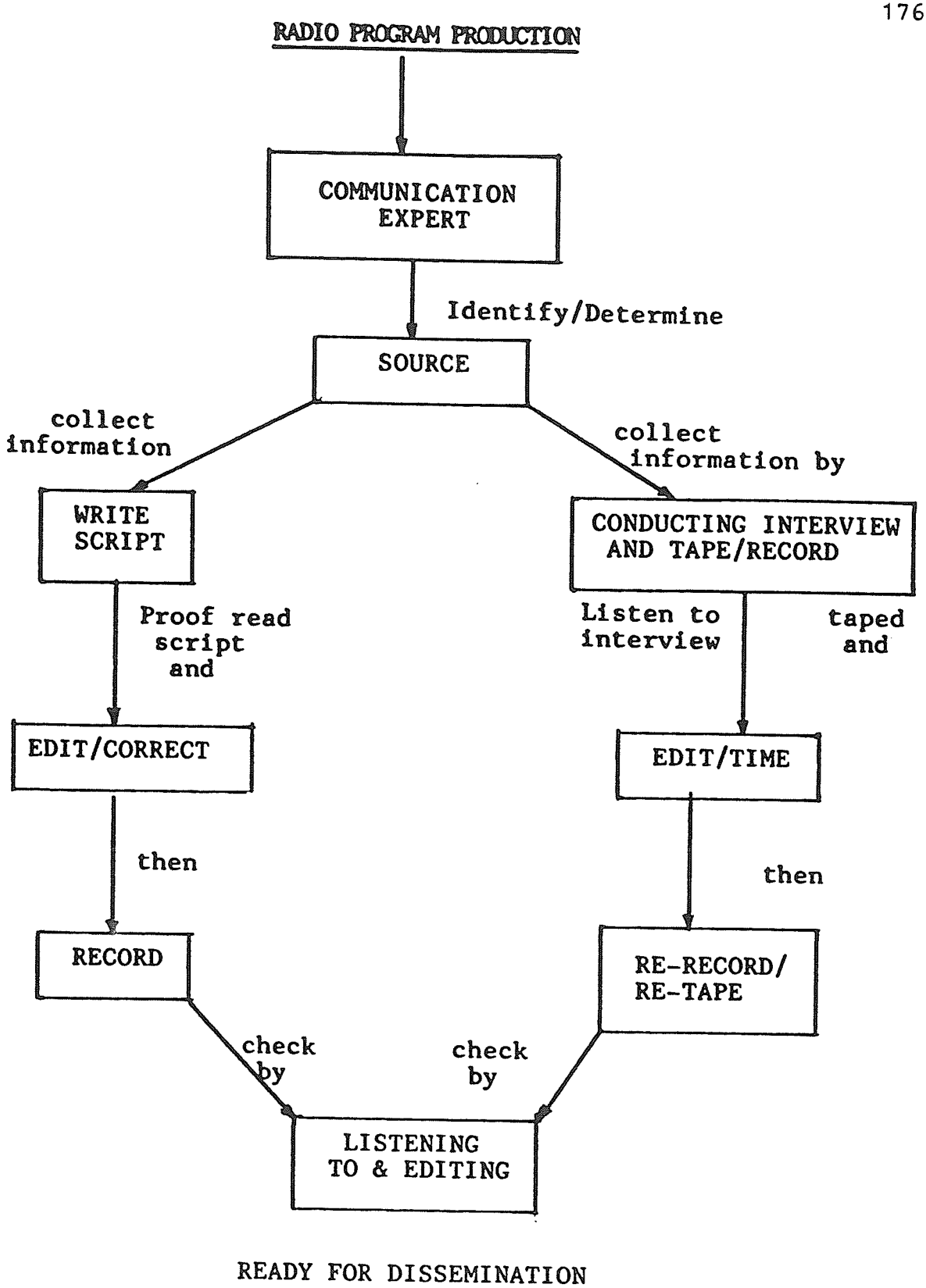

Fig. 2. EDUCATIONAL RADIO PROGRAM PRODUCTION: A CONCEPT MAP

newspapers from the country and the daily newspaper ... as well as the specific farm papers"; "The telephone", "the mail service", and "a cassette machine." It appeared that these methods depended upon the topic and available sources.

Another production factor worthy of mentioning here is the "timeliness." Of all the specific questions put to the respondents, the one concerning the seasons of the year was noteworthy because it was among the ones with the highest agreement. Table 6 (Appendix H) indicates that thirteen (86.7%) of the fifteen respondents agreed that the seasons of the year affect the kinds of information given to farmers. Responses to this question ranged from moderate agreement such as "definitely" (#6, #8) to strong affirmation such as "very definitely" (#11) and "absolutely." (#4). There appeared three major reasons for this high degree of agreement. These reasons had been alluded to before, and are rooted in communication experts' purposes of disseminating information. First, the emphasis on 'timeliness' by the respondents indicated that for any information to be useful, it has to be "timely" and "up-to-date." Several examples provided in this context within the individual interviews testified to its viability. The second and third reasons are factors of the first. In order to provide effective 'technical' or 'how to do' farming information, such information must be provided when the recipient can put it into practice. And only when such is

achieved can farmers improve their 'farming practices', 'income and standard of living' and 'quality of life' in the rural communities.

5.6 DELIVERY OF RADIO PROGRAMMES.

> ... tell [farmers] what you are going to tell them, then you tell them, and then, you tell them what you already told them. (#3).

In terms of delivery, there appeared to be two distinct approaches: (a) "live broadcast" (#11) using scripted materials, and (b) pre-recorded or "pre-taped items" (#7) which are sent on-the-air at the actual broadcast times. These two approaches are dependent upon the production methods discussed previously. The general delivery format appeared to follow communication expert #3's idea of:

1. Telling the audience what you are going to tell them - INTRODUCTION.
2. Telling them what you want to tell them - CONTENTS
3. Telling them what you already told them - SUMMARY/CLOSURE.

Of particular interest in this section are: the forms of delivery; the reception models; and the use of radio in conjunction with other media. Table 7 (Appendix H) indicates that fourteen (93.3%) of the fifteen respondents used the "interview" format to deliver their materials. This high state of commensurability was justified by communication expert #10 thusly:

> ... its been proven that that [interview] can be the most informative or the most interesting way of getting information across.

Further, eight (53.3%) of the fifteen respondents said that their programs took the forms of "discussions" and "lectures", while four (26.7%) of them used "debates" and "commentary" respectively. Other forms of delivery used by communication experts in the sample include "drama", "documentary" and "panel discussions." Experience indicates that a combinations of these forms of delivery adds variety, interest and thus, effectiveness to educational programming.

The second major area of interest is the reception models. This refers to how the target audience received the information. In the interviews that were conducted, thirteen (86.7%) of the fifteen respondents indicated that their target audience received information "individually" while nine (60%) of them indicated "family circles" (table 7 - Appendix H). This high state of agreement in 'individuality' and 'family circle' reception models can be attributed to the activities of the present day communication experts, and their uses of radio as an "awareness" (#6) and as a "reminder" (#9, #15) as opposed to educational medium. Although only five (33.3%) of them indicated "small groups", this model is highly used for educational purposes, especially, where discussion, dialogue and feedback is of prime concern (Ezeomah, 1983; Kidd & Etherington, 1978; Crowley et al., 1978; Anyanwu, 1977,

1978; McAnany, 1976; Mathur & Neurath, 1959; Nicol, 1954). In support of this notion, communication expert #2 said that "there needs to be more than one person ..., especially if you want to get discussion going." However, communication expert #1 described a unique 'small group', educational model that was in operation:

> They [Forum members] listened to the broadcast, they discussed it, they told me what they thought; I reported back [to] all of them what we discussed.

The third important area of interest is the use of radio in conjunction with other media. Although there was high agreement on the 'individuality' and 'family circle' reception models, there was also high agreement on the use of radio in conjunction with other media. Table 6 (Appendix H) indicates that eleven (73.3%) of the sample said "yes" to the specific question: "Are the broadcasts used in conjunction with other media?" The medium mostly used in conjunction with radio is the "print" media. It is used in a variety of ways such as: "Farm Radio Forum Guide" (#14), "press releases" (#7, #15), "farm papers (#3) "posters" (#3) and "newspapers" (#3). According to communication expert #2, every educational broadcast should have an accompanying package of printed materials - questions and answers - that they can come back to and reinforce the audience. Communication expert #9 supported expert #2's idea, adding that the print media allows adequate coverage of materials. In his own words,

> ... print media is quite important because there was often quite an additional piece of information provided which really helped round out the programme if you wanted to get more detail.

Finally, communication expert #14 indicated that the Farm Radio Forum guide "brought out more opinions and more information about the subject matter."

Other worthwhile aspects of delivery worth mentioning here are the 'ideal' and 'actual' broadcast times, the length of the programmes and the arrangements for feedback (table 8 - Appendix H). In terms of the ideal broadcast times, nine (60%) of the sample suggested "mornings" and "afternoons" respectively while only three (20%) of them indicated "evenings." Although there was high state of agreement for the morning and afternoon periods, those who did not indicate either had different viewpoints. According to them, the ideal broadcast time(s):

1. depends on the area and on the farming practices (#3).
2. [is] different for different farmers and is dependent upon the time of the year (#4).
3. [is] changing because more and more farmers have radios in their tractors and their combines and they listen to the radio all day long (#10).

It should be noted here that the 20% who suggested "evenings" were those involved in the former Canadian Farm Radio Forum.

On the other hand, the actual broadcast times varied greatly among communication experts in the sample. For example, eight (53.3%) of the fifteen respondents indicated 'afternoon', seven (46.7%) of them indicated 'evening' while only five (33.3%) of them indicated 'morning' (table 8 - Appendix H). Various reasons were given for these suggestions and choices. Such reasons include:

1. Farmers come in for lunch and listen to the radio (#1, #13, #15).
2. Farmers have their big meal and a rest at noon (#3).
3. They are very much trained for the noon slot farm broadcast (#6).
4. Most farmers have their radios on when they 're having breakfast (#6, #11).
5. Most farmers are in the house at noon or part of noon hour (#15).

In terms of length of the programs, there was no significant agreement as to what it should be. It varied from some seconds to an hour and half with major clusters around the zero to thirty minutes range (table 7 - Appendix H). There appeared three major reasons for this cluster, two of which were articulated quite clearly by communication experts in the study. The first is the attention span of the target audience - which they said is very short. It "is difficult to get peoples attention for longer than half an hour." (#2). The second reason is the worthiness of time for

the broadcasters and the broadcasting corporations. For example, the programmes are short "because time is money for broadcasters" (#6); and because it is convenient for the radio station (#7). Lastly, the use of radio as an "awareness medium" (#6), as a "reminder" (#9, #15), and as an information medium rather than as an educational medium.

Finally, only five (33.3%) of the fifteen respondents, four of whom were involved in the former Canadian Farm Radio Forum, had formal arrangements for feedback. Seven (46.7%) of them had "informal" types of arrangement while four (26.7%) of them don't have any forms or means of getting feedback from the target audience. This ignorance towards feedback can be attributed to the reasons given above. However, it should be borne in mind that feedback is a key factor and a necessity in any educational programming, especially, those for illiterate and neo-literate adults (Perraton, 1983; Daniel & Marquis, 1983; Nashif, 1982; Kaye, 1982; Neil, 1981).

5.7 EVALUATION OF RADIO PROGRAMMES/BROADCASTS.

Perhaps, another fundamental practical question put to communication experts in the sample was "How do you evaluate your programmes/broadcasts?" Analysis of table 4 produced a variety of answers. However, the variety of responses appeared to take place more on the semantic level than on the substantive, "how to do", level. It is the researcher's

TABLE 4

Evaluation: Summary.

Int.#	How Do They Evaluate Their Radio Programmes/Broadcasts?
#1*	-"By broadcast measurement devices-number of listeners." -Number of responses/letters from farmers.
#2	-Through criticisms by client -Number of requests for duplication. -Number of letters received.
#3*	-Informally, through comments/reactions from audience -"Audience rating."
#4	-"Self evaluation" -"Boss's Evaluation" -"Informal evaluation" -"Number of listeners."
#5	
#6	-Through "informal feedback from staff and farmers." -"Surveys" by the department.
#7	-"General feedback from staff and the target audience."
#8	-Through "self evaluation." -Comments from the "listening audience."
#9*	-Informal feedback from representatives of all areas. -Weekly reports.
#10	-Through "self evaluation."
#11	-Through "a survey form at fairs." -National rating services - number of listeners.
#12	-Intuitively, through experience.
#13	-"Broadcast measurement": Number of people that listen. -Formal and informal "feedbacks." -Number of "letters and phone calls" received.
#14*	-Through "Number of groups ... that reported."
#15	-Through "general feedback." -"Surveys." -"Size of audience from official surveys."

contention that much of the terminology used for describing evaluation procedures were synonymous at the level of meaning in communication experts' view. For example, consider the following terms that were used to describe evaluation procedures: Number of listeners (#1, #4, #11, #13, #14, #15); Number of responses/letters received (#1, #2, #13); and Comments/reactions from the audience (#2, #3, #8). Other terminologies and phrases used include: Self evaluation (#4, #8, #10); Boss's evaluation (#4); Informal evaluation (#4, #6); Informal feedback (#9, #13); General feedback (#7, #15); Formal evaluation (#13); and Surveys (#6, #15).

Although differing in phraseology, it appeared that these descriptions of evaluation procedures contained common elements or concerns within them. For all, there was a pre-occupation with, to borrow from Geertz (1973), "explication" and appraisal as well as an orientation towards feedback. It seemed clear in the mind of the respondents that evaluation and its procedures are synonymous and had the definite purpose of assessment. Hence, evaluation and its procedures appeared to be viewed as an instrument for measurement - the process of delineating, obtaining, and providing useful information for judging decision alternatives (Stufflebeam, 1969).

Although the overall responses by communication experts seemed to focus on measurement and appraisal as opposed to

procedures, one cannot simply overlook the variety of terms used to describe evaluation procedures. Even though one cannot definitely interpret the noted variations, it is perhaps possible to at least speculate as to the significance of such differences. From the researcher's experience with the interviews, it appeared that the use of differing phrases to describe essentially similar views and procedures reflected personal background, experience and practices of the respondents. Thus, in order to make sense of what has been said, it was necessary to construct a continua - a cluster of evaluation procedures - and place these respective phrases or tools within the context and processes of their belongings. For example, there are two major forms (formative and summative) of evaluation. In general, formative evaluation is "any review done for the purpose of improving the material"(Weston, 1986, p.7) and occurs within and during the entire process of programme design and production. Weston (1986) identified various types of formative evaluation which includes "self evaluation", "expert review", "developmental testing", "one-to-one testing", "group testing", "field testing", and "extended testing." (p. 9). On the other hand, summative evaluation is used to validate a programme and for judging decision alternative (Stufflebeam, 1969).

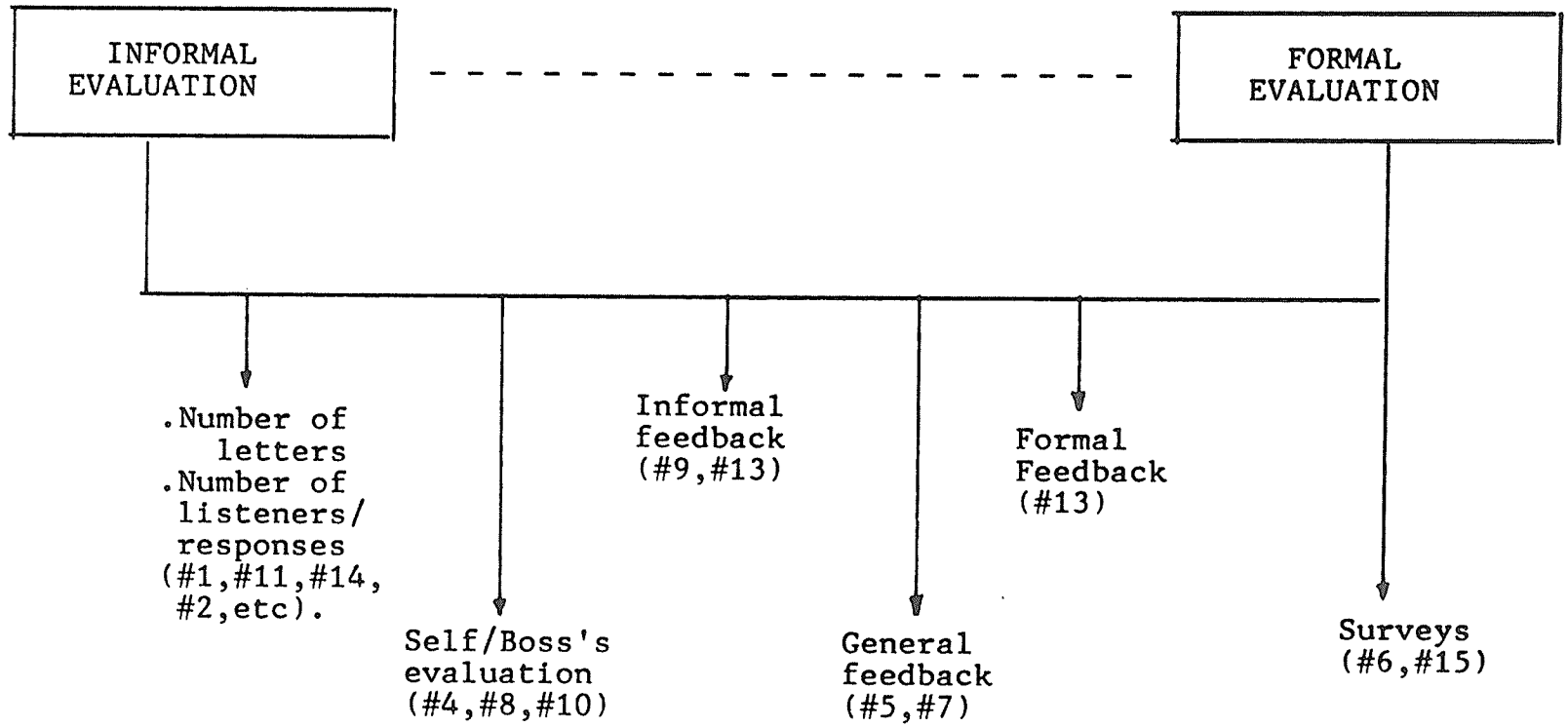

Figure 3: Evaluation Continuum.

Utilizing Oberg and Dufresne-Tasse (1986) pattern coding method, it was possible to code and classify the experts phraseology into informal and formal evaluations based upon the above definitions. Figure 3 below indicates that most of the respondents did some kind of informal evaluation. Although it is said to be informal due to techniques involved, these evaluations seemed to be carried out after the programme had been disseminated. Thus, they are placed in this context with the view that feedback received from the previous programme was used to revise and modify the following programmes. Only with this notion can the classification be accepted as valid. Secondly, from the pattern coding, it appeared that only two communication experts used some kind of formative/summative evaluation. Hence, one can conclude that the respondents used only informal type approaches to evaluate their programmes/broadcasts.

5.8 PROBLEMS ENCOUNTERED.

In the structured interview questions that were used (Appendix C or D), the respondents were asked to identify major problems encountered at the planning, production, delivery and evaluation stages of the communication process. Although most of them had not encountered or could not think of any major problems encountered at the time of the interview, a few problems appeared inevitable and prevalent.

Though accorded a low response rate, the major problems encountered at the planning stage were lack of time (#5 ,#9, #10, #12) and the problem of dealing with people (#2, #6); while those encountered during production included the above plus insufficient budget and people to interview (#2, #3, #15). The inevitable major problem encountered at the delivery stage was the difficulty of getting people together and to participate in discussions (#2, #9, #14). Finally, those encountered at the evaluation stage were "evaluation itself" - there is no way of doing it statistically and accurately - (#4, #6, #7, #13); and lack of feedback (#8, #9, #12).

In general, the most inevitable and prevalent problem encountered across the four stages is the "time" - "... to [plan] get the information put together" (#10); "... to [produce] get the programme done in time for it to be useful" (#2); "... to [deliver] do it" and "... to [evaluate] design an evaluation form." (#10). As suggested, these problems can be approached by "working as efficiently" as possible (#2, #4, #10), by allowing some flexibility within the processes (#6, #9, #10), and through interpersonal relationships (#14).

TABLE 5

Recommendations: Summary.

Int.#	What Are Their Recommendations?
* #1	-Should be done by a "Nigerian ... who knows those little nuances of the society." -Use "Farm Radio Forum approach." -Use "small listening groups." -Use "open line Radio." -Make programmes simple.
#2	-Don't loose "contact with the audience." -Don't loose "contact with the needs of people."
* #3	-Keep the programmes simple. -Design and direct programmes to the target audience. -Talk to the audience friendly & in their kind of language.
#4	-Develop "credibility", know the audience and "what they want." -Use "expertise" and "get down to basics."
#5	-Get "radio into the hands of everybody." -Don't talk "down to the audience." -Make it simple.
#6	-Radio "must be backed up ...by person-to-person contact" [and] by demonstrations." -Keep programmes "short and concise." -Know "your audience." -Get "community involvement." -Use "extension advisory groups."
#7	-"Keep the messages fairly simple & understandable." -Programs should be "guides and suggestions."
#8	-Keep "the information direct, simple"& understandable. -Don't get "too technical on a topic."
* #9	-Use the "whole Farm Radio Forum" approach. -Get farmers' "commitment" during initiation.
#10	-"Utilize the language of the people." -"Programs should be informal." -"Know ... your audience", involve the audience. -Don't use radio for "political propaganda."

Table 5 Cont'd.

#11	-Use indigenous to deliver information -"Use radio as eye opener." -Use "print or personal contact." -Information should be "relevant to the area."
#12	-Use information from "developed countries." -Don't have too long a program: keep it brief.
#13	-Government or radio people must be willing to provide such program. -The "farm people" must have a desire "to want to learn more, do it better or different." -"Talk at the level of ... farmers." -"Know where ... your listener is at ...."
#14*	-Organize "small groups." -Don't "aim for a group that is too large." -Find out what farmers have. -Find out "what they're interested in,..., what they want to learn about. -"Establish a good feedback from the group."
#15	-Determine possible radio stations; "what time of day is the best." -Develop "list of source materials"; "right kind relationship with the radio stations." -"Make people aware of the service" -Get "feedback" from the people early." -Get people involved right at the beginning.

5.9 RECOMMENDATIONS.

In this section, communication experts in the sample were asked to recommend approaches, identify pitfalls and problems foreseen for the uses of educational radio in the agricultural extension services of a developing country. Table 5 summarized the various ideas generated by the respondents. From the table, it was possible to identify five major recommendations made by communication experts. These were: 1) simplicity, 2) community involvement, 3)

indigenosity, 4) Farm Radio Forum approach, and 5) multi-media approach. These major recommendations are presented in order of the frequency with which they were mentioned by the respondents. It can be reasonably argued that the frequency reflects the emphasis and indispensability of communication experts' ideas and recommendations.

5.9.1 Simplicity.

Of the fifteen communication expert interviewed, nine (60%) recommended simplicity as being a good attribute of any educational radio programmes. The following examples illustrate some of the various ways in which the notion of simplicity was recommended.

-"translate the experts' fancy talk into ordinary,understandable language, ..." (#1)

-"Keep it [the programme] simple and talk to them in their kind of language." (#3).

-use "expertise" and "get down to basics" in such a way that they will understand it." (#4).

-don't take "it for granted that everyone understands the code words [technical jargons] involved." (#5).

-keep the programmes "short and concise ...." (#6).

-keep "the messages [programmes] fairly simple and understandable." (#7).

-keep "the information direct, simple and put... it across in the simplest form so that your listening audience can understand it." (#8).

-"Talk at the level of the listeners." (#13).

Although the phraseology used was different for each of the respondents (Woodley, 1984), there appeared to be little doubt that the underlying sentiments were the same; indicating the indispensability of the idea of simplicity in educational programming, especially, for illiterate and neo-literate adults.

5.9.2 Community Involvement.

Of almost equal emphasis was the notion of community involvement right from the beginning to the implementation and evaluation stages. Seven of the fifteen respondents made specific recommendations to this effect. Such recommendations include:

1. Using "... those individuals in the community to try and identify what is most important to be said." (#6).
2. Getting "a fairly good commitment out there that they want it." (#9).
3. Having "a desire on the part of the farm people to want to learn more, to want to do it better or different." (#13).
4. Having "smaller groups so that each person can have a little impact." (#14); and

5. Getting "that feedback from the people early, or if there were advisory committees or whatever ahead of time, to suggest what kinds of topics should be handled and how they're handled and either ahead of time or early in the service to make sure that this was what they wanted and they were going to in fact listen." (#15).

Although seven of the fifteen respondents represents only 46.7%, the notion of community involvement has been used extensively in such activities and has been explicated in the research literature (Anyanwu, 1977, 1978; Ezeomah, 1983; Crowley et al., 1978; Mathur & Neurath, 1959; Kidd & Etherington, 1978; Cassirer, 1977, 1974; Punasiri & Griffin, 1976; Grenholm, 1975; Nicol, 1954).

5.9.3 Indigenosity.

For six (40%) of the respondents, there was obvious concern about who is delivering the educational radio programmes. Such concerns ranged from awareness of the social norms to understandability of the people and their language. It prompted recommendations such as: "it should be a Nigerian who's delivering the educational" (#1) programmes; "someone ... who knows those little nuances" (#1) of the society; and "... as much as possible, utilize the language of the people you are talking to and probably do not do radio programmes in English if in fact most of the

people really relate better to a tribal language of some kind." (#10); and finally, "That the person who is giving the agricultural information is from there, and understood and could relate to the people." (#11). Although not specifically articulated, it appeared that indigenosity was in large measure related to community involvement. The inference seems to be an understanding of the community, their norms and language and the ability to relate to the people.

5.9.4 Farm Radio Forum Approach.

Almost equal emphasis was placed on the use of Farm Radio Forum approach. Five (33.3%) of the fifteen respondents recommended organization of "small [listening] groups" (#1, #14) in villages to sit, listen and discuss educational radio programmes. Communication expert #14 felt that "one of the most important thing is to try and get smaller groups so that each person can have a little impact." Although few recommended the Farm Radio Forum approach, it has been used extensively in both developed and developing country. Such countries include: Canada, India, Ghana, Benin Republic Latin America and the Caribbean, to name but a few (Nicol et al., 1954; Abell et al., 1968; Punasiri, 1976; Sitaram, 1969; Schwass, 1976, Kamath, 1974; Mathur & Neurath, 1959; Anyanwu, 1977, 1978; Khan, 1977; Kidd, 1950; McKenzie, 1950).

Especially of unique interest in the Farm Radio Forum approach is the 'small listening group.' In the literature, group learning and group listening has been a long-established practice of adult education and education of adult peasant farmers. For example, Lowe (1975) examined the assumptions of group theorists on group learning and concluded that 'group interaction leads to changes in individual behavior.' According to him, individuals in a group learn from one another, and are stimulated to behave in such a way as may be profitable to the whole group. Various literature reviewed in this study testified the viability and inevitability of group learning and radio group listening followed with discussions.

5.9.5 Multi-Media Approach.

The final area of major recommendations identified from table 5 was that of a multi-media approach. Again, five of the respondents suggested this approach. They recommended the use of "person-to-person contact" (#6), "print or personal contact" (#11) and the establishment of a good feedback system from the group (#1, #14, #15) so that farmers can report back in writing. Although a higher number of the respondents used radio in conjunction with other media, few mentioned it during their recommendations. Irrespective of this low recommendation rate, the use of multi-media approach in any educational programming is

inevitable and indispensable. In both developed and developing countries, especially for education of illiterate and neo-literate rural adults, the multi-media approach has proved successful. Major examples include the former Canadian Farm Radio Forum (Nicol et al., 1954); an Indian experiment in Farm Radio Forum (Mathur & Neurath, 1959); the Ghanaian experience (Abell, Coleman & Opoku, 1968); and many others described in the following chapter as well as review of the related literature.

To recapitulate, it must be remembered that the questions used during the interviews were open ended and non-directive in and of themselves. Therefore, since only five (33.3%) communication experts recommended the Farm Radio Forum and the multi-media approaches, it is likely that most other respondents would agree with these ideas. The respondents who recommended these themes/ideas probably placed higher priority and emphasis to them than on others. However, since these recommendations are strongly supported by the reflexivity literatures, it can be concluded that they are significant.

5.9.6 Perplexity And Pitfalls.

As stated at the outset of this section, the respondents were asked to identify pitfalls and problems foreseen for the uses of educational radio in the agricultural extension services of a developing country. Although some of them

were reluctant and hesitant to say what they felt because of not knowing any developing country "well enough" (#9), what follows is a further distillation of recurrent pitfalls and problems identified by those who responded. Though the pitfalls and problems were stated in the individual transcript summary presented in chapter IV as well as table 5, those mentioned here are felt to be relevant based on the researcher's experience and knowledge of a specific developing country as well as the related research literature.

Five major problems were foreseen for the uses of educational radio in the agricultural extension services of a developing country. These include:

1. Availability of radios (#1, #3, #4, #9, #10, #12, #14, #15);
2. Getting and encouraging people to actually listen to radio programmes (#2, #6, #11, #13, #14);
3. Attitude of the government and the use of radio as a propaganda thing (#4, #10);
4. Knowing the best time to get the target audience (#13, #15), having follow-up materials (print) available and accessible to them (#11), and the "language problem." (#13); and
5. "Getting trained radio announcers and farm directors who can talk about farming and yet not sound like big government officials, who can relate well to the

people in the country and still not preach to them." (#10).

In terms of pitfalls to be avoided, most of them are displayed in table 5 as cautionary statements such as don't loose "contact with the needs of people" (#2) and get "feedback from the people early." (#15). Other relevant pitfalls identified but not displayed in table 5 include: (a) Having "an expert who can't talk in plain understandable language." (#1); (b) "Turn[ing] off your audience before you ... even started." (#4); (c) Taking "it for granted that everyone understands the code words [technical jargon] involved." (#5); and (d) "Timing for [one's] convenience, for the broadcasters convenience rather than for the audience convenience." (#6).

5.10 SUMMARY AND CONCLUSIONS.

The themes and ideas presented in the preceding pages represent communication experts' purposes and planning, production, delivery and evaluation of educational/information radio programmes; and their recommendations for educational uses of radio in a developing country. In a capsule form, the interviewed communication experts use radio as an 'awareness', as a 'reminder' and as an 'information' medium; they plan their programmes 'cooperatively' and sometimes, in 'consultation' with the target audience; their production procedures follow

two main routes as displayed in figure 1; and their delivery method is mostly through interviews while the reception model is mainly 'individuality' and sometimes, 'family circle.' Evaluation is mostly informal with orientation towards feedback.

For educational uses of radio in a developing country, five major recommendations were made. To recapitulate, these were: 1) Simplicity, 2) Community involvement, 3) indigenosity, 4) Farm Radio Forum approach, and 5) Multi-media approach. As validated through 'reflexivity literatures', these recommendations appear appropriate and applicable at various stages of the technical processes. In practice, they appear interwoven and as such, intermingle within the plan, production, delivery and evaluation processes.

From the general summary analysis presented in this chapter, it can be concluded that:

1. The purposes of disseminating agricultural information to farmers in rural areas of Manitoba, Canada were:
   a) To provide 'timely', 'up-to-date', 'accurate', 'useful', 'technical' and 'how to do' farming information.
   b) To improve 'farming practices and market decisions', 'farm management ability', 'quality of

life', 'income' and 'standard of living' on the farm.

2. The interviewed communication experts plan and determine the purposes of information dissemination through:
   a) The 'cooperative efforts' of the target audience;
   b) 'Consultation' with experts and specialists in the field;
   c) 'Committees' and 'farm organizations'; and
   d) 'Experience' in- and on- the job.
3. The production of (any) radio programme may follow the four major identified steps:
   a) Determine interviews/identify sources;
   b) Conduct interviews/write scripts;
   c) Tape interviews/read and record scripts;
   d) Edit and re-record/re-tape.

   These four steps should be preceded by 'identification' (needs assessments) and 'research' as described in section 5.5
4. The delivery of any educational radio programme should follow three steps:
   a) 'Introduction': Tell the audience what you are going to tell them;
   b) 'Content': Tell them what you want to tell them;
   c) 'Summary/Closure': Tell them what you have already told them.

5. The communication experts interviewed evaluated their radio programmes 'informally' with orientation towards feedback.
6. The communication experts in Manitoba, Canada use radio as an 'awareness', as a 'reminder' and as an 'information' medium.
7. The target audience receive information 'individually' and sometimes, in 'family circles.'
8. The target audience are involved 'indirectly' and 'informally' during the planning process.
9. Majority of the communication experts use the interview format to deliver information.
10. The broadcast times depend upon the area (country), farming practices, seasons of the year; and may be different for different farmers.
11. The length of any educational radio programmes should be between 30 - 45 minutes with intermittent breaks.
12. The major problem encountered was the time to plan, produce, deliver and evaluate educational radio programmes.

Chapter VI

HOW RADIO HAS BEEN USED IN DEVELOPING COUNTRIES.

The purpose of this chapter is to seek answers to the second major problem of the study: "According to selected literature, how do the agricultural extension services of developing countries use radio to educate or disseminate agricultural information to farmers in rural communities?" In order to attempt to answer this question, this chapter continues from where chapter II left off. The aim now, however rather than to review the literature, is to extensively describe five specific and related projects/programmes/experiments (hereafter, used synonymously) in light of the preceding in-depth interviews as well as the above stated question. These projects represent the "five strategies of use" for radio in development (McAnany, 1976) and are drawn from developing countries. The projects described are:

1. NIGERIA: Education of Nomadic People.
2. GHANA: Farm Radio Forum Project.
3. INDIA: An Experiment in Farm Radio Forum.
4. BENIN REPUBLIC: Use of Radio in Rural Education.
5. DOMINICAN REPUBLIC: Radio Santa Maria.

Selection of these projects is based on three major premises. First, the fact that they dealt with education of illiterate or neo-literate adults, rural development, rural education, agricultural extension or Farm Radio Forum (as defined in chapter I); and used radio as the principal medium. Second, the fact that the literature described the processes - planning, production, delivery/broadcast, evaluation or a combination thereof. Third, the fact that the literature was available and within the reach of the researcher.

Since selection of these projects is delimited by three factors, it follows the expression 'nobody is perfect.' That is, this chapter and the employed methodology is not perfect; it has three major drawbacks. First, the phenomenon that the materials described may be a secondary source is a problem. It thus follows the first assumption of the study which states that the materials are not secondary - they are written by people who were directly involved in the projects. But whichever the case may be, the idea here is to abstract the major themes and practices from the literature, and from developing countries, to reflect upon, to support and to validate the data collected through structured in-depth interviews.

Second, the basis of selection of the described projects is not perfect. It is possible that the most relevant and important projects may not have been included because of the

selection criteria, that is, the criteria of availability limited the number of projects described. Finally, the third drawback is a result of the second, namely the chapter is not an exhaustive description of many such projects. Having recognized these drawbacks, it is anticipated that they will not invalidate the results and findings, especially, of this chapter.

Although each section that follows is started with a historical or developmental background of each project, it will be noted here that the descriptions that follow are mainly concerned with the 'how' - planning, production, delivery/broadcast, evaluation or a combination thereof - rather than the 'what'.

6.1 NIGERIA: EDUCATION OF NOMADIC PEOPLE.

In Nigeria, the nomadic people are made up of different ethnic groups who are "constantly on the move to herd their animals." (Ezeomah, 1983. p.29). Because of their constant movements, these ethnic groups are educationally disadvantaged. To bridge this gap, various educational experiments were initiated and implemented by the Nigerian government. For example, in Bauchi state of Nigeria, some mini-studies were carried out to identify the problems and attitudes of the nomads towards formal education. In order to attempt to solve the identified problems, three strategies were used. First, the acquisition of:

> (i) A mobile cinema van - complete with projectors and accessories, (ii) A tape recorder/player, (iii) special films; e.g. on cattle rearing, (iv) special (music) recordings. (Ezeomah, 1983, p.30).

Second, the approaches to be used which include spending time getting acquainted with the nomads through the use of films and music recordings; establishing relationships with them, and carrying out dialogues from the topics of the films and the music recordings; and getting the nomads to express their needs through dialogues, especially with the elders, and to act upon the accepted needs.

Third, the preparation which involved ascertainment of their willingness, and the number that are willing to participate, their location, route and destination. The provision of these basic equipment and approaches "were meant not only to gain a closer relationship with the cattle Fulani parents, but also to win their confidence and become acceptable to them." (Ezeomah, 1983, p.32).

Although radio was not used as the principal medium, the result of this experiment was overwhelmed with "poor enrollment and irregular attendance." (Ibid, p.42). Similar types of educational experiments were planned for, and implemented in different states of Nigeria within which the nomads travel. These states include Bauchi, Borno, Gongola, Kano and Plateau (for more detail, see Ezeomah, 1983b). Of particular interest is the 'Nomadic Fulani Educational Radio programmes of Plateau state. Based upon two publications by

Chimah Ezeomah[1] the pages that follow describes the processes of this specific project.

6.1.1 Planning, Production, Delivery and Evaluation.

Figure 4 below shows the processes followed and the type of information flow between programme producers, programme broadcasters and the nomadic Fulani receivers. Ezeomah (1983) described the stages as follows:

> In stage 1, the programme producer plans and produces what may be assumed to meet the needs of the nomads. In stage 2, the programme caster goes on the air as directed and the Fulani nomads receive the programme in a random passive fashion as in stage 3. The broken lines show that the nomads have no means of sending feedback to the producers. The radio is used in this was as an information medium. (p.47).

Although used as an information medium, the purpose of the Nomadic Fulani Educational Broadcasting "was to popularize the nomadic project among the nomads in order to affect their minds...towards social change." (Ibid, p.44). It appeared that the programmes were not designed to achieve this purpose. The nomadic adults were partly involved during the planning process. Ezeomah reported that only five percent of the respondents indicated that 'they had some

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[1] Dr. Ezeomah is a senior lecturer in Educational Administration and Planning in the faculty of Education, University of Jos, Nigeria. He became interested in the education of nomadic people in 1970 and 1971 when he participated in the adult education programme organized for them. Since 1976, Dr. Ezeomah has devoted his research efforts on how best to make suitable educational provisions for the nomads.

discussions with radio programme producers and that they were interviewed by 'radio men' about the conditions of their living in their camps... "(p.47).

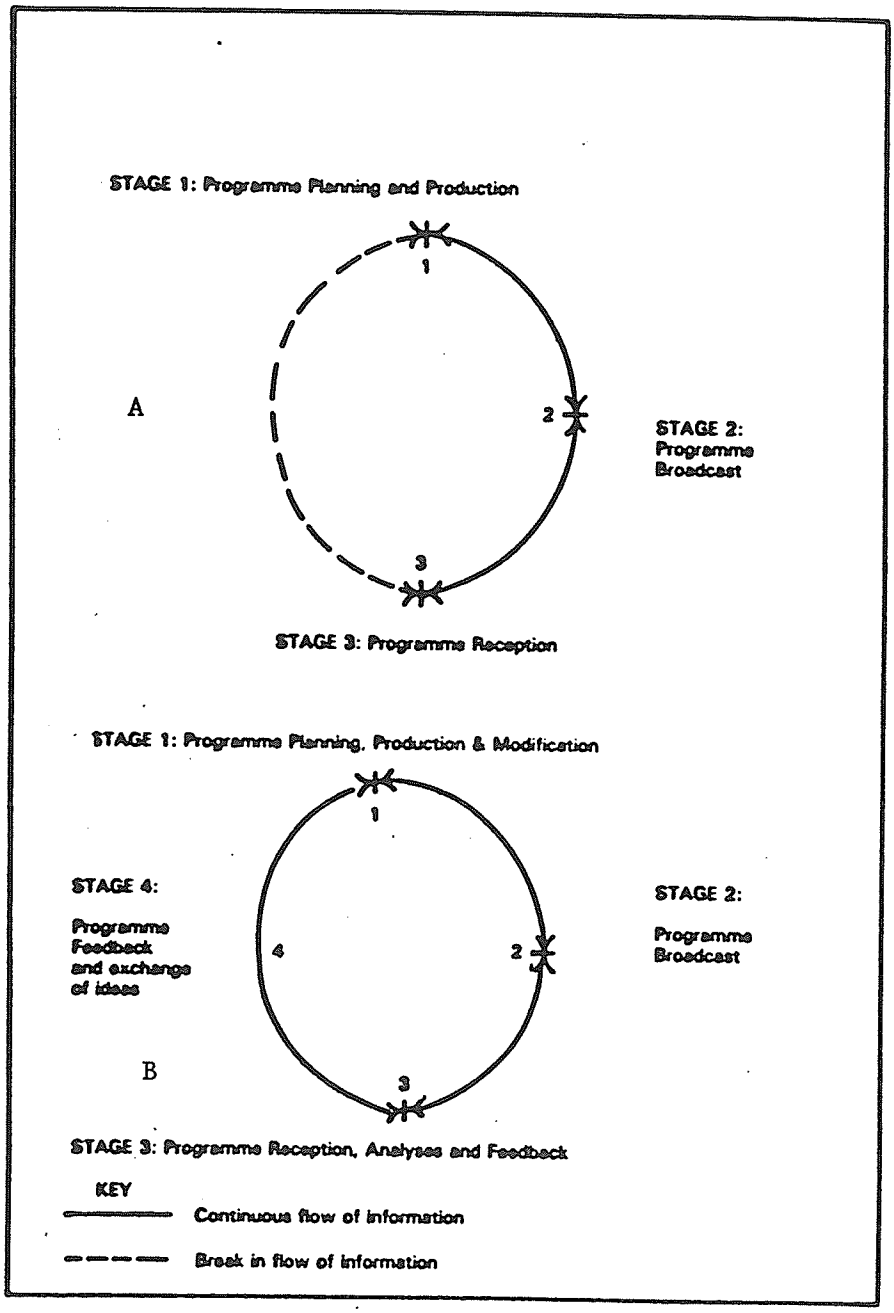

Figure 4: Radio Educational Programme Broadcast and Reception Model.

Not satisfied with the above processes, Ezeomah (1983b) argued that

> For a radio to be used as an educational and training medium, it should become a medium of dialogue and participation between the producers, the programme casters and receivers. (p. 47).

Thus, he proposed the second diagram of figure 4 as the ideal educational radio programme broadcast and reception model. In this model, the producer plans and produces programmes based on the information received from the receivers through field workers. The programme broadcaster uses the technical 'know how' to help the producer make modifications and improve the productions as more feedback is received from programme receivers; while the field workers study the environment and culture of the community and provide necessary information for programme production.

To evaluate the nomadic Fulani educational experiment, a survey was carried out to determine the extent to which the educational broadcast had affected the minds of nomadic people towards social change. The survey sought to answer the following questions:

1. How many nomadic Fulani own radios?
2. What type of programmes do they listen to?
3. Do they understand and discuss radio programmes they listened to with their neighbour?
4. How useful do they consider the programme?
5. Do they communicate with the programme producers? (Ezeomah, 1983a, p.61).

Although the survey methodology is not clearly stated, relative to the theme here, it revealed that:

1. Majority (85%) of the respondents discussed with others what they heard on the radio.
2. Only 5% of respondents showed that they had some discussions with producers.
3. Most of the respondents (93%) showed a desire to communicate with the programme producers so they can express their views on what affects their lives and have programmes of direct interest to them.

Regarding respondents' high desire to communicate with programme producers, Ezeomah (1983a) concluded that:

> This will not only encourage their active, critical and thoughtful participation but also enable them to become involved, at one time or another, in the business of educational broadcasting. This means giving them opportunity to be on air about matters concerning their seasonal movements,...(p.64)

Correspondingly, Ezeomah's conclusion supports the characteristics of indigenosity and community involvement recommended by communication experts during the interviews.

6.2 GHANA: FARM RADIO FORUM PROJECT.

In 1956, just before independence, Radio Ghana began its broadcasts in the Ghanaian languages. The traditional music and rural oriented programmes began to compete for air time. Invitations came from village chiefs and cultural

institutions for broadcasting coverage at traditional festivals, rituals and harvest celebrations. In the same year, a weekly series entitled 'The Cocoa Family' went the air as the first attempt at rural broadcasting, and continued for two years. By 1957, the year of independence, regular talks on agriculture were introduced on the network of Radio Ghana. "These were, however, more academic than didactic, because they were given by University lecturers in English, and so missed their intended audience...the peasant farmer who needed them most." (Coleman & Opoku, 1968, p.7).

In 1962, Radio Ghana accepted an invitation from the Australian Broadcasting commission to send a radio technician for a course of training in rural broadcasting in Australia. Mr. Opoku was given this opportunity. He saw the great contributions made by rural broadcasting to the advancement of agriculture and raising of the national economic level of Australia. His return in Ghana was followed "almost immediately by the introduction of a series of 30-minute weekly farm broadcasts in Akan, the language spoken by about 60% of the country's population." (Coleman & Opoku, p.8).

During 1963-64, Mr. Opoku "spent approximately one year in Canada studying all the phases of Farm Radio Forum in its country of origin." (Abell, 1965 p.2). By 1964, the government of Ghana, in cooperation with UNESCO and the government of Canada, introduced the Ghanaian Farm Radio

Forum on a pilot basis. This section describes the processes of the Farm Radio Forum project of Ghana.[2]

6.2.1 Planning, Production, Delivery and Evaluation.

As a Farm Radio Forum experiment, the organizers chose the "Eastern Region of Ghana" with the "Akan speaking dialect" as the project area. Sixty experimental forums were organized in forty villages in the project area, while forty forums were surveyed in twenty villages as control for the purpose of assessing results. (Coleman & Opoku, 1968; Abell, 1965).

Various organizations and government ministries were involved during the planning processes. These include Radio Ghana, United Ghana Farmers Co-operatives, National Council of Ghana Women, Ministries of Agriculture, Education, Health, Social Welfare and development, University of Ghana and the Institute of Ideological Studies. A "steering committee" consisting of representatives of the above organizations and ministries was made responsible for planning the project. A "subject committee" was nominated by the steering committee.

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[2] This description is based upon the work of William F. Coleman, director of Broadcasting, and Andrew A. Opoku, Rural Radio Producer, Ghana Broadcasting Corporation; and Hellen C. Abell, Technical Advisor, External Aid Office, Government of Canada, on secondment from the University of Guelph, Ontario.

The members of the subject committee were requested to draw up lists of topics they considered appropriate for the programmes. They were also requested to ensure that the interests of all the participating organizations were reflected in their selection, so that a broad view would be taken of the problems of rural people. The suggested topics were discussed exhaustively to elicit the pros and cons. After discussion, the "secretary convenor" prepared a detailed breakdown of the topics. Editors were then commissioned to write papers on the topics in English. According to Coleman and Opoku, (1968),

> this careful planning was aimed at bringing the academicians and experts down to the level of peasant farmer and unskilled labourer, whose problems they were invited to help in solving. (p.12).

Other planning activities prior to the establishment of forums in the selected villages was the training of "field organizers." Representatives in forty villages of the project area were selected. The organizers worked in teams of four and organized the forums.

To assist the chairperson and secretaries of individual forums, "three one-day workshops were arranged" and the participants were "given a more complete briefing on the forum technique and on their specific duties." (Coleman & Opoku, 1968, p.11). Also, a revised version of the All India Radio Guide for field organization of farm forums was prepared and mimeographed. Documents outlining the duties of

the forum secretaries and chairpersons, as well as a meeting guide was prepared and translated into the Akan language.

In terms of production, the department consisted of a Chief Organizer, a Forum Advisor and a producer. They examined and classified the topics according to their most appropriate modes of presentation. The comprehensive scripts were reduced to about one and a half pages, translated into the broadcast languages and distributed to the panel members as guides. At the beginning of the project, a Forum Calendar or Programme schedule was distributed to all forum members in the form of an illustrated booklet with synopses of all the guide materials and dates at which each of the broadcasts were on-the-air. "The calendar provided a double-check on the guides, and at the same time advance information on the fields to be covered by the broadcast during the season." (Coleman & Opoku, 1968, p.12).

The aim of the Farm Radio Forum was to give farmers or rural people a new incentive to group action in tackling common problems affecting their community, to stimulate thought and understanding among rural listeners on subjects that widen their horizons as citizens, and to help them improve their conditions as farmers. To accomplish this aim the Farm Radio Forum project worked in four phases:

> (1) the provision of visual aids, printed guides summarizing and synthesizing points of interest in the theme of the broadcast; (2) the broadcast; (3) organized group discussion; (4) group action. (Coleman & Opoku, 1968, p.11).

On the day of the broadcast and before the actual broadcast time, a "village crier" sounded the traditional gong to summon the forums to assemble and intones the evening greetings. The forums then met and exchanged ideas on the subject shortly before the broadcast started.

The first part of the broadcast - a summary of reports, comments and criticisms from the forums was read by an announcer. The second part, which was the body of the programme was then introduced and the questions which were to form the basis of the ensuing discussion, was read to the listening panels. This ensured that forums which had not received their guides because of postal delays or any other reasons had something on which to base their discussions. Sometimes, the questions were repeated at the end of the discussion before signing off.

The broadcasts took many forms depending on the subject. Majority of them were panel discussions in which volunteers both literate and illiterate participated in studio discussions. In this case, the chief Organizer acted as the 'animator' for the discussion. Also, some subjects were broadcast as straight talks; while others were dramatized or took the form of "talk-backs" in which forum members were invited to participate (Coleman & Opoku, 1968). At the end of the transmission, the forums discussed the broadcast and related it to their own local situations; and wrote back their views and reactions to the organizers. They also

indicated what action they proposed to take as a result of the information and discussion inspired by the broadcast. The forum 'talked-back' by having the producers and organizers attend forum meetings, record "on-the-spot discussions of some of the subjects." (Ibid, p.12), edit and broadcast back to the forums in the normal way. According to Coleman and Opoku, (1968), "It is by this two-way approach that the forum method of adult education by radio scores over others." (p.12). The forum talk-backs were arranged to follow every three broadcasts. At this stage, representatives of the forum were invited to the studio to recapitulate and indicate their reactions to the subject presented to them in the past month. "Apart from the enthusiasm these talk-backs, or audience participation broadcast, engendered, they also revealed the high degree of comprehension attained by forum members." (Ibid, p.13).

As an experiment in Farm Radio Forum, the evaluation was carried out in three stages: a pre-broadcast survey, on-going assessment and a post-broadcast survey. The experiment was designed as follows:

> ...20 villages, each with one organized Farm Forum listening group (type A villages); 20 villages, each with two Farm Forum groups (type B villages); 20 villages where a radio would be supplied for village listening, but no organized group would be formed (type C village); and 20 villages where no radio would be supplied, nor would any listening group be formed (type D villages). (Abell, 1968, p.24).

Types C and D villages were regarded as 'control' and was deemed necessary because of the availability of "privately-owned radio receiving sets throughout Ghana." (Ibid, p.24). By this design, it was possible to compare: (1) villages with supplied radios and with one or two organized listening groups (types A and B villages respectively); (2) villages with supplied radios but without organized listening groups (type C villages); (3) villages where no radio were supplied, nor were the people encouraged to listen to privately owned receiving sets through which the special Farm Forum broadcast could be heard (type D villages).

To test the effectiveness of the Ghana Farm Radio Forum project as "a method of educating adults and stimulating village self-help efforts" (Abell, 1968, p.25), several methods of data collection were utilized. First, before the series of broadcasts began, an "eleven-page questionnaire" was designed, pre-tested and used to conduct a "pre-broadcast survey." Also, a "village information sheet" for each of the 80 villages was compiled. The survey was administered by Farm Forum field organizers through 'face-to-face' interview with 480 rural people residing in all of the 80 rural villages. Before going into the field to conduct these interviews, the field organizers were given a two-day training period, during which the sample design for the survey and the interpretation, use and administration of the questionnaire were explained in detail. Written

instructions for interviewers were supplied. On the other hand, the village information sheet was used to collect "pertinent information concerning over thirty environmental and social factors." (Ibid, p.26).

Second, during the series of twenty broadcasts (December 6, 1964 to April 18, 1965 inclusively): (a) "observation reports on Farm Forum meetings" were prepared by each field organizer and each representative from the headquarter, and made available to the evaluation staff; (b) a "weekly reports of Farm Forum secretaries" which recorded minutes and attendance of each forum meeting and the actions to be taken by the forum, were also made available to the evaluation staff; and (c) a "village day" record which brought to light "invaluable information" on various aspects of the forum activities.

Third, using information from the pre-broadcast survey, observation reports, guides prepared for the broadcasts and consultation with informed persons, a questionnaire was prepared, pre-tested under field conditions, improved based upon the results of the field test; and used to conduct a post-broadcast survey.

Finally, "a brief but essential piece of "action research" was carried out immediately following the post-broadcast survey." (Abell, 1968, p.28). In this case, ten of the men who has acted as Farm Forum organizers and/or

observers during the project were requested to complete a two-page confidential questionnaire. From these evaluations, Abell (1968) concluded:

> With no exceptions, these experienced organizers and observers said that Farm Radio Forums should be continued in Ghana. Hence the evidence that Farm Radio Forums should be continued, in the opinion of the rural people (as obtained from the post-broadcast survey). (p.28)

6.3 INDIA: AN EXPERIMENT IN FARM RADIO FORUM.

> The pilot project has been a rewarding experiment for the All India Radio. It has suggested new directions in the use of radio as the voice of the new village in India, as a stimulus for new thinking in the countryside and as a factor in the growth of rural development activities based on free discussion, conviction and agreement. (Mathur & Neurath, 1959, p.13).

In 1955, 'Unesco-AIR Farm Radio Forum' was launched in India to test how a forum type broadcast programme can be used as an effective means of education. Before this period, villager's listening clubs and farm forums were in existence, but no special programmes were directed towards them. These clubs and forums were operating perfunctorily when the pilot project, based on the Canadian pattern, was established in 1956. "This entailed specially planned broadcasts, formation of listening-and-discussion groups and a scientific assessment of the reactions of the listeners." (Mathur, 1959, p.19).

Based upon An Indian Experiment in Farm Radio Forums by

J. C. Mathur and Paul Neurath,[3] this section describes the processes of the Indian experiment in Farm Radio Forum.

6.3.1 Planning, Production, Delivery and Evaluation.

In October 1955, the secretary of the Ministry of Information and broadcasting held discussion with government and UNESCO officials and made two basic decisions on which the project was planned. First, to restrict the experiment to a compact area where only one regional language is spoken. "A Marathi speaking area of five districts in the Bombay State was chosen for the purpose." (Mathur, 1959, p. 20-21). Second, to have an independent body, other than the All India Radio, evaluate the project. The Tata Institute of Social Sciences, Bombay, was approached to undertake the assessment.

By the end of the year, the Director-General of AIR in cooperation with AIR officials held discussions with representatives of the departments of Agriculture, Education, Information and Development of the Government of Bombay. Based upon these discussions, "a comprehensive memorandum covering both the administrative system and the programme requirements of the scheme was prepared." (Ibid, p.21). The scheme comprised four main elements: central

[3] J. C. Mathur was the Director-General, All India Radio (AIR); Paul Neurath was a Fulbright Exchange Professor of Social Research, Tata Institute of Social Sciences, Bombay, on leave from Queen's College and New School of Social Research in New York.

direction, field organization, program planning and presentation, and assessment.

Under the directorship of the Director-General of AIR, a Central Executive Committee was formed. This committee had representatives from "the Development, Publicity, Education, Agriculture and Health Departments of the Government of Bombay" plus four additional persons, two of which were "the heads of AIR stations at Bombay and Poona." (Ibid, p.21). The committee decided the project areas, and the number of farm forums that were organized. Its responsibilities included getting various authorities to agree to certain administrative steps.

Further, a "Field Organization Committee" was set up which included the Directors of Education, Agriculture, Publicity, radio officials and the deputy Commissioner of development. "This sub-committee... was entrusted with the task of selecting part-time organizers, allotting centres, drafting general instructions, etc." (Ibid, p.21).

To assist the AIR staff in planning the programmes, a subject committee was formed. It consisted of ten persons, some of whom were experienced farmers while others were members of the Education, Development, Agriculture and Public Health Department of the State Government. With the regional variations, seasonal requirements, habits and interests of rural people in mind, this Committee prepared a

list of nearly two dozen topics. "These topics were discussed in two meetings of the subject committee" (Ibid, p.33) after which, the producers began their planning.

A "Programme Presentation Committee" which consisted of programme producers of the Bombay and Poona stations and the assistant producer in charge of rural programmes at Poona was formed. The policy adopted for the programmes was to place emphasis on the practical aspects of rural life, and stimulate lively discussions among the listeners without raising controversial political issues. In total, twenty programmes were planned, produced and broadcasted. A forthnightly farm forum guide which indicated "programme schedules, general background information, hints to convenors and specific questions on which discussions" (Mathur, 1959, p.22) was prepared and issued. Also, a "small editorial committee" was formed for that purpose.

In terms of programme production and delivery, "Twenty specially designed programmes, each of 30 minutes' duration, were broadcast during the normal rural programmes at 6.30 hours, twice a week (on Sundays and Thursdays)..." (Mathur, 1959, p.22). The broadcast had two parts to it:

> first, the presentation in the form of a play, a feature, panel discussion, interview or straight talk, of the subject selected for the evening; second, the listeners corner in which the suggestions, criticisms and comments of the members of the farm forums were broadcast and discussed and questions answered. (Mathur, 1959, p.33).

For the twenty programmes, eight were dramatized presentations, seven were panel discussions, four were straight brief talks while three were interviews. The production was carried out as follows:

> Of the 20 programmes, 4 were 'live' of which 3 were broadcasts from the studios and 1 inaugural programme from a village; 16 were pre-recorded on tape, of which 2 had been pre-recorded in the villages. Various parts of other programmes had also been pre-recorded in the villages." (Mathur, 1959, p.33).

With regard to programme production through interviews, Mathur (1959) found that inviting the villagers to the studio made them self-conscious which, in turn, took away the genuineness of the atmosphere.

The language of presentation was Marathi - a local dialect - with a few characters speaking with slight rustic accents to give it local colour. In a number of programmes, the contrast between old and new ways of life was emphasized and humour was used effectively. Also, "the broadcasts were supplemented with visual aids such as film shows, pictures, posters and charts..." (Ibid, p.22).

In most forums, "the discussions were in the local dialect which lent to the spontaneity and interest of a language full of the humour and apt idioms that abound only in the language of the soil." (Mathur, 1959, p.39). The procedures were kept to the minimum; discussions were opened and closed usually by the group leader who also intervened and restored order when discussions became heated. Decisions

were, in some forums, taken by a show of hands. Group leaders and convenors used the guides to stimulate discussions. According to Mathur (1959),

> On the whole, discussions were everywhere frank, practical suggestions were made and a sincere desire to improve their lot was shown,...(p.39).

Each forum consisted of about twelve to twenty active members with a chairperson and a secretary convenor. Before organization of the forums and during preparation of list of forum members, the organizers consulted the village council chairperson, the village headpersons, the village level worker, farmers union and school teachers. And before enrollment, the forum members were told their responsibilities and expectations. The objectives of the forums were explained to them as follows:

> a) to listen to the special farm forum programme that was broadcast twice a week; b) to discuss before and after the programmes some of the problems on which the broadcast focused attention; c) to state their views on the problems and make suggestions about the programmes and occasionally to contribute to the programmes. (Mathur, 1959, p.30).

The forum members were also told and encouraged to follow-up the programmes with developmental activities in their village.

Although not necessarily educated, the chairpersons of the forums were chosen from amongst the elderly persons in the village, village council chairpersons, teachers and village headpersons. The key officials of the forums were

the secretary convenors. They had to be educated persons, capable of reading and writing. They were sent "weekly programme guide" and it was their responsibility to "publicize the subject of the broadcast, the time of the programme, etc. on the news-wall or notice board." (Mathur, 1959, p.30).

The Secretary convenors were also responsible for keeping records and arrangements of seats, lights and wherever possible the exhibition of charts and posters. They "reported any breakdowns of radio sets, made entries in the attendance register, took notes when the programmes was on and recorded the conclusions of the discussions." (Ibid, p.30). They prepared three copies of the minutes of each discussion - for AIR Assistant Station Director, the district organizer, and for the forum's own records.

> These reports enabled AIR, Poona, to maintain records of the activities of each forum and taught the forums the work of record-keeping and taking minutes. They also provided AIR with some interesting programme material (Mathur, 1959, p.31)

The evaluation of Unesco-AIR Farm Forum project was entrusted to the Tata Institute of social sciences and a representative of AIR[4] who was associated with initial planning of the assessment. The main objectives of the

[4] The survey to evaluate Unesco-AIR Farm Forum project was conducted by Dr. A.M. Lorenzo, head of the Department of Social Research, and Dr. Paul Neurath, Fulbright Exchange Professor of social Research, Tata Institute of Social Sciences, Bombay. Evaluation report was written by Dr. Neurath.

evaluation were:

1. to examine whether Radio Farm Forum could be used to transmit new knowledge;

2. to study group discussion as a means of transmitting knowledge;

3. to study the role of Radio Farm Forum as a new institution in village life and as an instrument in general village uplift. (Neurath, 1959, p. 62-63).

In addition to the above objectives, the evaluation examined: (a) the reactions of the forum members to Radio Farm Forum as a whole; and (b) the reaction of forum members to individual programmes.

The sample was restricted to twenty forum villages as an experimental group, and twenty non-forum villages as a control group. The experimental group were categorized as:

> Category I - old radio, project area; Category II - old radio, non-project area; Category III - new radio, project area; category IV - new radio non-project area. (Neurath, 1959, p.64).

"Old radio" referred to villages which had had radios before the experiment, while "new radio" referred to those that received their first community radio set as a result of the Radio Farm Forum experiment.

Similarly, the non-forum, control, group were subdivided into four categories as the experimental group. the designation, categories V to VIII with old radio-project area, old radio non-project area, no radio project area, and

no radio non project area were used. "New radio" forum villages were matched with "no radio" non-forum villages so that they were "strictly comparable only for the pre-broadcast period when neither of them had radio." (Neurath, 1959, p.64).

The evaluation took place in three stages: pre-broadcast survey, observation, and post-broadcast survey. During the pre- and post-broadcast periods, the questionnaire designed to assess the level of knowledge before and after the experiment and to ascertain the reactions of forum members to the whole Radio Farm Forum was administered. During the observation period, each forum was visited four times, its proceedings were observed and the members were interviewed. In total, each forum village - experimental group - consisting of twenty forum members was interviewed "six times: once before, once after, and four times during the series of 20 broadcasts. Each non-forum village was interviewed twice: once before, and once after the series." (Neurath, 1959, p.65).

In terms of findings and lessons learned from the Indian experiment Neurath (1959) carried out various types of evaluation. He outlined the reactions of each forum to the broadcasts, discussions, participations; and compiled what the forum learned by comparing the forum and non-forum groups, various groups, various topics and group discussion. He also defended "radio farm forum as an institution" and

"as a medium for transmitting knowledge." (p.101). Finally, summary, conclusions and recommendations were provided.

In sum, Neurath (1959) concluded that:

> 1. Radio farm forum as an agent for transmission of knowledge has proved to be a success beyond expectation. Increase in knowledge in the forum villages between pre- and post- broadcasts was spectacular, whereas in the non-forum villages it was negligible. ....
>
> 2. Group discussion as a means of transmitting knowledge was a complete success. ... Both leaders and members learned how to conduct orderly discussions, keep to the point and adjust to each other's mode of discussion. Knowledge that existed in a latent form in the villages was brought out in the open and shared by the whole village. ....
>
> 3. ... Forums developed rapidly into decision-making bodies capable of speeding up common pursuits of the village faster than the elected Panchayat [chiefs]. ....
>
> 4. Reaction to the radio farm forum as a whole was most enthusiastic, and the demand that this be made a permanent feature was practically unanimous. ....
>
> 5. Reactions to individual programmes were usually favourable, although single programmes came in for criticism either for not being informative or for not being presented in an interesting manner. ....
>
> 6. Visits to numerous non-survey forums have produced evidence that the overwhelming success in the 20 survey villages where it was studied in great detail was equalled in the other forums throughout the experiment. (p. 105-107).

For an extensive discussion of the methods, findings, conclusions and recommendations see

Mathur and Neurath (1959). An Indian experiment in farm radio forums.

6.4 BENIN REPUBLIC: THE USE OF RADIO IN RURAL EDUCATION.

In Benin Republic, the use of radio for the purpose of educating the masses started in 1960 with a special broadcast by Monsier Glegnon-Todokoun. The central theme of the broadcast was the education of peasant farmers against injudicious cutting down of palm trees in attempt to produce palm wine. The broadcast was directed to the south and centre of the republic, and was made in the "Fon language."

Although the broadcast did not completely put an end to the indiscriminate cutting down of palm trees by some peasant farmers, it "aroused awareness among technical officers in the Departments of Water Resources, Forestry and Agriculture as to the possibility of educating rural peasants through the medium of the radio." (Anyanwu, 1976, p.2-3). Also, it led to the initiation of a "micro-radio programme" through which rural development technicians specifically helped the peasants in planning their planting and harvesting. Since then, radio has become "an effective means through which the government reaches the rural masses and get them familiarized with plans for national development." (Anyanwu, 1977, p.59).

The description that follows is one of such projects for national development: The use of radios in `rural education. This description is based upon two publications by Dr. Clement N. Anyanwu.[5]

6.4.1 Planning, Production, Delivery and Evaluation.

As a procedure to promote the welfare of rural peasants in Benin Republic, experimental radio programmes were planned, produced and broadcasted (processes not known). These broadcasts were coordinated by "the Audio-Visual and Initiation to Popular Education (Centre Audio-Visual et d'Initiation pour l'Education Populaire) - (C.A.V.I.E.P.)." This centre received reports and news items from all the technical departments concerned with the development of agriculture, forestry, fishery, and other corporations in the Republic. Radio programmes were broadcast in different local dialects. Each broadcast lasted for a period of fifteen minutes, "from 7.10 to 7.25 p.m."

After three months of experimentation, the government of Benin recognized that collective listening to radio broadcasts is an important learning strategy which would enable the peasants to "grow more aware of their own behaviour and values, as well as become better able to analyze and assess their relations with other groups and

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[5] Dr. Clement N. Anyanwu is a professor at the Faculty of Education, University of Ibadan, Nigeria.

people." (Anyanwu, 1978, p.5).

As a result of this realization, the agricultural extension officers, monitors and trainers who had direct contact with the peasants were instructed to organize collective listening for those farmers who were enthusiastic about profiting from the broadcasts. The aim was to get field officers to explain to farmers the various policies of government as were broadcast through the agricultural radio" (Anyanwu, 1977, p.61). Also, certain state societies engaged in the promotion of rural life, such as the Agricultural operation, organized collective listening by "tuning directly to the broadcasts or by recording them for a replay during their meetings with the peasants." (Anyanwu, 1978, p.5).

6.4.2 Agricultural Radio Clubs.

From the organized collective listening groups, 'Agricultural Radio Clubs' were formed. In these clubs, registration was voluntary and free. Each club consisted of thirty-one members and each member contributed a small amount of money per week for the purchase of radio batteries. Members were functioning and industrious adult peasants who were interested in the development of agriculture, and were prepared to learn from the Agricultural Radio programmes. They were drawn from all quarters and hamlets which made up the village in which the radio club is established such that

> decisions taken at meeting sessions are relayed to every member of the village, so that every farmer gets information about the correct methods of...In this way, the Agricultural Radio Club remained an institution, not only for the 31 registered members, but also for the whole village. (Anyanwu, 1978, p.7).

The village chiefs were the presidents of the radio clubs in their village, and represented the government in the day-to-day running of the clubs. They protected the clubs and gave them their moral, and sometimes financial support. Apart from the village chiefs, each radio club had a chairperson or "an animator" who directed the club meetings. They encouraged people to come together, listen to the broadcasts, and discuss the problems raised, and the issues involved in the radio programmes.

Usually, animators are individuals who understand intimately the problems and needs of their community and are prepared to direct the members to think about their problems, work actively and communicate freely for the solution of their common problems. As group leaders, animators are devoted to the cause of better living, and are able to give example to others through selfless service to their community. Usually, they are neither politicians nor technical experts; they are ordinary respected members of the community with the capability to lead people to the realization of their felt needs. They encourage people to come together, listen to the broadcasts and discuss the problems raised, and the issues involved in the radio programmes.

In the Benin Republic, animators were aided in their tasks by technical advisors from the Government Ministries who were assigned to the villages as change and development agents. Animators and technical advisors were the two most important officers of the Agricultural Radio Clubs because the success of the clubs rested on them.

> They summarized and drew out the main points of every emission, thereby making discussions by members easy and profitable. Also they directed the meetings of the club, and ensured that discussions were not diverted to unprofitable bypaths.(Anyanwu, 1978, p.8-9).

Under the supervision of the animator, each radio club had a radio diffusion centre where members assembled to listen to the broadcast. After listening, the animator led members through a discussion of the directives given by the broadcast and proceeded to study the specific problems involved in the methods recommended.

On the other hand, the technical advisers took note of the questions posed by members during discussion, answered them to the level of their competence and referred rather complicated questions to the sector chiefs. In turn, the sector chiefs processed the questions and relayed the answers through the Agricultural Radio Station for the benefit of other sectors, and for the smooth administration of the system.

Further, the technical advisers summarized the views, observations and suggestions of the peasants as they were

made during their meetings. Their weekly and monthly reports were sent to their superior officers. These reports, in turn, were used to "strengthen and diversify the radio programmes, as well as improve the education of the peasant farmers in agricultural development, and their general welfare as citizens." (Anyanwu, 1978, p.9).

6.4.3 Reform, Replanning and Evaluation.

By July 1968, "after one and a half years of operating the Agricultural Radio, investigations were carried out to collate the reactions of the peasants, with a view of effecting necessary reforms in the administration of the Agricultural Radio programmes." (Anyanwu, 1978, p.9). From the information and suggestion collected, a reform of the Agricultural Radio was planned.

A National Committee which was responsible for planning the calendar of the agricultural broadcast was formed, and consisted of senior officers of the government ministries. "Topics on general motivation, built around the development of agriculture, food and nutrition, health, national education, cooperation, civic responsibilities, and the exercise of administrative authority, were developed for the programmes." (Ibid, p.9). Also topics on rural life developed by the Ministries and state societies of agriculture and co-operative action were injected into the agricultural Radio programmes. Messages from the radio

clubs, and questions and answers of interest to the development of agriculture, all formed important themes for the Agricultural Radio programmes.

Further, Departmental Committees were set up to make recommendations to the National Committee on topics and subjects for radio broadcast. This committee decided on the formation of new clubs, and handled the general administration of the clubs. Under the reform, the Audio-Visual Centre (C.A.V.I.E.P.) continued to co-ordinate the services of the Agricultural Radio. As a result of these reforms, the Agricultural Radio continued to grow in its activities and became "an important organ for fostering the efficiency of agriculture in the Benin Republic, and for the improvement of the living conditions of the rural peasants." (Anyanwu, 1978, p.11).

After reformation and reorganization of the Agricultural Radio programmes and clubs, an evaluation was carried out. To conduct this evaluation, a three-day national seminar of Rural Radio was organized in July 1969. About sixty participants, mostly district heads and a few operational heads, attended the seminar. Based upon the substantial results obtained through the radio clubs, the sixty "participants unanimously admitted that the Rural Radio had distinguished itself as an effective instrument of information and education among rural peasants." (Anyanwu, 1978, p.12). As a result, the seminar recommended that:

1. the government should set in motion all possible means of making the work of the Agricultural Radio enthusiastically undertaken, to attain complete success;...;

2. the choice of villages for new radio clubs should be made by District Radio Committees, which were in the position to appeal more directly to all those citizens interested in the elevation of the rural man;

3. competent vernacular facilitators should be recruited, since the effectiveness of the Rural Radio transmissions depended essentially on the clarity and exactness of the texts presented;

4. a commission should be set up to study beforehand the choices of the vernacular languages to be used on the air....'

5. the department in charge of popularization should make sure that all the materials necessary for maximum exploitation of the countryside are available before preparation for radio transmission.

6. the C.A.V.I.E.P., through the various means at its disposal should affect close collaboration with the Rural Radio, in order to keep up with its activities for the rural masses. (Anyanwu, 1978, p.12-13).

Since after the seminar, a theme is chosen every month, as well as pictures with a simple technical note attached to each picture to enable the technical advisers to explain the pictures to the members of the radio club. Each theme is selected by a team of specialists which discussed the pictures to be adopted, and sorted them out to conform with the established practices in the Republic. Also, a communication network between the Agricultural Radio, the Audiovisual Centre, and the technical departments was

established. This network enabled the National Committee of the Agricultural Radio to work out a quarterly time-table for the themes or topics handled in the field, with the support of the pictures prepared by the Audio-Visual Centre. Anyanwu (1978) rationalized the activities of this committee this way:

> The topics were developed in successive stages, to explain the pictures, and to carry the peasants, step by step, through a programmed learning experience leading to the mastery of some agricultural practice. (p.13-14).

Finally, as a form of motivation and encouragement to better efforts in the application of the radio lessons, a regular annual competition was organized. "This competition titled 'Operation Radio Progress', advances a number of prizes to winning clubs, and consolidates the favourable impact which the Agricultural Radio had made on the rural peasants of the republic." (Anyanwu, 1978, p.15).

6.5 DOMINICAN REPUBLIC: RADIO SANTA MARIA.

In the Dominican Republic and in 1956, Radio Santa Maria started as a small cultural religious broadcasting station of the Roman Catholic Diocese of La Vega. Gradually, it expanded into a combined commercial-education station. In 1964, a radio literacy programme, modelled after Radio Sutatenza (ACPO) in Colombia, was established. By 1970, "over a period of six years, 25,459 adults had received literacy certificated" (White, 1976, p.5) from the Radio

Santa Maria literacy programme. With this model, programmes of community development, small farmers' associations and cooperations were promoted.

In 1970, an analysis of the potential of the radio medium for rural development was carried out. From this analysis, it became clear that the unstructured programmes and literacy training of Radio Santa Maria is obsolete because of rapid changing conditions in both rural and urban areas of the region. As a result, a complete reorganized adult education programme was initiated in 1971 which had in part, the following objectives

> 1. to provide adults of a lower-status background with a quality education enabling them to take advantage of new opportunities in an expanding economy and,...to exercise responsible leadership for the social development of the country.
>
> 2. to avoid the phenomena...of desertion and low levels of commitment to study,...
>
> 3. to develop an instructional and supervisory system which radically cuts cost while at the same time improving the level of academic achievement to conventional system. (White, 1976, p.6).

The pages that follow described the components and processes of the reorganized adult education programmes of Radio Santa Maria. This description is based upon: <u>An Alternative pattern of basic education: Radio Santa Maria</u>

by Robert White.[6]

6.5.1 Components of the Educational System.

As a reorganized adult education programme, Radio Santa Maria has six components to its educational system:

1. a set of weekly lesson sheets distributed to students;
2. a daily broadcast explanation accompanying these sheets;
3. personal guidance of a field teacher;
4. a weekly discussion involving the field teacher and the assembled students of the sector;
5. supporting cultural and educational radio programmes; and
6. expected participation of students in the existing community organizations.

First, "a weekly set of six to eight attractively printed lesson sheets, one for each subject" (White, 1976, p.6), is provided to students. These lesson sheets contain, on one side, an outline of the material to be explained in a week's radio broadcast; on the other side, a series of written exercises. Over the twenty-three weeks of a course, these

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[6] Robert White is a senior sociologist with the Institute de Investigaciones Socio-Economicas in Tegucigalpa, Honduras. From 1970 to 1972, Dr. White carried out studies of the role of mass communications and non-formal education in peasant movements and rural development in Honduras. From 1973 to 1975, he directed studies of radiophonic schools and other rural development programmes in Nicaragua, ElSalvador and Haiti.

lesson sheets form a combination text and students' workbook.

Second, a one hour daily broadcast (lesson) and exercise is provided (Monday to Friday). In this one hour, one half hour is devoted to a broadcast which explains the materials in the lesson sheets; while the other half hour is devoted to doing the exercises.

Third, field teachers are used to supplement the lesson sheets and the daily broadcasts; and as an administrative link between the central office and the students. They correct students' written exercises, answer students' questions, detect students weaknesses, and help students with doubts after the broadcast explanation of the lesson sheets. As White (1976) puts it:

> The field teacher has a most important role beyond simply answering questions, namely, giving individual guidance to students, establishing group norm of lifelong education and linking the educational experience with the community and family, (p.37).

Fourth, a weekly group meeting of students and field teachers of each sector is held. "As a communitarian dimension of the learning process", the field teachers hold weekly meetings with the students in their sector to answer questions in a group context, explain materials which were problematic to the whole group, provide general reviews for examinations, and give the examinations. The 'central theme' of various subject matters of the week is also discussed during this group meeting.

Fifth, other general cultural and educational programmes and a series of special programmes for different age and occupational groups are provided. "These programmes are designed to give an important cultural and educational support to the more formal educational process (White, 1976, p.7).

Sixth, students of Radio Santa Maria are expected to consider active participation and leadership in community organizations as part of their education. The educational programmes of Radio Santa Maria are worked through existing organizations , and the activities of these organizations are looked upon as an extension of the more formal educational courses.

6.5.2 Planning, Production, Delivery and Evaluation.

The planning process begins with a meeting of broadcast teachers in which they discuss the materials each will cover over a weeks period, the feedback on students' problems, looking ahead to important contemporary events which might be of importance in composing the study materials, coordination of the various subject matters with "the central theme of the week," and other planning matters. Also, a central theme is selected, at the beginning of each semester, on some subject of current interest in the Dominican Republic.

Early in the design, the broadcast teachers discuss the artwork and diagrams with the staff artist so that by the end of the week, all parts of each lesson will be ready for mounting on a master sheet to be sent to the printing department. In the week before the printing, the broadcasts are recorded. Before the end of the third week, "everything is printed, recorded and ready for distribution to the field teachers for the weekly interchange meetings with students on the following weekend." (White, 1976, p.34)

A staff of five broadcasting teachers, two artists and a director of the teaching staff prepares and produces materials for the four grade levels of Radio Santa Maria. Each teacher specializes in a particular subject for all grade levels so that the material is vertically integrated - linked to different age levels. The class summaries of each subject for each grade level is the responsibility of each broadcast teacher. However, as they design the lesson sheets and exercises, they check with one another, and with the director for clarity and accuracy of presentation.

After the lesson sheets have been prepared and printed, the broadcast teachers form teams of two: a male and a female and enter into a teacher-student dialogue. In which case, the class is not simply an exposition but a conversation in which one party asks a series of questions and, in general, plays the role of the inquiring student working with the lesson sheets. This method creates an

atmosphere of an active student posing questions, discovering the answers, and building a logical pattern of thought. According to White (1976):

> This animated conversation of questions and answers, with an occasional little joke between a male and female 'first name', is a much more pleasant and attractive experience than a direct, monotonous exposition. It establishes a person-to-person relationship with the student and a level of personal involvement that is difficult to reproduce in a large class context. (p.32-33).

Some subjects such as reading lessons and social studies are dramatized with special sound effects and musical background. In recording the lessons for better broadcasts, the broadcast teachers work in cooperation with studio technicians, who handle "the details of timing, sound level, musical inserts, sound effects, and final mounting on a tape to be delivered to the broadcasting studio." (Ibid, p.33)

During delivery, the broadcasts begin with a signature tune which indicates the starting of classes and move onto a special tune which call attention to a particular grade. The broadcasts are alternated between two grade levels such that explanation of the material is given to one class while the other class is completing some exercises on the back of the lesson sheet. For example, when the third grade is called to attention, the broadcasting teacher assigns exercise to them and turns to explain the first subject matter for the fifth grade.

The explanation -"class dialogue"- begins with a brief review and proceeds to "development of new words, exposition of the basic material, relation of the material to the drawings, recapitulations of the exposition, and finally, a brief assignment of the exercises on the back of the lesson sheet." (White, 1976, p.33). At this point, the broadcasting team leaves the fifth grade to work on these exercises for about eight minutes and take up exposition of another subject with the awaiting third grade. After exposition with the third grade, the signature tune for the fifth grade is played, calling it back to class for a further period.

> Thus, it is possible to present in one hour seven classes of eight minutes each, four for one grade and three or four for another grade. (p.33)

In terms of evaluation, the teaching staff of Radio Santa Maria maintain a constant feedback on students' comprehension of materials through the weekly reports of field teachers and the visits of staff to each sector. The information so gathered is used to adjust and improve the lessons, exercise sheets and broadcast classes.

> In this way the context of the lesson sheets can also be kept much more up-to-date, and the central theme can be interrelated with current events in the country. (p.33-34).

In general, it appeared that various types of formal evaluation have been carried out for,and on behalf of, Radio Santa Maria. Of within limit is a case study by Robert White. The objective of the case study was:

1. to provide a descriptive analysis of the institutional structure of a system of basic education, emphasizing how this model has put into practice principles of lifelong education and indicating some of the advantages of this institutional arrangement compared with conventional educational methods;

2. to examine the outcomes of lifelong education in the students,...;

3. to provide illustrative, empirically-based material from which the theoretical foundations of lifelong education may be developed. (White, 1976, p.5).

The cultural-education radio station and radiophonic school of Radio Santa Maria in the north, central, Cibao region of the Dominican Republic was selected for this case study. Although the methodology was not clearly stated, the case study surveyed various aspects of Radio Santa Maria. For more detail about this case study and its findings, see White (1976). An alternative pattern of basic education: Radio Santa Maria.

6.6 SUMMARY

This chapter has described five major projects which dealt with the education of illiterate and neo-literate adults, rural development, rural education, agricultural/educational extension and Farm Radio Forum, as defined in chapter 1. It revealed most of the approaches used to carry innovative and developmental information to peasant farmers in rural communities. These descriptions

were concerned with the 'how' -planning, production, broadcast/delivery and evaluation - of the projects. The described projects were drawn from Nigeria, Ghana, India, Benin Republic and the Dominican Republic.

From the Nigerian case, it can be inferred that the processes followed were haphazard and autocratic. Its plan, production and delivery were not carried out in consultation, with cooperative efforts of those involved nor with feedback from the recipients. In that case, the recipients were passive as opposed to being active. In other words, the approaches was that of an "open-broadcasting: the unorganized audience" (McAnany, 1976, p.5) which is used for information purposes. Also, its evaluation method was not clearly stated.

Alternatively, the Ghanaian Farm Radio Forum project was thoroughly planned, produced, delivered and evaluated. The processes were carried out by different committees set up to execute various activities at different stages. The recipients and in some cases, their representatives were involved during the processes plus an in-built feedback mechanism. Thus, they were active participants. In this case, the approaches were that of "Radio Rural Forum: the decision group" and "radio and animation: the participating group." (McAnany, 1976, p.9-18).

Like the Ghanaian project, the Indian experiment in Farm Radio Forum was thoroughly and skillfully planned, produced, delivered and evaluated. It has almost the same characteristic with the Ghanaian project. Although they were both experimental, organized and performed by UNESCO and its officials, the Ghanaian and the Indian projects displayed indispensable approaches that should be adopted, modified and adapted to any education of illiterate and neo-literate adults using radio.

The fourth described project was 'The Use of Radio in Rural Education' in the Benin Republic. In this case radio was used for national development. Notwithstanding that the technical processes of planning, production, delivery and evaluation were not known, the procedural processes of organization provided some reasonable model that can be imitated. It can be argued that the approach followed was that of "instructional radio: the organized learning group." (McAnany, 1976, p.7).

Finally, the Dominican Republic Radio Santa Maria whose strategy is that of "radio school: the nonformal learning group" (McAnany, 1976, p.12) supplied useful procedures and ideas for the design, plan, production and delivery of any educational broadcasts. These procedures and ideas can be adopted, modified and adapted to any such similar situations.

Although these projects used radio as the principal medium, a multi-media approach, feedback, advance organizers and reinforcement appeared implicit in all of them. In general, one can conclude that each project is a suprasystem with systems and subsystems. In particular, the above descriptions showed how the systems and subsystems are interrelated, organized and coordinated such that the predetermined purposes of the suprasystem were accomplished.

Chapter VII

RECAPITULATION: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS.

The purpose of this study was to investigate how educational radio has been used to disseminate agricultural information to farmers in rural communities; and to recommend appropriate guidelines for its potential uses in the agricultural extension services of Nigeria and other developing countries.

7.1 SUMMARY OF DESIGN AND PROCEDURES.

The design and procedures followed for this study were that of qualitative methods ascribed in part by Lincoln and Guba (1985). Miles and Huberman (1984), Carney (1983, 1972), Bogdan and Bilken (1982), Patton, (1980), Glaser and Strauss (1967); and modelled in part by Woodley (1984). Specifically, this study followed the same procedures as Woodley's doctoral dissertation.

The sample for the study was drawn from Manitoba, Canada and consisted of fifteen communication experts who have used radio to spread agricultural information to farmers in rural communities. The format selected for the study was that of in-depth structured interview and review of the related literatures.

A six section structured interview questions - 'interview guide' - was developed, pilot and field-tested; and used to conduct the interviews. Although the guide contained structured questions, the interview format was open-ended in that respondents were free to answer in whatever way they felt appropriate. However, the responses were guided by their experiences and practices as communication experts.

After the interviews, transcripts were made for each one, and a summary of each interview was written as well. These were mailed out to the respondents for verification and qualitative validation. Following this, "displays" - summary charts and tables (Miles & Huberman, 1984) - were constructed and a collective summary of all interviews was written. Analysis of the data took place thereafter.

7.2 SUMMARY OF MAJOR FINDINGS.

Bearing in mind the limitations of the investigation and of generalization, the findings of this study are, by design, inconclusive in and of themselves. However, from analysis and synthesis of the generated data, it is possible to identify a number of key findings. These findings applied to the three main questions of the study, and the five sections of the interview guide.

Regarding the first question, it was found that the interviewed Manitoba communication experts do not use radio

to educate but to make farmers aware, to remind and to inform farmers in rural communities. It was also found that the purpose of disseminating information was two fold:

a) to provide 'timely', 'up to date', 'accurate', 'useful', 'technical' and 'how to do' farming information; and
b) to improve 'farming practices and market decisions', 'farm management ability', 'quality of life', 'income', and 'standard of living' on the farm.

With regard to the 'how' of information dissemination, it was found that:

1. Manitoba Communication experts plan radio programmes 'cooperatively' and sometimes, in consultation with the target audience. Most of the respondents in the study indicated that they involve the target audience during the planning processes. Although mostly indirectly and informally, these involvements varied and ranged from consultation with experts and specialists in the field to cooperative efforts of agricultural organizations.
2. Manitoba Communication experts produce radio programmes by following four major steps. These steps follow two main routes as displayed in figure 2 and are preceded by identification - needs assessments and research.

3. Manitoba Communication experts deliver information by, unconsciously, following the good folklore practice of 'INTRODUCTION-CONTENT-SUMMARY.' Also, the participants in the study professed the viability of interview and discussion formats of delivery; and the use of print media in conjunction with radio programmes.
4. Manitoba Communication experts evaluate radio programmes informally with orientation towards feedback. Since radio is not used for educational purposes, most of the respondents evaluated their programmes informally. In this case, the results were assumed to be mainly used for programme improvements.
5. Manitoba Communication experts made some relevant and reasonable recommendations for the educational uses of radio in the agricultural extension services of developing countries. In their recommendations, five significant characteristics that must be taken into consideration when programming for farmers in rural communities of any developing country were identified. These characteristics were: simplicity, community involvement, indigenosity, Farm Radio Forum approach and multi-media approach. The respondents in the study professed the indispensability and viability of these characteristics in any

educational radio programming, especially for illiterate and neo-literate rural adults.

Concerning the second research question, it was found that the agricultural extension services of developing countries has used radio to educate, and to spread agricultural information to farmers in rural communities.. In general, the study seemed to confirm McAnany's popular discovery about "radio's role in development." According to McAnany (1976), there are "five strategies of use" for radio, namely:

1. open broadcasting: the unorganized audience
2. instructional radio: the organized learning group
3. radio rural forum: the decision group
4. radio school: the nonformal learning group
5. radio and animation: the participating group.

These strategies have been used extensively in the agricultural extension services of many developing countries.

In particular, the reviewed related literature and the described projects revealed that the agricultural extension services of developing countries use radio for a variety of purposes. The 'how' or "strategy" of these uses depended upon many factors and attributes such as the purpose, the

context, the society and its political system, the organizing body, the abundance or lack of needed resource materials and the educational level of the target audience, to name but a few.

From the foregoing, and concerning the third research question, it appeared that the researcher (or any experienced educationally conscious individual) cannot specifically and accurately state 'how' Nigeria and other developing countries can use radio to educate and disseminate agricultural information to farmers in rural communities. Because, any potential guidelines for educational uses of radio has to be culturally bound, politically bound, contextually bound, purposely bound, needfully bound and organizationally bound. For these reasons, the researcher feels that any developed guidelines must be tentative and subject to adoption, modification and adaptation to each society's circumscriptions.

7.3 CONCLUSIONS.

The purpose of this conclusion is to summarize briefly the facts brought out in this study which may assist potential users of educational radio in developing countries. From the study, it can be concluded that:

1. The use of committees in which each concerned segment of the society/community is represented at various

stages of the plan, production, implementation/delivery and evaluation processes of radio programming is effective, and more desirable.

2. Various forms of programme production such as drama, panel discussions, interviews and debates add variations in modes of presentation and thus, vitalize participants interests.
3. The length of educational radio programmes should be 30-minutes, maximum to be 45-minutes with intermittent breaks. Also, the broadcast times should depend upon the farming practices, seasons of the year, country and may be different for different farmers.
4. Advance preparation and production of programme plans and guides aids readiness.
5. Human interaction is necessary for adoption and adaptation of any innovation:
   a) Group radio listening followed by group discussion is more influential in changing attitudes and beliefs toward innovation.
   b) A mixture of radio programmes with home visits by agricultural extension agents and other related specialists improves communication, learning, retention of information and provides feedback.
   c) Two-way flow of information improves learning and retention of information.

6. The use of radio in conjunction with other media such as prints, posters, slides and person-to-person contacts enables adequate coverage of subjects and provides reinforcement.

7.4 FRAMEWORK FOR EDUCATIONAL USES OF RADIO.

The significance of this study was to establish a framework for educational uses of radio in the agricultural extension services of Nigeria and other developing countries. It appears that this study is fruitful since it is now possible to provide a tentative framework for consideration.

Figure 5 below is a five phase framework proposed for educational uses of radio in the agricultural extension services of Nigeria and other developing countries. This section describes the components of each phase.

Phase 1: NEEDS ASSESSMENTS.

The needs assessments phase of educational uses of radio should determine the gaps between current use and required (or desired) uses (Kaufman & Stone, 1983; Mayer, 1986). It should attempt to answer the following questions:

> -where are we going? (or what are we to accomplish?); and
> -why are we going there? (--and, how far is it from where we are now?). (Mayer, 1986, p.117).

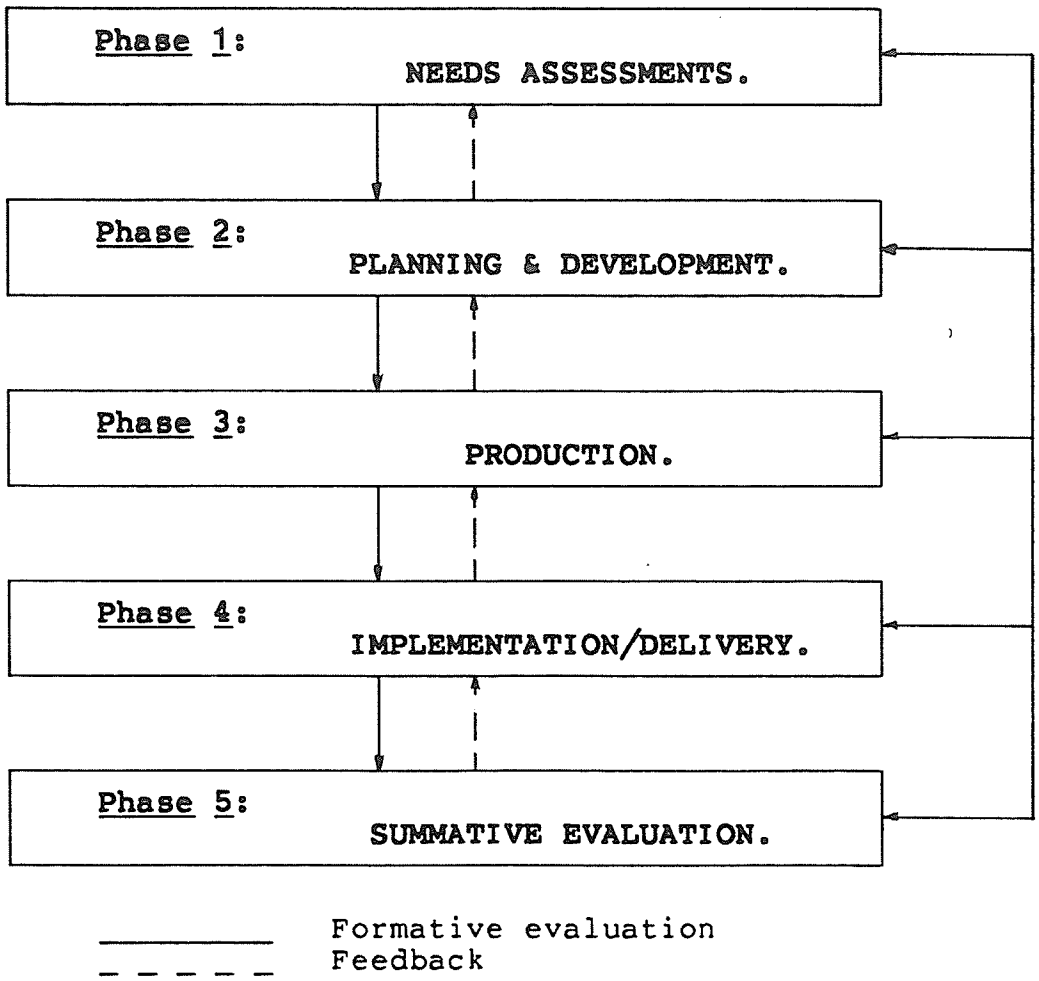

Figure 5: Framework For Educational Uses of Radio.

By answering these questions, the organizers should determine the existed gaps, the targeted destination and the raison d'etre for working towards such destination. These questions should be answered by conducting preliminary research studies and consultations with village chiefs, local community heads, village teachers and other active responsible and recommended individuals. Such preliminary studies and consultations must aim at assessing the specific

needs of the concerned society, community, village or rural area, as well as answer the various problems foreseen by the respondents in this study.

Phase 2: PLANNING AND DEVELOPMENT.

Once needs assessments show a green light to continue, the organizers are automatically in phase 11 of the framework. In this phase, a foundation and standing block for educational uses of radio should be laid. To accomplish this, the organizers should form various planning and development committees such as:

a) Advisory Committee: which will oversee the whole scheme and provide advice as required or where necessary.
b) Planning Committee: which will be in charge of planning and controlling the whole scheme.
c) Subject Committee: which will be in charge of determining the subjects and topics of interest to the target audience.
d) Production Committee: which will be in charge of writing up the scripts, producing study/forum guides and the whole programme. It may consist of subcommittees such as print material producers, writers and audio-producers.
e) Delivery Committee: which will be in charge of organizing listening groups, heading group discussions, overseeing the use of equipment and providing feedback to the planning committee. It may also consist of subcommittee such as village chiefs, secretary convenors, field advisors/teachers etc; and finally

f) Evaluation committee: which will be in charge of carrying out on-going formative evaluation, providing continuous feedback for scheme modification and improvements; and carrying out a final-summative evaluation to assess the results and effectiveness of the scheme.

These committees must work cooperatively and in conjunction with each other. They must have a communication network which will enable them to provide a workable timetable for all their activities, responsibilities and coordinations.

Phase 3: PRODUCTION.

If the above two phases are carried out effectively, Phase 3 will be simplified immensively. It then becomes a collection and coordination of ideas and concepts from each committee; and the production of the programmes, support materials and scripts by the production committee.

Of particular significance to the production phase is the subject committee and its activities. This committee must determine the subjects and topics in such a way so as to avoid criticism. This can be done by involving representatives of all concerned segment of the society during the initial brainstorming of subjects. Alternatively, it could be done through consultation and research. In this case, it should focus on the following questions:

a) What problems do people have?

b) What are the solution to these problems?

c) What are the constraints in applying these solutions?

d) What vested interests are threatened by the solutions?

e) What will the solutions cost (the individual, the family, the nation)?

f) What are people's attitudes?

g) What do people believe?

h) What do people do or practise at present?

i) What language do people use when talking about these things?

j) What misconceptions do people have?

k) What are the current and proposed policies of the government?

l) What history is there of previous actions in this area?

m) What regional variations should be considered (problems, solutions, languages etc.)?

(Crowley et al. 1981, p.22).

Phase 4: IMPLEMENTATION/DELIVERY.

As an action phase, the planning and advisory committee is expected to open up the building whose foundation was laid in phase 2. Although the delivery committee has a lot more responsibilities, the success of the whole scheme depends upon effective execution of each committee's responsibilities. The production committee must be able to supply programme guides and support materials based upon

advice of the advisory committee and the subjects recommended by the subject committee. The delivery committee must make sure that participants are organized and ready to receive the information. The programmes must be soundly based upon feedback provided by the evaluation committee right from the beginning, and pilot stages to the delivery phase.

Phase 5: EVALUATION.

The effective execution of responsibilities should be determined by the evaluation committee right from the beginning to the end. Therefore, each phase of the processes should be evaluated and provided feedback as to their improvements. The final-summative evaluation will then be done at the end of the project.

It must be borne in mind that these five phases of the framework runs parallel with each other, interacts with each other and must be coordinated - like a suprasystem with systems and subsystems - in order to accomplish any predetermined purposes. This can only be done through a suitable communication network which allows every member/committee to cooperate, consult and coordinate the whole scheme. Specifically, this framework must be viewed as a suprasystem with systems and subsystems. The systems are the five phases of the framework while the subsystems are the different activities to be performed by each committee.

7.5 RECOMMENDATIONS FOR EDUCATIONAL USES OF RADIO.

Based upon the structured in-depth interviews, review of the related literature and described projects (findings, developed framework and conclusions) in this study, it is possible to to make some recommendations for consideration. Thus, for any educational or impact-participatory information uses of radio in the Agricultural Extension Services of Nigeria, and other developing countries, the researcher recommends the following:

1. Consideration of the developed framework for educational uses of radio. This framework views educational uses of radio as a suprasystem with systems and subsystems which must be planned, organized and coordinated in order to accomplish a predetermined purpose. The systems (e.g. plan, production, etc.) and subsystems (e.g. organizing listening groups) must be interrelated with each other and must provide continuous feedback for modification and improvement of the suprasystem. In this framework, the processes of using radio to educate is viewed as a 'science of organizing and organization.'

2. Application of the five significant characteristics recommended by the respondents. As has been explicated through reflexivity literatures, these characteristics are very indispensable, especially when programming for illiterate and neo-literate adults. Experience gained from

this study indicates that their application will enhance any educational radio programme and thus aid the accomplishment of project objectives.

3. Educational Radio Handbook or Guide be produced. For effective utilization of radio as an educational medium, it is desirable to have printed words to act as a guide, advance organizers and a reinforcer. This approach was used in Ghana, India and the Dominican Republic and has proved to be a necessity. Hence, for educational uses of radio in the agricultural extension services of Nigeria, and other developing countries, it will be necessary to provide a handbook which will contain the following:

a) The objectives of the project and each individual programme;
b) Materials of use to participant as well as group leaders;
c) Specific suggested supplementary reference materials such as books, papers and contact persons;
d) Specific suggested supplementary activities/practices;
e) Comprehensive outlines of subject matters to be covered during each broadcast;
f) Specific suggested methods of group preparation before the broadcast;
g) questions and ideas for discussion; and
h) a calendar indicating the date and name of the broadcasts to be received.

This handbook must be provided to each participants ahead of time. Inclusive in this handbook should be a special guideline for group leaders or field teachers. It should include:

a) Preparation to be made for the broadcasts;
b) Activities to be used during the broadcasts;
c) Follow-up activities after the broadcast;
d) Methods of organizing for listening; and
e) Use of sound equipment (radios).

4. Systematic training of producers and field organizers/teachers. Irrespective of the background and experience of programme and material producers, field organizers/teachers, and other involved individuals, it is absolutely necessary to organize some 'pre-service' or 'in-service' training for them (FAO, 1977). This training should aim at creating awareness and understanding of the aspects of rural development, effective utilization of educational broadcasting, providing clear operating procedures, ensuring that each participant is clear about their responsibilities and authorities, and that all involved agencies or their representatives understand what their roles are and what is expected of them.

5. Vernacular (or local dialects) and competent vernacular facilitators should be used. It will be ill-advised to use English or any foreign language for either

the radio programme or group discussion when most of the people really relate better to a tribal language of some kind (#10); because the effectiveness of any rural radio programmes should depend essentially on the clarity of voices, exactness of the presented text and speed of presentation. Furthermore, the use of local dialects should account for regional peculiarities and differences with respect to programme preparation and production. This approach has proved to be successful in Ghana, India, Benin Republic and many other developing countries.

6. Each radio programme be recorded on tapes and made available to absent participants. Since everybody in the rural areas is not punctual, nor healthy at all times especially in developing countries where the notion of time is valueless, it would be wise to record the programmes on tape. This could be done by group leaders or organizers. The tapes can be used for various purposes: for the individual active participants who were absent; for young groups of farmers, clubs and associations who might be interested, and for reinforcement purposes.

7. The maximum length of any educational radio programmes should be forty-five minutes. Because of the limited attention span and the inability to retain verbal information for a longer period of time, it is hereby recommended that the length of educational radio programmes be thirty minutes; maximum to be forty-five minutes with

intermittent breaks and discussions as in the case of Radio Santa Maria.

8. Adoption and adaptation of the modified ten steps of launching a campaign developed by Crowley, Etherington and Kidd (1968) in their Radio Learning Group Manual. (Appendix I). These steps are based upon practical experience in Tanzania and Botswana. Although subject to adoption, modification and adaptation because of the various societal circumscriptions mentioned above, these steps have proven to be relevant and indispensable. It has been used in this way by many developing countries.

9. Considerations of the important lessons learned from several Radio Learning Group (RIG) Campaigns. These are:

a) Get an early agreement among all concerned on the how to plan and run the campaign

b) Work out clear operating procedures that suit your situation. they can never be too simple.

c) Be clear about who is in charge and about the limits of his or her authority.

d) Make sure you have sufficient staff - listen to them and keep them fully informed.

e) Make sure that all agencies involved understand what their role is and what is expected of them.

f) Make sure that the campaign (or project) has enough money and the expenditure is properly accounted for. (---). (Crowley, Etherington & Kidd, 1981, p. 42).

10. Finally, adherance to the above conclusions, proposed framework and recommendations. It is the researcher's belief that if the above conclusions, proposed framework and recommendations are carefully studied, adopted, modified and adapted to each potential users culture, context, need, political and organizational structures, the educational or impact-participatory purposes of using radio must be fully achieved. To put it in another way, permit me to borrow this idea from Michael Neil (1981) which says:

> ..., before you "adapt", listen to your mother tongue, Learn your own people's games, Observe your people's technologies, listen to them describing their functionings, then, do get inspired by the above [framework, conclusions, and recommendations] .... (p.96).

7.6 RECOMMENDATIONS FOR FURTHER STUDIES.

Evaluation of the present study indicates a need for further exploration in three major areas: first, replication in developing countries to determine the actual practices and models of disseminating information; second, implementation and evaluation of the above framework, conclusions and recommendations in a specific developing country or community; and third, a further study of the Manitoban situation.

In the present study, the concern was on the 'how' of information or education of rural illiterate and neo-literate adult farmers as opposed to the 'what.' It appeared

that the study had shed some light on this concern. What is left untouched is the exact practices, processes and procedures as being carried out in developing countries of today. Therefore, the researcher recommends that this study be replicated in developing countries to ascertain validity of practices, processes, procedures (models) and their congruency. The replication should follow a similar research method; that is, it should be a descriptive qualitative study.

Alternatively, the findings, conclusions, recommendations and proposed framework of this study should not be left to die. It would be a worthwhile effort to critically study them, analyze and synthesize them, and put into practice in a specific developing country. Undoubtedly, this could form a major basis for rural education in which the community is the campus; and a means of spreading developmental information to rural peasants in developing countries. With this vision in mind, it is hereby recommended that the findings, conclusions, recommendations and proposed framework of this study be studied, implemented in a specific village and evaluated. The implementation of this concept should start as a pilot project and if successful, made part and parcel of the adopted community.

Decisively, this study identified the practices, processes and procedures of Manitoba communication experts. It revealed the purposes of disseminating information, and

the various views held by Manitoba communication experts about Manitoba farmers. For example, the sample in the study indicated that Manitoba farmers listen to the farm radio programmes at a specific time (noon) for various reasons (e.g., they are trained for the noon slot farm broadcast). Not discounting the validity of these views, it appears that a study of Manitoba farmers is necessary. This study should aim at determining what Manitoba farmers listen to, how they listen and when they listen; and the accomplishment of the stated purposes by Manitoba communication experts. In other words, the current study was delimited to communication experts and did not take into account the recipients (farmers). A followup needs to consider farmers' reactions to similar questions.

Finally, further implications of this study need to be explored beyond mere replication. New lines of thought should involve a closer examination of the potential impact and functioning of a systematic model of information dissemination.

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Appendix A

PROJECTS GROUPED BY TYPE OF RADIO STRATEGY.

Country	Sector	Project
Afghanistan	Agriculture	Rural Broadcasting
Costa Rica	Population	Diálogo
Dominican Republic	Population	Towards a New Family Life
Haiti	Health	Radio Docteur
Honduras	Health	Mass Media and Health Practices
India	Agriculture	School-on-the-Air
India	Population	Bombay Family Planning Project
Indonesia	Population	Grains of Sand
Indonesia	Population	The Jamu Project
Kenya	Education	Correspondence Course Unit
Kenya	Health	Giving Birth and Caring for your Children
Korea	Education	Air and Correspondence High School
Korea	Population	The Songdong Gu Project
Mexico	Agriculture	Radio Huayacacotla
Mexico	Nutrition	Nutrition Education in Rural Mexico
Philippines	Agriculture	Masagana 99
Senegal	Health	The Sine Saloum Rural Health Care Project
Sri Lanka	Health	Health Education Radio Dramas

Listening Groups (15)

Country	Sector	Project
Botswana	Agriculture	Our Land
Botswana	Education	Understanding Government
Colombia	Education	ACPO
Dominican Republic	Education	Radio Santa María
Ecuador	Education	Radio Mensaje
Guatemala	Agriculture	Basic Village Education
Haiti	Health	Classe d'Hygiene
India	Development	The Maharashtra Radio Forum Pilot Project
Nicaragua	Education	Radio Mathematics
Niger	Development	Association of Radio Clubs
Senegal	Agriculture	Radio Pilot Project
Spain	Education	Radio ECCA
Tanzania	Health	Man is Health
Tanzania	Nutrition	Food is Life
Thailand	Agriculture	The Radio Farm Forum Pilot Project

Campaigns (10)

Country	Sector	Project
Colombia	Population	Radio and Family Planning
Honduras	Population	Family Planning Media Experiment
Iran	Population	The Isfahan Project
Korea	Nutrition	CARE Mass Media Nutrition Education Campaign
Nicaragua	Nutrition	Advertising Campaign
Pakistan	Population	The Hyderabad Project
Philippines	Nutrition	Mass Media Nutrition Advertising Campaign
Taiwan	Population	The Kaohsiung Experiment
Trinidad & Tobago	Nutrition	Breastfeeding Campaign
Tunisia	Nutrition	Dr. Hakim

*Morocco's Maadid Radio Study is not classified because it was a media-research project with no broadcast component.

Appendix B

LETTER SOLICITING PARTICIPATION.

November 12, 1985

Dear

I am a graduate student in the Faculty of Education, working under the supervision of Dr. Denis Hlynka. The proposal for my Master's thesis involves research in the area of educational uses of radio. In order to complete this project, I would have to interview some fifteen incumbent agricultural extension agents and/or communication experts. In attempting to choose participants, your name has been suggested by the Manitoba Department of Agriculture: Communication Branch, as a possible interviewee. I am writing therefore to ask whether or not you might be willing to take part in this study.

What will be required of the participants will be to respond to a series of questions about planning, production, delivery, and evaluation of radio programmes, which I have prepared. The interview will last approximately one hour. Although the interview will be taped for later analysis, I do guarantee absolute anonymity to the respondents.

I will be contacting you by telephone before the end of November to find out whether or not you are willing to participate in this study. Should you accept, we will be able to schedule the interview at that time. All interviews will take place in December.

Thank you in advance for your anticipated cooperation.

Respectfully yours,

Ndubuisi Goodluck Nwaerondu
Graduate student
Room 410 Education Bldg.
Faculty of Education
University of Manitoba.

Dr. Denis Hlynka.
Chairperson
Room 430 Education Bldg.
Faculty of Education
University of Manitoba.

Appendix C

STRUCTURED INTERVIEW QUESTIONS.

C.1 PERSONAL DATA.

1.1 Profession/Occupation_____

1.2 Years of experience in profession/occupation _____

1.3 What is your job as a communicator/extension agent?

1.4 What major duty (or duties) do you perform?

1.5 How do you perform this/these duty(ies)?

1.6 Have you had experience in developing country(ies)?

1.7 If yes, which country(ies)?

1.8 What was/were your major duty(ies) in that/those country(ies)?

C.2 PURPOSE AND PLANNING.

2.1 What are the goals of disseminating agricultural information to farmers in rural communities?

2.2 How are these goals determined?

2.3 Who is in charge of determining these goals? Why?

2.4 How are the topics of the broadcasts determined?

2.5 Who is in charge of determining these topics? Why?

2.6 How are the contents of the broadcasts determined?

2.7 Who is in charge of determining these contents? Why?

2.8 Who is the target audience?

2.9 Is the target audience involved in the planning process?

2.10 If yes, what kind(s) of involvement?

2.11 How does the target audience know about your broadcasts?

2.12 What are the major problems you encountered during planning?

2.13 How have you attempted to solve these problems?

C.3 PRODUCTION.

3.1 How are radio programmes produced?

3.2 Who is involved in the production process? Why?

3.3 Where are the programmes produced?

3.4 How is the information used for production collected?

3.5 Do the seasons of the year affect (or determine) the kind of information you give to farmers?

3.6 If yes, can you give some examples?

3.7 What are the major problems you encountered during production?

3.8 How have you attempted to solve these problems?

C.4 DELIVERY.

4.1 What do you think is the ideal broadcast times to farmers?

4.2 What are your actual broadcast times to farmers?

4.3 How long are the radio programmes? Why?

4.4 Who is involved in the delivery processes?

4.5 What forms do the programs take (discussions, lectures, debates, interviews, etc.)? Why?

4.6 Are the broadcasts used in conjunction with other media (e.g. print, films, slides, posters, etc.)?

4.7 If yes, which media? Why?

4.8 Do farmers listen to your programmes/broadcasts in:

(1) Large groups _____ (2) Small groups _____

(3) Family circles _____ (4) Individually _____

(5) Others _____

4.9 What are the arrangements for feedback from audience to broadcast station/producers?

4.10 What are the major problems you encountered during delivery?

4.11 How have you attempted to solve these problems?

C.5 EVALUATION.

5.1 How effective are your programmes/broadcasts?

5.2 How do you evaluate your programmes/broadcasts?

5.3 What is the size of the audience:

(a) Aimed at? _____

(b) Actually reached? _____

5.4 What do you think the target audience learn from your programmes/broadcasts?

5.5 What do you learn from your programmes/broadcasts?

5.6 What are the major problems you encountered during evaluation?

5.7 How have you attempted to solve these problems?

C.6 RECOMMENDATIONS.

6.1 What approach(es) would you recommend for the use of educational radio in the agricultural extension services of a developing country?

6.2 From your experiences, what are the pitfalls to be avoided?

6.3 What problems would you foresee for the use of radio in the agricultural extension services of a developing country?

6.4 Who do you think will be capable of solving these problems?

6.5 What approach(es) would you recommend for their resolution?

Appendix D

STRUCTURED INTERVIEW QUESTIONS.

D.1 PERSONAL DATA.

1.1 Profession/Occupation_____

1.2 Years of experience in profession/occupation _____

1.3 What was your job as a communicator/extension agent?

1.4 What major duty (or duties) did you perform?

1.5 How did you perform this/these duty(ies)?

1.6 Have you had experience in developing country(ies)?

1.7 If yes, which country(ies)?

1.8 What was /were your major duty(ies) in that/those country(ies)?

D.2 PURPOSE AND PLANNING.

2.1 What were the goals of disseminating agricultural information to farmers in rural communities?

2.2 How were these goals determined?

2.3 Who was in charge of determining these goals? Why?

2.4 How were the topics of the broadcasts determined?

2.5 Who was in charge of determining these topics? Why?

2.6 How were the contents of the broadcasts determined?

2.7 Who was in charge of determining these contents? Why?

2.8 Who was the target audience?

2.9 Was the target audience involved in the planning process?

2.10 If yes, what kind(s) of involvement?

2.11 How did the target audience know about your broadcasts?

2.12 What were the major problems you encountered during planning?

2.13 How did you attempt to solve these problems?

D.3 PRODUCTION.

3.1 How was the radio programmes produced?

3.2 Who was involved in the production process? Why?

3.3 Where were the radio programmes produced?

3.4 How was the information used for production collected?

3.5 Did the seasons of the year affect (or determine) the kind of information you gave to farmers?

3.6 If yes, can you give some examples?

3.7 What were the major problems you encuntered during production?

3.8 How did you attempt to solve these problems?

D.4 DELIVERY.

4.1 What do you think was the ideal broadcast time to farmers?

4.2 What were your actual broadcast times to farmers?

4.3 How long were the radio programmes? Why?

4.4 Who was involved in the delivery processes?

4.5 What forms did the programmes take (discussions, lectures, debatesn, interviews, etc.)? Why?

4.6 Were the broadcasts used in conjunction with other media (e.g. print, films, slides, posters, etc.)?

4.7 If yes, which media? Why?

4.8 Did farmers listen to your programmes/broadcasts in:

(1) Large groups _____ (2) Small groups _____

(3) Family circles _____ (4) Individually _____

(5) Others _____

4.9 What were the arrangements for feedback from audience to broadcast station/producers?

4.10 What were the major problems you encountered during delivery?

4.11 How did you attempt to solve these problems?

D.5 EVALUATION.

5.1 How effective were your progrmmes/broadcasts?

5.2 How did you evaluate your programmes/broadcasts?

5.3 What was the size of the audience:

(a) Aimed at? _____

(b) Actually reached? _____

5.4 What do you think the target audience learned from your programmes/broadcasts?

5.5 What did you learn from your programmes/broadcasts?

5.6 What were the major problems you encountered during evaluation?

5.7 How did you attempt to solve these problems?

D.6 RECOMMENDATIONS.

6.1 What approach(es) would you recommend for the use of educational radio in the agricultural extension services of a developing country?

6.2 From your experiences, what are the pitfalls to be avoided?

6.3 What problems would you foresee for the use of radio in the agricultural extension services of a developing country?

6.4 Who do you think will be capable of solving these problems?

6.5 What approach(es) would you recommend for their resolution?

Appendix E

LETTER OF PERMISSION TO AUDIOTAPE THE INTERVIEWS

December 1985

Dear Sir/Madam

TO WHOM IT MAY CONCERN.

I hereby grant Ndubuisi Goodluck Nwaerondu permission to audio-tape my responses to his structure interview questions. I understand that the contents of the tape will be solely directed towards the completion of his M.Ed. thesis. I also understand that members of the thesis committee may have access to the tapes (if they wish), and that the tapes will be erased upon completion of the study.

Signed by: _____

Date: _____

Thank you.

G. N. Nwaerondu
Graduate Student
Room 410
Education Bldg.

Dr. Denis Hlynka
Chairperson
Room 430
Education Bldg.

Appendix F

SUMMARY VALIDATION LETTER.

May 28, 1986

Dear Participants,

As a follow-up to the interview that we had in January this year, I am sending you my summary analysis of our dialogue. As I mentioned at that time, I am soliciting your reactions to this analysis and I would ask that you respond to the attached summary validation questions. Once you have reacted and responded, please return the sheet in the self-addressed envelope by June 15, 1986. If I have not received your reaction and response by this date, I will assume that you have accepted the analysis as valid and correct.

In order to refresh your memory with respect to our dialogue, I should have included a copy of the transcript, but due to the size and some transcription problems, I am unable to do so. Therefore, I am enclosing the used questionnaire to remind you of the questions asked. I should also remind you that the transcript is available on request.

Should you have any concerns, please feel free to contact me or my advisor at the telephone numbers below. Otherwise, thank you in advance for your anticipated understanding and cooperation in this matter.

Respectfully yours

Ndubuisi Goodluck Nwaerondu
Graduate Student
Room 410 Educ. Bldg.
Faculty of Education
University of Manitoba
Phone # 783 0833

Dr. Denis Hlynka
Chairperson & Advisor
Room 430 Educ. Bldg.
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Appendix G

SUMMARY VALIDATION QUESTIONS.

a) In general, does the analysis accurately represent your views and practices as communication expert?

b) Are the key elements/practices identified correctly and appropriately?

c) Does the analysis capture the major elements of your practices (Purpose and planning, production, delivery, evaluation and recommendations.) as communicated during the interview?

d) Comment

Appendix H

SPECIFIC QUESTIONS ANALYSIS.

TABLE 6

Specific Questions Analysis.

Q.#	Questions	Yes	No	Neut.	Total
1.6 1.7	Experience in dev. countries? Which countries? *	5 33.3%	10 66.7%	0 0%	15 100%
2.9 2.10	Is target audience involved during planning process? What kinds of involvement? **	11 73.3%	4 26.7	0 0%	15 100%
3.5	Seasons of the year affect the kind of information?	13 86.7%	1 6.7%	1 6.7%	15 100%
4.6 4.7	Broadcasts used in conjunction tion with other media? Which media and why? ***	11 86.7%	4 26.7%	1 6.7%	16 106.7%

NOTE:

* Countries include: Kenya, Sri Lanka, India, Costa Rica, El Salvadore and Guatemala.

** Involvement is mostly indirect and informal. It ranged from registration of opinions in writing and through a committee of the top echelon of agriculture to general discussions with producers, farm organizations and elected board member.

*** Print such as Farm Forum guide, press releases, farm papers newspapers and posters. They are used for reinforcement purposes, and for adequate coverage of subject matters.

TABLE 7

Specific Questions Analysis.

Q.#	Questions	0-15min.	16-30min.	31-45min.	46-11/2hr.
4.3	Length of programs	7 (46.7%)	5 (33.3%)	3 (20%)	3 (20%)
		Interv.	**Discu.**	**Lecture**	**Debate**
4.5	Forms of delivery	14 (93.3%)	8 (53.3%)	8 (53.3%)	4 (26.7%)
		Lrg.Grp.	**Sml.Grp.**	**Fmy.Cle.**	**Indiv.**
4.8	Reception model	1 (6.7%)	5 (33.3%)	9 (60%)	13 (86.7%)

TABLE 8

Specific Questions Analysis.

Q.#	Question	Morning	noon	Evening
4.1	Ideal broadcast times	9 (60%)	9 (60%)	3 (20%)
4.2	Actual broadcast times	5 (33.3%)	8 (53.3%)	7 (46.7%)
		Formal	**Informal**	**Non**
4.9	Arrangement for feedback	5 (33.3%)	7 (46.7%)	4 (26.7%)

Appendix I

MODIFIED TEN STEPS OF ORGANIZING A RLG CAMPAIGN.

Step 1. Following Identification,
First Ideas on the Extension Topic

↓

Step 2. Preliminary Consultation

↓

Step 3. Preliminary Research on Extension Content

↓

Step 4. Producing the Extension Preliminary Plan,
discussing it with the Rural Extension
Co-ordinating Committee (RECC)

↓

Step 5. Taking a Project Memorandum to Cabinet who
issues a political directive to:
a) establish an extension organization
b) give the extension the necessary priority
c) find funds for the extension

↓

Step 6. Rural Extension Co-ordinating Committee meets and
a) notes the Cabinet Directive
b) formally agrees on extension and gives
it priority
c) nominates an Extension Co-ordinator
d) instructs the Extension Co-ordinator to take
control of the Extension
e) nominates agency members of the Extension
Committee
f) agrees on the first extension meeting date

Step 7. Extension Co-ordinator makes a detailed plan for the Extension and discusses this individually with each agency involved (and of course the agencies meet together informally and formally, whichever is useful, to discuss and agree their individual and collective roles).

Step 8. The Extension Committee meets to:
- a) discuss and amend and finalize the plan
- b) agree on a schedule of meetings and system for keeping each agency informed of Extension progress and demand
- c) establish the Extension Working Teams and the District (local community) and Town Teams.

Step 9. The Extension Working Teams meet to:
- a) ensure that all members are familiar with the overall Extension plan
- b) review in detail their own tasks in the Extension
- c) agree on a schedule of meetings and methods of working

Step 10. The District and Town Teams meet to agree on:
- a) tasks and those responsible for carrying out each task
- b) a schedule of meetings and a method of working
- c) a system for communicating with the Extension Co-ordinators.

Figure 6: Modified Ten Steps of Organizing a RLG Campaign.