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UTILIZATION OF EDUCATIONAL RADIO IN FACILITATING ADULT BASIC EDUCATION

THE CASE OF TIGRAY REGION

BY

BINIYAM ATNAFU

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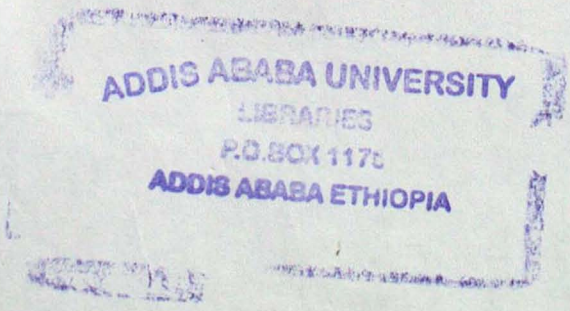

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UTILIZATION OF EDUCATIONAL RADIO IN FACILITATING ADULT BASIC EDUCATION THE CASE OF TIGRAY REGION

A THESIS SUBMITTED TO THE SCHOOL OF GRADUATE STUDIES ADDIS ABABA UNIVERSITY IN PARTIAL FULFILLMENT FOR THE REQUIREMENT OF THE DEGREE OF MASTER OF EDUCATION IN ADULT AND LIFE LONG LEARNING

BY

BINIYAM ATNAFU

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ACRONYMS AND ABBREVIATIONS

ABE----------Adult Basic Education

ABEC----------Adult Basic Education Center

ABERP----------Adult Basic Education Radio Program

CET----------Center for Educational Technology

DEMM ----------Department of Educational Mass Media

EMA ----------Educational Media Agency

EERA----------Ethiopian Educational Research Association

EPRDF----------Ethiopian People Republic democratic Front

MOE----------Minister of Education

NETP----------New Education Training Policy

TEB----------Tigray Educational Bureau

TEMC ----------Tigray Educational Media Center

UNDP----------United Nation Development Program

UNESCO----------United Nation Social and Cultural Organization

ABSTRACT

The main purpose of this study was to investigate the utilization of educational radio in adult basic Education in Tigray region. To this end, multi method research approach was employed to conduct the research in three selected zones of the region. The sources of data then, were adult learners, facilitators, adult basic education coordinators, wereda and regional bureau heads and personnel in educational media centers. Criterion purposive sampling was used to select the sample zones and werdas. Respondents were selected from adult learners on the basis of simple random sampling. Questionnaires, interview and document analysis were used to gather data from the above sources. The data were analyzed using percentage, frequency distribution and chi-square test and descriptive statements. The result of the study indicates that adult basic education radio program did not effectively utilized in Tigray region due to technical problem, Poor quality of the programs and lack of commitment from educational personnel's to use radio programs. Moreover in some part of the region adult basic education radio program are not accessible due to their Geographical location. In light of these findings, some recommendation were forwarded, educational personnel at different levels need to have increased commitment to alleviate the different obstacles that are facing the use of educational radio programs in adult basic education.

CHAPTER ONE

1. Introduction

1.1 Background of the Study

Education is a process by which society can preserve and transmit the accumulated skills, knowledge and values of cultural heritage in order to foster the wellbeing of its citizens. It is the most effective means of curbing population growth, eradicating poverty and ensuring democracy, peace and sustainable development (UNESCO 1975).

Adult basic education is one of the ways to reduce poverty particularly for developing countries (Haggis, 1995, in Amare, 2001: 14). In support of this statement (Mingat, 2003),cited in Hailu Yilma (1988) pointed out that, a large share of adults have not completed their basic education and the country could be at risk of missing the productive citizens, and the economy could also be fundamentally constrained due to lack of literate individuals who would be potentials for further development.

Among other facilities the use of media is essential for teaching-learning strategies, in order to improve the efficiency as well as effectiveness of the process (Head, 1974).

Scattered population, limited government funds, insufficient facilitators, insufficient training and other factors that characterize the developing countries necessitate the use of mass media especially radio. In practical terms for developing countries a radio service is more attractive than television service, especially in Adult basic education where population is more numerous and widely scattered (Head, 1974). Radio is a relatively cheap technology with very extensive reach. As a rule of thumb, the poorer and more rural the area, the more important a role of radio plays (Head, 1974).

There are more reasons for the importance of radio education in Adult basic education for developing countries. It communicates facts, offers a range of experiences far beyond the capabilities of the facilitator in the center, draws a wide range of creative talent and can blend actuality, and can present material that has been packaged from the resources available at the production center (Long, 1984).

Pressures such as enrolment growth and demand for change and improvement in curricula are becoming strong issues in many countries. These and other combined pressures stimulate the utilization of media technology in education, particularly in less developed countries. The United Nation Development Program policy paper (1989) states the need for educational technologies as:-

> *All developing countries will look to education technologies to resolve major problems in the delivery of education and training in the coming decade. Yet the role of educational technology will vary greatly among them, depending on the country's need and available resource (UNDP, 1989).*

In developing countries media can play a great role to transmit basic education to the rural masses and improve their skills. Particularly applying Radio to adult basic education may speed up the task of changing people to a new and improved social order (Abell, 1968).

Educational radio has been employed within a wide variety of instructional design contexts. In some cases it is supported by the use of printed materials, by local discussion groups, and by regional study centers. It is sometimes designed to permit and encourage listener reaction and comment. Indeed, in some cases, there is provision for the audience to raise questions and to receive feedback (Abell, 1968).

According to Thompson, (1977) radio has been used extensively as an educational medium in developing countries. For instance in Thailand, to teach mathematics, Mali, for literacy training, India for rural development, Kenya in support of correspondence courses, Botswana for civics education, Mexico, for literacy training and other programs, Nigeria, for nutrition education, Nicaragua, for health education, and Paraguay, to offer primary school instruction.

In a study sponsored by UNESCO, Neurath (1959, 1960) studied the effects of a 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 programs. Each forum had twenty members who came together twice a week to listen to a thirty-minute program 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 villages. 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. According to Neurath (1959):

> *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 (p. 105)*

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 programs were broadcast once a week from December, 1964 to April, 1965 exclusively. Five programs 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 as well as the control group (non-forum members) were interviewed on what they had learned from the broadcasts. When the results were compared they revealed that forum members learned more than the non-forum members (Abell 1968).

The potential of radio to motivate listeners to take action, modify behavior, and undertake activities is evident in the literature reviewed thus far. In some cases, radio has been used effectively 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 (Bryam, Kaute & Matenge, 1980; Abell, 1968).

Ethiopia as a member state of the United Nations, in the year 1990 committed itself to the education for all initiatives and in 2000 to the Dakar frame work for action which focuses on achieving the goal of education for all by the year 2015. Moreover, the countries strive to achieve the millennium development goals (MDGs) which include the achievement of universal primary education (U.P.E). Increasing Adult Literacy by fifty percent by the year 2015 is also one of the major goals in the Dakar agreement of Education for all. Although the country has given much emphasis to achieving these international agreements, the government realizes that Ethiopia can't achieve the goals of education for all through formal schooling alone (M.O.E, 2006).

Though, adult basic education began in Ethiopia long years ago, still it is found in a lower stage. The government did not give due attention to this

field and the methods to deliver adult basic education are not effective (UNESCO, 2007).

As it was reported in various annual meetings held by UNESCO, due to lack of attention of the government the performance of adult basic education revealed that though some achievements have been made in Ethiopia, the country is still categorized among those that perform poor (UNESCO, 2007).

Ethiopia has been using media, especially electronic broadcast media particularly radio to deliver adult basic education for long period of time (CEDO survey Team 1972). Using such type of technology to transmit information and basic knowledge to the masses may be better than opening large amount of centers throughout the country in relation to cost, manpower e.t.c.

In Tigray regional state, at present, adult education is mainly facilitated through wereda educational bureaus. The Agricultural and rural development bureau, Health bureau and women affairs bureau of this region also contribute a great deal to, the implementation of the program (Tigray Education Bureau, 2004).

Health station, alternative basic education centers, primary schools are mainly selected by the committee as the center for adult basic education. Educational bureaus at woreda level appoint those volunteer students above grade ten as facilitators based on the contract agreement which can be renewed at the end of the year. The payment differs in each woreda from 170-210 birr per month (Areaya Gebru, 1999)

According to Areaya Gebru, (1999) the Tigray region with one radio production studio and one transmission station is realizing the autonomy given to it due to decentralization. The Radio station in the region has two transmitters of a ten and one kw (kilowatt) for formal and non formal education respectively. Having these facilities, the region is involved in the

production and broadcasting of educational radio programs for primary schools and non-formal education. Among the programs of non-formal education, Adult basic education is one of them. Agriculture, Civic and Health Education are some of the programs which are delivered to adults through educational radio broadcasting. To this end, the programs are broadcasted three days per weak early in the mornings and lat afternoon.
The current situation of adult education has problems of trained manpower, material and method of teaching. Although attempts are made to use educational radio to assist adult learners, it is not well organized and has lack of consistency (Araya Gebru, 1999). Few studies were conducted on the extent of implementation, prospects and challenges of using educational radio in Tigray region to facilitate adult basic education. Therefore, it is logical to think of using educational radio in facilitating adult basic education to solve some of the problems in this region.

Access to formal school is a common problem for most of the adults in Ethiopia while it is intensified as one move away from the center. The researcher's choice of Tigray region is because of his familiarity with the region.

1.2 Statement of the problem

The fundamental rationale of my interest to deal with the proposed topic is to investigate and assess how far the medium of radio has positively contributed to the adult basic education development in Tigray region, to pin-point some practical obstacles encountered by the adult basic educational radio program producers, coordinators, and listeners during the process of production and utilization of the radio programs, and to explore the future expectations and prospects of educational radio in the region. Therefore an attempt is also made to investigate the radio adult basic education programs and look for the answers for the following basic question.

1.3 Research questions

1. Is there full use of Adult basic education radio program in Tigray region?
2. What are the major opportunities/threats of using radio broadcast for adult basic education in Tigray region?
   - 2.1 Is the quality of Adult basic education radio program in Tigray region affect the proper utilization of radio in Adult basic education?
   - 2.2 Do the technical supports affect the utilization of Adult basic education radio program in Tigray region?
   - 2.3 Are the educational sectors at bureau, program production centers and weredas committed to support the effective utilization of Adult basic education radio program in Tigray region?
   - 2.4 Are the adult learners in Tigray region interested in Adult basic education radio program?
   - 2.5 To what extent are a radio support service are available in Adult basic education radio program (teachers' guide, radio sets, power supply participation in planning, and utilization training)
3. What are the problems of adult learners in attending radio broadcast in Tigray region?
4. What solutions need to be sought to overcome the limitations of radio programs to deliver Adult basic education in Tigray region?

1.4 Objective of the Study

1.4.1 General Objective of the study

The thesis "Utilization of Educational Radio in facilitating adult basic education in Tigray region" is a case study which assesses the contribution of educational radio to deliver adult basic education in the region and its major problems.

1.4.2 Specific Objective

The following are the specific objective of the study

- Show the development and application of educational radio in Tigray region.

- Explore the major opportunities/threats of using radio broadcast in adult basic education in Tigray region.
- Investigate the major problems of adult learners to learn through radio broadcast in Tigray region.
- To suggest possible solutions based on the finding of the research for the obstacle of using educational radio to facilitate adult basic education.

1.5 Significance of the Study

At present Ethiopia, implementing the new Education and Training Policy. The policy is planned to expand non-formal education. The policy also targets to achieve the goal of education for all. In this regard, the study has the following significance.

- Helps in creating awareness about the importance of using media in adult basic education.
- Serves as a basis to draw an appropriate policy and guidelines that can improve the use of media to deliver adult basic education.
- Serve as a basis for other researchers who would like to make further study in the same area.

1.6 Delimitation of the Study

The scope of the study is delimited to assess the effective utilization of adult basic education radio program in government controlled adult basic education centers. Utilization of radio programs is affected by different conditions. How ever, this study deals with, the quality of the radio programs, the technical factors, the commitment of educational personnel at all levels, the interest of the learners and the radio support service (radio sets, power supply, radio teachers' guide, utilization training, participation of teacher in content selection) .

1.7 Limitation of the study

The study is limited in some respects. It would have been more reliable to collect data about performance of facilitators by observing each sample facilitators for long period of time continuously. However this could not be implemented due to failure of the transmitter when the researcher conducts this steady. This may influence on the quality of the study.

The shortage of enough literature that deals with adult educational radio program in Tigray region as well as in Ethiopia, the shortage of time and money also some of the obstacle which face the researcher during the field work.

1.7 Conceptual Definition

Non Formal Education: - any organized educational activity outside the established formal system- whether operating separately or as an important feature of same broader activity i.e. intended to serve identifiable clients and learning objectives. (Head, *S* .w 1974)

Educational Radio*:* - deals the production and transmission of Radio programs which are intended to enrich and supplement formal and non formal education. (Arts S.B, 1995)

Mass media: - technological devices such as radio and television and useas the means of communicating with a common message to a large number of people simultaneously. (Bordenave J. 1977)

Communication: - the transmission of information, ideas and knowledge from one person to another or from one group to another group through mass media with intended aims and objectives. (Bordenave J. 1977)

Quality of the program: in this paper it refers to the appealing and appropriateness of the nature of the ingredients of the script (format, sound,

effect, novelty, pace, logical arrangement, voice, language etc) and enriching the experience of the learner (personal enhancement).

Radio support service: in this paper it deals with the availability and reception quality of radio sets, power (batteries, electricity radio teacher's guide, provision of training, participation in radio content selection).

Commitment: refers to attention, readiness and willingness of personnel at all levels to facilitate, cooperate and accomplish tasks related to educational radio programs accordingly.

CHAPTER TWO

2. Review of Related Literature

2.1 Definition and Brief History of Adult Basic Education

Adult Basic Education is the very minimum knowledge skills, attitudes and values that will enable adult learners to operate with reasonable expectation of success in their community or society. It is the practice of teaching and educating adults with basic education. The practice is also often referred to as 'Training and Development' (Haggis, 1995, in Amare, 2001: 14).

The passage of the Adult Education Act of 1966 and its subsequent amendments represented the first major funding effort of the federal government to reduce adult illiteracy (Mcginnis, 1988). For the past 22 years, federal policy for adult literacy has been contained principally in the Adult Education Act and in the administration of the program it supports (Mcginnis, 1988). The Act authorized 90% federal funding with states matching 10% to encourage states to develop adult literacy education programs. Funded under the Adult Education Act, Adult Basic Education (ABE) is the largest single program to reduce adult illiteracy (Mcginnis, 1988). Federal funding for this program, after 16 years of growth , has been frozen at existing levels for the past seven years and, therefore, in constant dollars has diminished. The $20 million a year adult illiteracy costs taxpayers (Mcginnis, 1988).

Hilliard (1985) emphasized that the original authorization of Adult Basic Education gave much discretion to state and local agencies and clearly required states to bear the responsibility of developing adult literacy education programs. The 1978 amendments to the Adult Education Act contained several significant new policies. These amendments required that services to adults to expanded throughout the public and private sector,

including community colleges, instead of relying so heavily on the public schools as had been done previously.

2.2 Radio as a means to deliver adult basic Education

2.2.1 Brief History of Radio and Educational Radio

There is no single person who is the inventor of radio as we know it today. Its development, like most inventions is based on the theories and contributions of many people. The existence of radio waves was first predicted in 1846 by an English physicist, James Clerk Maxwell. In 1888, a German Physicist Heimich Herth, demonstrated that, radio waves actually do exist and that they travel through space (Coyle, 1989).

Many attempts were made to communicate via radio waves; but the most successful radio pioneer was an Italian, Gugliemo Marconi. Marconi used radio waves to send dot-and-dash codes like those used in telegraphs, but using radio waves, not wires (Coyle, 1989).

Two inventions of tubes marked the next significant steps in the development of radio: the diode rectifier tube in 1904 Englishman Sir John Fleming, and the audio or vacuum tube, a triode amplifier with a filament plate, and grid in 1960 by American Lee De Forest, considered by some to be the "father" of radio (Hilliard, 1985).

At first all transmissions sent through the air by "radio" were telegraph signals. There are conflicting claims for the first broadcast of speech sounds over the air. Historians generally acknowledge that first voice transmission was that of Reginald A.F Fssenden in 1906 from 'Brant Roch' Massachusetts (Hilliard, 1985)

An important technical advance in making radio available to the public was the demonstration in 1922 by inventor Edwin H. Armstrong of the super heterodyne as a broad caster receiver. It was not long before the commercial

value of radio was realized. At first many of the stations were operated by colleges and universities, with information and educational programs, including news casts, whether reports and farm news as the principal programming (Hilliard 1985).

Radio grew wildly during its formative years, with unchecked proliferation of stations, the development of networks, and advertising support. Its technical growth culminated in the first around-the-world broadcast from Schenectady in 1930. The lack of regulations, however, resulted in chaos over the airwaves, with the new medium virtually chocking itself to depth (Hilliard, 1985).

2.2.2 Characteristics of Educational Radio

Radio is particularly suitable as a medium to educate and inform. It can cover huge distances, reach many people, and does not have the distracting qualities of television when used for direct instruction. Programs can be educational, aiming to import specific ideas, information, or techniques; or educative aiming to inform on a general level (Coyle, 1989).

Radio can do that the class teacher cannot. In supporting this (Mohanty 1992 and Muller 1985) stated that radio can bring new or unavailable resources into the classroom. At the same time, its use does not require literacy. Radio is much more a personal thing coming direct to the listener. There are obvious exceptions in the rural areas of less developed countries where a whole village will gather round the set. However, even here, the transistor revolution has made radio an everyday personal item (Hillard, 1985)

Radio works particularly well in the world of ideas. As a medium of education, it excels with concepts as well as facts. From dramatically illustrating an event in history to pursuing current political thought, it has a capability with any subject that can be discussed, taking the learner at a

predetermined pace through a given body of knowledge. With musical appreciation and language teaching, it is totally at home (Abell, 1968).

2.2.3 Approaches to the Use of Educational Radio

When we use educational radio for both formal and non formal Education the program producer should be clear about what it is he or she is trying to achieve. Lack of clarity about the program purpose leads to a fuzzy, ineffective end-product; it also leads to arguments in the studio over what should not be included (Coyle, 1989). Before looking at some, possible personal motivations for making programs at all, we should examine the meaning of the much-used phrase-broadcasting as a public service. In support of this, Bates states that:

> *It is important to identify clearly the Primary target audience in order to select appropriate production styles and transmission arrangements which are best suited to that audience* (Bates A, 1982).

The potential of radio to motivate listeners to take action, modify behavior, and undertake activities is evident in the literature reviewed thus far. In some cases, radio has been used effectively 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 (Bryam, Kaute & Matenge, 1980). Other reports have examined the results of radio when used in conjunction with some form of interpersonal support such as discussion/study groups, printed materials, or contact with extension workers, and found them to be very efficient and effective (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 Parlato (1982,

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

It should be noted that most of the evaluation studies reporting change in behavior were based on self-reported action by those interviewed, rather than by independent observation. Accordingly, the potential of radio has been particularly difficult to ascertain on this issue.

A study of nutrition education in rural Mexico compared the effectiveness of a mass media group (radio with posters and pamphlets) with a direct education group (teachers and audio-visuals) in transmitting nutrition concepts. The study 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 the regular, face-to-face classroom instruction by teachers. The third area was a control, not taught directly by radio or teachers. They were not made aware of the radio programs but some of them could have listened to them. Knowledge of nutrition concepts was evaluated immediately after instruction and three months later. One year later, charges in diet were studied. The evaluation showed that nutrition concepts were learned equally well using mass media and regular, face-to-face classroom instruction. Both groups reported a positive change in food consumption habits. It was observed that radio messages were more uniform than the regular face-to-face methods of 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 indicating the uniqueness and uniformity of educational radio in teaching disadvantaged adults in developing countries (Gelonesi, 1986).

Many writers have proposed that educational radio can be most effective when supported by trained facilitators, group learning, group discussion (dialogues), feedback, and the use of multimedia approaches. For example,

Perraton, (1978) argued that trained facilitators must be used in order to successfully utilize educational radio. He stated that group learning is more effective than individual learning and that group discussion is an effective method of learning from radio. The facilitator must converse with students in order to emphasize the main points covered by radio programs as well as to provide feedback where necessary.

Neil (1981) contends that educational radio can only be effectively utilized by employing the following techniques:

1. Using educators with long (and preferably recent) experience of living in rural areas.
2. Communicating, in detail and continually, with the leaders of village learning groups where these exist.
3. Paying careful attention to, and learning from, the work of local communities or other organized groups (for example, farmers, agricultural, and health service radio broadcasters).
4. Working through valid intermediaries such as chiefs or headmen in villages, i.e. through established and accepted social structures.

2.2.4 Characteristics of Adult Educational Radio Broad Casting

Kay and Harry (1982) notified adult basic education should encompass not only the development of a 'toolkit' of social skills, but also the application of the tools to the acquisition, use, and production of relevant and useful knowledge which can help bring abut changes in society itself.

Adult education broadcasting is very different from school broadcasting. According to Robinson (1977), adult basic education broadcasting differs from school broadcasting at list in the following characteristics.

A. Generally speaking it is primarily addressed to voluntary audiences situated in their own homes who are not readily identified as classes is schools can be identified. So their qualities are less easy to assess and their response to the programs is les easy to observe.

B. Whether the audiences can be identified or not, they present a much greater variety of ages, previous education and life experience, than the specified age group for a school broadcast course.

C. Adult education broadcasters can similarly assume a less regular pattern of following the programs than a school series addressed to a particular age group. So repetition and revision must be built into the broadcast series itself.

2.2.5 The Use of Educational Radio Broadcast for Adult Basic Education

The use of radio for adult basic education started with the advent of radio broadcasting in the 1920s and '30s. Together with information and entertainment, education - both formal and non-formal was regarded as one of the three main services that the new medium would, and should, offer its audience (Kaye and Harry, 1982).

In the decades following the Second World War, educational radio spread from the industrialized nations of Europe and North America to the developing countries, mainly through colonial broadcasting services. As most of these countries achieved independence in the 1960s they continued to use radio for adult basic education, especially in the areas of agriculture and health (Tenker, 1992).

However, the 1970s brought an increasing emphasis on the educational potential of television and video. The new technology offered sound, visual images, movement and colour, but was also much more expensive; many societies and individuals, particularly in the rural areas of poorer

countries, did not have access to it. In many areas of the world radio is still the only medium through which educators can reach a mass audience, simultaneously and at relatively low cost; although television and video may have overshadowed radio, it was never eclipsed (Kaye and Harry, 1982).

The 1970s also brought three major developments that allowed radio to extend the range and scope of its activities, especially at the local and community level (L. Hilliard, 1985)

- The development of FM (frequency modulated) radio transmission
- The consequent growth of local and community radio stations
- The increasing availability of relatively low-cost, portable, AM/FM radio receivers
- The increasing miniaturization of radio transmitting stations.

Even, the substantial opportunities for adult basic education offered by these developments were not fully realized over the next 30 years. Although this was partly due to the increasing commercialization of broadcasting during the period, there remains a tendency among educators to focus on newer media - initially television and video, and more recently teleconferencing, the Internet and the World Wide Web - at the expense of older technologies, which can often achieve similar goals very effectively and usually at a fraction of the cost.

Nevertheless, local and community radio continues to make a significant contribution to adult basic education:

In Kenya, the Media Trust has recently been supporting the use of radio drama/soap opera, transmitted by a local radio station, as part of a health education campaign in the Meru region (www.col.org/clippings).

In the Oshakati area of northern Namibia, local radio is part of an adult basic education project entitled "Cattle is our livelihood," to improve cattle keeping practices among local farmers (www.col.org/clippings).

In the Apac community of northern Uganda, a portable solar or battery powered "suitcase radio station" broadcasts programs of local and timely interest, in an initiative co-sponsored by the Government of Uganda and The Commonwealth of Learning (www.col.org/clippings).

2.2.5.1 Farm Radio Forum

One of the most dominant and widespread examples of the use of educational radio is known as "Farm Radio Forum." It was started in Canada in 1941 as a radio discussion program and served as a model which was adopted subsequently in a number of developing countries. After ten years, its sponsors, the Canadian Broadcasting Corporation (CBC), the Canadian Federation of Agriculture (CFA), and the Canadian Association for Adult Basic Education (CAAE), invited UNESCO to cooperate in carrying out an evaluation of the program and its effectiveness as an instrument of adult education (Abell, 1968). The lessons learned from Canada such as the use of forums, multi-media, printed materials, two-way communication and various production techniques (drama, interview, panel discussion) were then introduced in India early in 1956, and in Ghana in 1964, with the initiative and sponsorship of UNESCO. The radio programs for rural forums have been concerned 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 were reported (Nyirenda, 1981; Waniewicz, 1972).

2.2.5.2 The Role of Radio Broadcasting in Technical and Further Education (TAFE)

A. Radio as access to TAFE

'Access' is a concept which informs much of TAFE's educational philosophy. It not only represents the removal of barriers, but asserts the importance of giving people the means to embark on an educational activity or course of training. This includes making people feel comfortable with the very idea of further education, creating an environment in which they do not feel alienated, helping them to recognize and articulate their needs in their own terms, providing them with the basic information, the literacy, innumeracy and study skills which will enable them to engage in the education process, and, importantly, supporting them once they have taken up a course (Muller, 1985).

As a mass medium, one of radio's strengths lies in attitude formation, and the use of radio to create a favorable disposition towards the idea of recurrent or lifelong education are to address a critical access factor.

Over the past decade, many a TAFE College has made considerable use of local radio to publicize and promote its educational offerings, and this continues to represent a major slice of TAFE airtime. Such publicity and promotion is an attempt to enhance access to TAFE by breaking down barriers of ignorance about what courses of study are available at 'the local tech', and by overcoming fears associated with 'going back to school (Muller, 1985).

B. Radio as outreach

Outreach refines the concept of access by the deliberate focusing of attention on those in our community identified as educationally disadvantaged. The focus normally falls upon groups for whom the education system has failed, or for whom the usual services are unavailable,

inadequate or inappropriate. Of all the areas in which TAFE is operating, that of outreach are possibly the one in which radio is having the biggest impact. Several recent initiatives testify to the value of the medium in providing sustained educational support for a community, or in helping to create a community of otherwise isolated individuals (Gelonesi, 1986).

The outreach arm of Woden College is planning to utilize radio as part of an overall educational strategy to reach these groups. Proposals include a focus on women's issues through public radio 2XX, the sharing of poetry, short stories and talk amongst the elderly on Radio for the Print Handicapped, and the establishment of radio-based local study groups dealing with topics and issues from ABC Adult Education programs and Radio Summer Schools. Here, radio is being perceived as a more or less open-ended resource, a means of facilitating an educational encounter between the target group and TAFE, and encouraging links between members of the target group themselves (Gelonesi. 1986)

2.3 Methods Traditionally Used for Adult Basic Education

Many of the existing basic education facilities for adults, where they exist, are provided through a variety of channels both publicly and privately financed (Kaye and Harry, 1982).

- Voluntary organizations of various types, working essentially at a local and community level, even when represented on a national basis (Trade union organizations).
- Churches and religious organizations of various denominations
- Official government departments and parasitical organizations and councils.
- Pressure groups, of differing kinds (e.g. consumer groups, community action groups).

The methods used by these various organizations is differ widely ranging form individual person to person activities, the ranging of study groups at local and community level, the dissemination of printed information, and the broadcasting of radio and television programs on a regional or national basis. Each of these methods has its strong points, but taken separately, each also has serious limitation (Kaye and Harry, 1982).

2.3.1 Inter Personal Activities

Inter-personal activities can take a variety of forms. Direct individual and group meetings, self-help groups, action groups, as well as indirect contact through post or telephone such contacts have important pedagogical and motivation functions. They can be used as an occasion for learning specific skills, from a local volunteer, a specialist tutor, or a skilled practitioner. Such meeting does not need to take place in formal or class room- like surroundings, but might be arranged in peoples' homes, in bars, or in community centers (Kaye and Harry, 1982).

Group meetings of more than a few people can be difficult to organize at times which will suit all the people involved. One to one personal 'tutorial' meetings (e.g. to teach literacy skills) require potentially large numbers of volunteers and tutors. In sparsely populated communities problems are magnified and time and money will be needed from meetings (Kaye and Harry, 1982).

2.3.2 Self-Study Print Materials

One way of overcoming same of the draw backs of inter personal activities as a method to deliver adult basic education is to opt for self-study materials to provide a proportion of the basic learning medium (Kaye and Harry, 1982).

Such materials can take the form of leaflets, newspaper or magazine supplements, or more extensive self-instructional texts. To be effective, it helps if they are prepared in attractive and stimulating style and formats. Such materials properly developed and presented, can prove very effective for importing a range of basic knowledge and skills, provided that there is sufficient motivation among target groups (Kaye and Harry, 1982).

As the disadvantage ages of self study, print materials include the fairly long period of time needed to develop and prepare suitable materials and the costs and difficulties associated with improving, modifying, and up-dating them (Kaye and Harry, 1982).

2.3.3 Television and Radio Broadcasting

Beyond the above two method some countries used television and radio broadcasting to deliver basic adult education at national, regional, and where the facilities exist, community level. The advantage of using television and radio broadcasting in this field is explained by Abell.

> *Alter actively presented broadcasts can provide valueable publicity for a learning project or related social issue if transmitted at appropriate hours (Abell, 1968).*

Perhaps more importantly, television and radio broadcasts can stimulate the viewers and listeners, and develop their motivation and confidence to a point at which they want to start a learning project or embark on a course of action.

2.3.4 Advantage and Threats of Using Educational Radio for Adult Basic Education

A. Advantage of using educational radio for adult basic education

As a medium for adult basic education, local and community radio is:

Attractive: most people enjoy listening to radio, particularly if it is well produced and presented. It's generally regarded as a personal, friendly and reliable medium

Available: local and community radio services are common throughout the world. Where they are not available, it is relatively easy and not prohibitively expensive to set them up

Accessible: most people, even in the poorest rural areas, have access to radio receivers and a source of power. Since educational radio relies mainly on the spoken word, it can speak to people directly and in their own language - even to those without the benefit of literacy

Affordable: educational radio programs are relatively cheap to produce and to transmit. The costs are dramatically less than those for television or video, and usually lower than print or face-to-face teaching and learning costs (Mcginnis, 1988).

Local radio stations usually have close ties with the local community; at their best, they are a well-informed, trusted and valued part of the local social structure. They can ask their listeners to tell them what they want and need in terms of adult basic education and training, and can help articulate and promote these views locally. Local radio stations also often have good access to organizations and individuals with the knowledge, skills and experience to respond effectively to local needs. They can enter into

partnerships to plan, design and develop adult basic educational projects, and to implement and evaluate them (Mcginnis, 1988).

Radio can also involve local people in its programming, providing a platform for local ideas and opinions and responding quickly and effectively to listener comments, questions and suggestions - where necessary, even calling local authorities and officials to account through regular "feedback" programs (Thompson,1987) .

Despite its old-fashioned, low-tech feel, local and community radio has a good deal to offer in the field of adult basic education. However, it's important that one is aware of its limitations and how to compensate for them if radio is used for adult basic education at the community level (Thompson, 1987).

B. Threats of using educational radio for adult basic education

Broadly, the limitations of local and community radio for adult basic education are:

Technical - related to the effective transmission and reception of radio signals within a local community

Institutional - related to the nature and purposes of radio stations within their local communities

Educational - related to radio as a medium for adult basic education

Economical - related to the training, equipment, start-up and ongoing or associated costs of radio stations, programming and staff (Mcginnis, 1988).

Technically, the successful use of local radio for adult basic education depends on a clearly audible radio signal being able to reach all parts of the community that the radio station serves. Listeners within the community also need suitable radio receivers and adequate sources of power to receive the signal clearly. They must know where to find the signal on the radio dial and how to tune in the radio set to get a clear signal.

Depending on the strength of the transmitter in relation to the local topography and population distribution, a clear signal may not reach all parts of the local community. There may also be institutional issues that limit the effectiveness of radio adult basic education. Radio stations - particularly if they are operating on a commercial basis - may give a low priority to educational broadcasting. They may see themselves as competing for audiences with their commercial rivals, and may feel that educational programs do not fit the station's image or draw a sufficient audience to attract advertising revenue (Thompson, 1987).

Such stations may be unwilling to broadcast educational materials, or may want to charge high commercial rates that would add substantially to costs. They might agree to broadcast the programs as part of their public service obligation, but may be reluctant to give the programs good transmission slots. The educational programs may only be broadcast very late in the evening or early in the morning - hours that many (if not most) of the target audience would find unsuitable. The stations may also lack the human and material resources to produce high quality educational programs (Thompson, 1987).

Educationally, radio's exclusive reliance on sound (mainly the human voice) means it can't communicate visual images except in the imagination of the listener, which is not always adequate for educational purposes. Using radio on its own is very difficult when dealing with subjects that have a strong

visual component, such as subject matter involving spatial relationships (carpentry), complex dynamic processes (machine operation) and the demonstration of practical skills (Mcginnis, 1988)

Radio gives students very little control over when and how they are going to learn. Radio programs are usually broadcast at fixed times, which as we suggested earlier might not always be convenient to listeners. Even if the programs are repeated, finding a convenient time will not always be possible. Programs can be recorded on audiocassette for later use, but not all students will have access to this facility.

C. OVERCOMING THE LIMITATIONS

On the technical side, new advances in solar and wind-up power are helping overcome issues such as unreliable electricity supply, or the limited availability and expense of conventional batteries needed to power radio transmitters and receivers. But radio also has a few educational limitations. How can we maximize its educational strengths and minimize its weaknesses?

As Thomas, (2001) stated, the following methods will help to overcome the limitation of educational radio

- If radio lacks a visual dimension, it needs to be accompanied by printed visual support materials
- If transmission times are inconvenient, listeners should be encouraged and enabled to record them off the air and listen to the cassettes when it suits them
- If radio offers too little interaction, the programs should be regarded primarily as stimulus material. Listeners should be

encouraged to form discussion groups around the programs, to listen, discuss, decide, and act

- If listeners lack the skills to use radio effectively, programs should be designed to develop those skills.

2.4 Educational Radio Man Power Training, Utilization and Evaluation of the Programs.

2.4.1 Educational Radio Man Power Training

Training is one of the most significant needs in educational media planning. It is unlikely, except in highly developed countries that ready-made reservoir of trained talent will be available (Hencok, 1977).

It is acknowledged in educational mass media that for a good standard of efficiency in technological operation, programming, utilization of broadcast and evaluation the training of media manpower at different levels is vital (Asres, 1988). Thus, identifying short and long term training of a series of courses, familiarization seminars aiming at multiplier effect is a major responsibility of the department to enable it to meet the growing demand human power (Hailu, 1988).

In adult basic education radio broadcast, the training of animators involves various development agencies which are partners in the radio program production, utilization and evaluation activities (Asres, 1988).

The content of animator training is not different from media teacher training except the relevant topics of Adult learning, communication process, management of adult listening center and the role of the group leader, and the contribution of radio to development (Tenkir, 1972).

2.4.2 Utilization of Educational Radio Broadcast in Adult Basic Education

Utilization is essentially a practical organizational aspect of media use, equally involving officers in the centre, the supervisory force and those in charge at receiving points (C.E. T, 1973)

In media operation there is a need to have a system which effectively links the organization disseminating the educational messages, the field agents supervising the application of the broadcasts and the program customers receiving the messages. (The process has an out ward flow of information from the centre to the intended audience and a return flow of information form the audience to the centre). To measure the effectiveness of radio programs, it is vital that this two-way communication be formed and sustained consistently based on the dissemination of relevant and adequate media materials to the target audience. In the case of adults it is essential to organize listening center (Kay and Harry, 1982).

2.4.3 Radio Receivers Provision and Maintenance Service

When we raise the issue of radio program utilization the availability of radio sets and their maintenance has to be given top priority because, as Katz put it:

> *With out...receivers to receive the signals that are broadcast, the broadcasts are wasting their time (Katz, 1977).*

The radio sets distributed to adult listening centers in developing countries are mostly donated by international agencies like UNICEF. Development agencies and non governmental organizations are encouraged to provide radio sets to adult listening centers (Key and Harry, 1982).

2.4.4. Evaluation of Adult Basic Education Radio Broadcast Programs

As spain said, Evaluation of Adult Basic Education Radio Broadcast Programs is a constructive tool that can help to achieve desire results (Spain, 1986). To measure application of the programs at field level, to find out the problems encountered during implementation and to know the impact of the programs on knowledge of the target audience, the centre has been involved in two aspects of evaluation work. These are utilization evaluation and impact Evaluation (Assres, 1988).

A. Utilization Evaluation

Utilization valuation is conducted to identify weaknesses and strength of the implementation of radio messages and the radio support materials. This is done usually before the impact evaluation (content evaluation) is conducted because failure in application has a direct effect on the content evaluation. However, since they are very much interrelated it is very difficult to draw a line between the two. Through a continuous process one starts and the other follows (Robinson, 1977).

B. Impact (content) Evaluation

Robinson, (1977) impact (content) evaluation is done after the preparation of support material implementation of the radio programs. It is important in order to improve its programs. Both formative and summative evaluations are made. As Robinson:

> *The principal merit of formative evaluation is that it can help to shape the learning material during the actual process or preparation (Robinson, 1977).*

The main merit of summative evaluation is that it is directly based on the real situation; it is assessing what actually happened. This is particularly valuable when a course is to be repeated; as is generally the case in BBC

Adult Education and is always the case in the Open University (where each course is repeated for four or five years (Robinson, 1977).

2.5 Development of Educational Radio in Ethiopia

In Ethiopia, Radio news broadcast in its simplest form began at the eve of the Fascist Italian invasion of the country in 1935 (Petrosi 2002). Educational Media Agency in Ethiopia traces its origin to the audio-visual center which was established by the Ministry of Education and Fine Arts in cooperation with USAID in 1953/54; (Teshome; 1998). Educational broadcasting was commenced in 1965, to meet the preesing needs of the expanding educational system (Tenker, 1992)

In 1974 Educational mass media service, Department of Educational mass Media, Established with the following major objectives (E.M.A 1974).

- To introduce new and innovative way of teaching methods and to update teachers through broadcasting new educational and pedagogical concepts.
- To extend the vocational training programs, adult and distance education.
- To extend qualitative education and multiply the skills of limited professional.
- To teach the working langue of the country.
- To introduce science and technology to the broad masses.

2.5.1 Basic Adult Educational Radio Programs in Ethiopia

Radio has contributed in creating awareness and mobilizing the great majority of the people, living particularly in the rural areas of Ethiopia, since 1974 significantly in the field of basic adult Education (Assres, 1988).

There were three areas of basic adult education radio programs specifically designed for rural adults in Ethiopia. These programs were agriculture, health and civics adult radio programs. The programs were broadcasted from regional educational radio stations in four major languages of the

country (Amhagna, Tigrgna, Oromigna (Wolaytegna) which cover nearly 90% of the whole population, with the full control of central government (Assres, 1988).

Before the coming of E.P.R.D.F to power Basic Adult Educational radio programs which constitute 624 programs of 15 minutes duration each were broadcasted for 1:50 hours per day (except Saturday and Sunday) which become 2,608 hours in a year (Tenker, 1992).

The present situation emphasizes the provision of adult basic Education in local languages (M.O.E, 2006). As a result developing radio programs for adults turned over to the region. The regions are responsible to produce and broadcast adult basic education programs by themselves. Based on this autonomy, Tigray region has produced and broadcasted different basic adult Education programs since 1989. These include agriculture, Health, civic (Araya Gebru, 1999).

According to Araya Gebru, (1999) adult basic education program are broadcasted three days per weak early in the morning and late afternoon. He also explains there are lack of organization and consistency of the programs.

CHAPTER THREE

3 Research Design and Methodology

The purpose of this section is to describe the methods, designed, tools and techniques developed, and the procedures adopted for collecting and analyzing data.

3.1 Design of the Study

The major concern of the study is to examine and describe the extent of utilization of educational radio in Adult basic education radio in Tigray region, and to identify the factors that influence the practical use of this program in Adult basic education radio centers. Multi-method research approach which uses both quantitative and qualitative research designs form the basic approaches of the present investigation.

3.2 Source of Data

The data used in this study were classified in to two, primary and secondary data. The primary data were collected from:-

A. Educational bureau of Tigray.

B. The educational bureau of sample zones and weredas.

C. sample adult learners and facilitators in the selected weredas.

The secondary data were obtained from different source. Some of them were reports on the use of radio to deliver adult basic education from weredas to zones from zones to region and from region to Ministry of Education. To secure facts and figures for this study, various official and other documents and educational database were referred to.

3.3 Sample and Sampling Techniques

Currently in Tigray region there are seven zones, namely, south Tigray, south eastern Tigray, Mekele zone, eastern Tigray, central Tigray, western Tigray, and north western Tigray. All zones use educational radio to facilitate adult basic education but the extent of utilization differs from one to the other (Tigray Educational Bureau, 2004).

For this study only three zones were selected using purposive sampling techniques. According to Patton (1987:52) in purposive sampling the units of samples are selected by the researchers, who attempt to obtain a sample that appears to him or her to provide rich information. There are different strategies for selecting information rich cases purposefully. Criterion sampling is the one that is used in the present study. The logic of criterion sampling is to review and study all cases that meet some pre-determined importance (Patton1987).

Thus the researcher set three criteria to select information reach sample areas (1) the relatively better utilization of educational radio in Adult basic education radio, (2) Accessibility to collect the necessary data, (3) familiarity of the researcher with the areas. Based on this south eastern, eastern and central zones were selected. Using the same sampling techniques the researcher selected sample weredas from sample zones. South eastern, eastern and central zones consists four, seven and eight weredas respectively. The following table shows the number of adult learners and facilitators in each sample weredas.

Table 3.1 Number of total adult learner and facilitators in sample zones and weredas

zone	woreda	ABEC in N°	Adult learner			facilitators		
			Male	Female	Total	Male	Female	Total
South eastern	Samere	6	72	132	204	4	2	6
	Doga Temben	4	45	30	75	3	2	5
Eastern zone	Hawzen	4	93	40	133	6	-	6
	Kilit awlalo	8	201	105	306	6	3	9
	Atsbi	8	115	200	315	5	3	8
Central zone	Werilek	8	199	104	303	5	4	9
	Aferom	3	33	22	55	2	1	3
	Mereb leke	2	111	26	137	3	2	5
total	8	43	869	659	1528	62	20	51

ABEC= Adult Basic Education Center

Source: - Tigray educational bureau

20% of total adult learners and more than 35% of adult basic education facilitators were included in the sample from each wereda based on lottery system of simple random sampling technique. Accordingly the number of adult basic education center, adult learners and facilitators which were included in the sample from each wereda is given in the table below.

Table 3.2 Number of total adult learners and facilitators which include in the study

zone	woreda	ABEC In N°	Adult learner			facilitators		
			Male	Female	Total	Male	Female	Total
South eastern	Samere	2	14	26	40	1	1	2
	Doga Temben	1	9	6	15	1	1	2
Eastern zone	Hawzen	1	19	8	27	1	-	1
	Kilit awlalo	2	39	21	60	2	1	3
	Atsbi	2	23	38	61	2	1	3
Central zone	Werilek	2	38	21	59	2	1	3
	Aferom	1	7	4	11	1	1	2
	Mereb leke	1	22	5	27	1	1	2
total	8	11	171	129	300	11	7	18

ABEC= Adult Basic Education Center

The researcher conducted interview with 18 adult basic education facilitators which comprised nearly 35 % of the total adult basic education facilitators in the sample zones and to all sample wereda educational bureau administrators, adult Basic Education Coordinators, the educational media center heads, one non-formal educational program producer and one educational bureau administrator at regional level. So the total number of individuals who were interviewed was 33.

The secondary source was used to strength the information which was gathered directly from primary sources.

3.1.4 Instruments of Data Collection

Multiple instruments of data collection are used in the current study. Using more than one data collection techniques has an advantage to minimize the weaknesses of any one source of data (Patton, 1987). Bearing in mined this idea, the present investigation was conducted by using three types of instruments.

Following preliminary discussion held with concerned experts of Ministry of Education and Educational Bureau of Tigray region and the review of reports from selected zones about the use of radio to facilitate adult basic education, data collection instruments were developed. The instruments include:

- *Document Analysis*: - any valuable data in the study area, for example, educational statistics and annual abstracts were analyzed through document analysis.
- Interview schedule designed to collect information from ABE facilitators, adult Basic Education coordinators and all the selected institutions in the area of study.
- Questionnaire with close ended items prepared to collect information from, adult learners

3.1.4.1 Pilot study

The objective of the pilot study was to identify the reliability and validity of the questionnaires. For the purpose of pilot study, three adult learning centers were selected from wereda Werilek namely Hinzat, Melka, and Misema. The study was carried out from January 25, 2009 to 2, February 2009. The entire selected adult learning centers for pilot study use radio to facilitate adult basic education. But unfortunately when the researcher conducted the pilot study all of them did not use radio due to failure of the transmitter from the broadcasting center at Mekele for the past two months. The total numbers of adult learners in the sample

adult learning center (for pilot study) are 152. Nearly 50% of these figures are women. From each center, an equal proportion of adult learners were included in the pilot study (i.e., 16 adult learners from each center). The proportion of males and females was also equal in the pilot study since there is no significant difference in number between them. Thus the total number of respondents in the pilot study was 48. Out of which 24 were women.

The questionnaires for adult learners were adopted from Tenker (1992), Assres (1988), Teshome (1998) and also collected from different literature in the field under consideration so as to fit the objective of the present investigation. Students were asked statements that are intended to measure the extent of there knowledge about the utilization of adult basic education radio programs.

The item was translated into Tigrigna in order to help respondents fill in them with ease. The Tigrigna version was given to four Tigrigna teachers who teach in Werie secondary and preparatory school to receive comment. Finally these comments were used to increase the validity of the questionnaires.

The questionnaire was distributed and collected by the researcher himself. The investigator oriented the respondents about the objective of the study and how to respond for the questionnaires. The investigator also helped those adult learners who could not read and write to fill the questionnaire properly. In this regard the investigator was assisted by facilitators`. The researcher also gave chance for respondents to ask questions whenever they felt the ambiguity of the items and to write additional points that needed emphasis at the back side of the questionnaires. (See Appendix III)

After collecting the questionnaire, the coefficient of reliability was calculated by Cronbach's Alpha reliability method for 30 respondents using SPSS window program version 15.0. The result of reliability

coefficient showed internal consistency of 0.81. This result indicates that the reliability of the questionnaires is high.

Finally, the improved items of the questionnaire were discussed with the educational radio program experts before the actual study was conducted. The comments were used to improve the validity of the questionnaires. After such activity the final questionnaires were distributed for the actual study.

3.1.5 Procedures of Administration and Data Collection

The questionnaires were distributed to all sample respondents by finding convenient time for them so as to maximize the quality of responses and degree of return. An official contact was made with all concerned offices to get permission and support for research work. The researcher had an assistant for the timely distribution and collection of data. The researcher also had to make a close follow up during data collection and at the same time he has also conducted an interview with sampled respondents.

The data gathered through questionnaire were coded and tabulated in tables prepared for analysis.

3.1.6 Data Analysis

Descriptive survey quantitative and qualitative data analysis has been used. Data collected through questionnaire which leads themselves to quantitative analysis were computed using percentages and frequency distribution as well as Chi-square test, whereas the data collected through interviews and documents has been analyzed qualitatively by using descriptive statement.

CHAPTER FOUR

4. DAT APRESENTATION, ANALYSIS AND INTERPRETATION

4.1 Number of Adult Basic Education Radio Program Used In Adult Basic Education Centers.

Adult learners were asked to indicate the number of adult basic education radio program they used in 2007/2008 academic year with three rating scale. The summary result is illustrated in table 3

Table 3 frequency and percentage distribution of adult learners' responses on the number of radio programs used in 2007/2008

0 (no use) 10-20 (partial use) 16-30 (high use) 26-48 (full use)

Statement	Respondents N=1320				Chi square
	0(no use)	10-10 (partial use)	16-30 (high use)	26-48 (full use)	
Number of radio programs used in 2007/08	115 (38.3%)	160(53.3%)	25(8.4%)	-	65.2

As it is indicated in table 3, most of the respondents (53.3%) reported that number of adult basic education radio program used from surveyed adult basic education centers in the year 2007/2008 ranges from one to fifteen (which is partial use) whereas (38.3%) of the respondents indicated that they were not using adult basic education radio program at all. besides, the table portrays absence of full use of adult basic education radio program in the surveyed adult basic education centers. This indicates that radio programs are not uniformly utilized in surveyed centers. The computed chi- square value in table 3 shows that there is significant difference between the observed frequencies and the expected ones.

The study also sums up the interview results of adult basic education facilitators, adult basic education co-coordinators Wereda education office heads, media centers and regional education bureau heads on whether adult basic education centers facilitators make regular use of radio broadcasts or not in the year 2007/8, all of them indicated that the programs had been utilized regularly and the adult learners benefited from the programs. However, later on during discussions through probing questions with facilitators, coordinators most of them agreed that because of a number of constraints, they didn't even use a single adult basic education radio program in the mentioned year. Same respondent in eastern zone indicated that:

> *Except electric failure at radio station or absence of facilitators due to personal problems, & holidays the radio programs are regularly used though the degree of utilization varies and is less effective" (interview with Non-formal education coordinator of eastern Tigray Zone 02/07/2009).*

However, since constraints listed above by respondents are many it is possible to say that adult basic education radio program are not fully utilized. Besides, the TEMC heads asserted that

> *There are few centers in the region which are found at depression (e.g in southern Tigray) that could not receive broadcasts. But for such centers which are disadvantaged due to their relief feature alternative conditions to use educational radio programs are not adjusted by educational bureau. (02/07/2009).*

Based on the adult learners' questionnaire and the interview with educational personnel's the researcher can understand the existence of centers that completely ignored to use radio programs. And there was no center that utilizes the programs fully. Thus, these results seem, to show the absence of full use of programs when it is examined against the standard set by the TEMC. According to TEMC all adult basic education

centers expected to use 48 radio programs per one academic year for each subject (Agriculture, health and civic).

4.2 Quality of adult basic education radio program

To know the opinion of the respondents, adult learner, facilitator, adult basic education radio program producers, adult basic education supervisors at regional and wereda level about the different aspect of adult basic education radio program in adult basic education center the researcher prepared questionnaires and conduct interview.

To secure opinion of adult learners statements representing different aspects of the quality of Educational radio programs were presented. Each statement was written in five point rating scale (Strongly disagree, disagree, undecided, agree & strongly agree). The respondents were asked to put a check mark (√) whatever they thought it described their opinion. The result obtained from students' response in these respect is presented in table 4 & 5 accordingly, interview results are also indicated.

Table 4 Adult learners were asked to indicate there opinion on the mode of presentation (quality aspect) of adult basic education radio program with the following rating scale

1. Strongly disagrees. 2. Disagree. 3. Undecided. 4 agree. 5. Strongly agree.

N°	Statements	Frequency and percentage of respondents.(N= 300)					
		Strongly disagree	Disagree	Undecided	agree	Strongly agree	Chi-square
1	ABERP designed to encourage students' participation	92 (30.7%)	98 (32.7%)	32 (10.7)	40 (13.3%)	37 (12.5)	69.9
2	ABERP provide enough pause to respond for radio questions, to show maps or diagrams etc.	90 (30.0%)	95 (31.7%)	36 (12%)	48 (16.0%)	31 (10.0%)	61.4
3	ABERP are presented in different formats/ teaching method/ e.g drama, dialog etc.	102 (34.0%)	104 (34.7%)	22 (7.3%)	47 (15.7%)	25 (8.3%)	108.9
4	ABERP proceed from simple to complex	98 (32.7)	116 (38.7%)	8 (2.7%)	49 (16.3%)	28 (9.3%)	104.9
5	ABERP presented in an interesting manner	122 (40.7%)	94 (31.3%)	35 (11.7%)	33 (11%)	16 (5.3%)	138.1
6	ABERP fit with learner ability and age level	98 (32.7%)	116 (38.7%)	8 (2.7%)	49 (16.3%)	28 9.3%)	45.3
7	Speed of ABERP presenter coincide with the listening ability of adult learner	112 (37.3)	97 (32.3%)	29 (9.7%)	37 (12.3%)	25 (8.3)	113.1

p>0.05

ABERP=Adult Basic Education Radio Program

ABERP=Adult Basic Education Radio Program

As it is indicated in table 4 from the surveyed centers only 25.8% of adult learners have the opinion that adult basic education radio program are designed to encourage adult learners to participate during broadcasts. On the contrary, 10.2 %were unable to decide & the majority (63.4 %) considers that programs are not designed to encourage adult learners to participate during the broadcasting. In line with this, three fourth of the interviewed facilitators (14 in number) stated that

> *The formats of* adult basic education radio program *are teacher-centered type. The learners are passive during broadcasts. The communication is one way. Of course there are very few questions at the end of the broadcast that allow adult learners to participate orally. (Interview with facilitators 02/07/2001)*

Tigray educational media center program producer also believed that "adult basic education radio program are not interactive. It could have been improved if pilot broadcasts were made in few centers" (*28/06/2001*).

In the table above 23.2 % of respondents agreed that duration of pause in adult basic education radio program is enough whereas, most (61.7%) of the respondents depicted that the duration of pause was not enough to respond for oral questions and to involve physically in showing maps, chart and to answer radio questions. from this it is understandable that the short span of pause limited the engagement of adult learners in learning during broadcasts.

Adult learners also responded to whether combined radio teaching formats were used or not. As it is indicated on the same table, 24% of them portrayed that adult basic education radio program are presented

in varieties of radio instruction formats. Where as 7.3% were unable to decide, and most of them (68.7%) reported that a verity of radio formats were not employed. With regard to formats, interviews also confirmed that:

> *In majority of the programs single voice talk is the dominant format used to present adult basic education radio program In some cases, team teaching format by inviting experts is employed in combination with single voice talk. But it was done in a wrong manner. That is, instead of presenting the lesson by the actual voice of the experts program producers themselves act as an expert. Through time the adult learners & facilitators have understood that program production ends failed to invite actual experts in the field. (Interview with facilitators 02/07/2001)*

Thus, the situation may lead not to believe the radio programs. Whenever the value set by the adult learners & facilitators about radio education is eroded it is inevitable that its utilization became less effective.

In the above table majority of the respondent adult learners (71.4%) agreed that adult basic education radio program proceeds from simple to complex, where as 2.7 % were failed to decide & nearly one Fourth (26.5%) disagreed on the procedure of the programs proceeds from simple to complex.

Moreover, majority of adult learner (72%) responded that adult basic education radio program is not presented in an interesting manner. Whereas 11.7% didn't decide on the attractiveness of the presentation, 16.3% responded that the programs presented in an interesting way. The computed chi-square value in table 4 shows that there is significant difference between the observed frequencies and the expected ones.

Majority of adult learner (69.7%) responded negatively to the relationship between the speed of adult basic education radio program and the listening ability of the learners. In contrast to this, only 20.6% of adult learners' responded the speed of adult basic education radio program

coincides with the listening ability of adult learners. Almost all interviewed adult basic education facilitators (17 in number) indicated that the speed of adult basic education radio program presenter did not much with the listening ability of the learners. In contrast to facilitators responses, adult basic education coordinators and the TEMC head explained the appropriateness of adult basic education radio program presenter's speed to the listening ability of adult learners.

Most of adult learners (71.6%) responded adult basic education radio program did not fit with the learner's ability and age level. 25.8% of the adult learners responded positively about the issue under discussion. The interviewed facilitators indicated that "adult basic education radio program fits with some group of learners but not to others". They explained the reason for this to be the existence of different age groups with in one center. From the background response of adult learners, it is possible to understand this difference. Those age groups their age between 18 and 35 responded positively to this question. The computed chi squire show significant differences between the observed frequency and the expected ones.

Furthermore, other aspects of the quality of the program assessed in this study are the language and sound used in the programs. The results in these regard are found positive among the majority of respondents as it can be seen from the data in Table 5

Table 5 Adult learners were asked to indicate their opinion about the language, sound of presenter and sound effects (quality aspect) of adult basic education radio program with the following rating scale

1. Strongly disagrees. 2. Disagree. 3. Undecided. 4 agree. 5. Strongly agree.

No	Statements	Frequency and percentage of respondents. (N=280)					
		Strongly disagree	Disagree	Undecided	Agree	Strongly agree	Chi-square
1	The language used in ABERP is easy	33 (11%)	52 (17.3%)	27 (9%)	88 (29.3%)	100 (33.3%)	71.1
2	Sound of ABERP presenter is clear	41 (13.7%)	46 (15.3%)	1 (0.3%)	109 (36.3)	10 (34.3%)	138.1
3	ABERP use sound effects relevant to the lesson, e.g. animals and car sound	-	116 (38.7%)	2 (0.3%)	150 (50%)	33 (11%)	

p>0.05

ABERP=Adult Basic Education Radio Program

As it can see in Table 5 majority of the respondents 62.6 % agreed that the language used in adult basic education radio program is easy,

whereas 28.3 % of adult learners expressed their views that they disagree in the ease of the language used.

At the same time most of the respondent adult learners (61%) agreed that sound effects used in adult basic education radio program are relevant to the respondent learners. 31% of them disagree on the relevance of the sound effects to the lessons. The computed chi-square value in Table 5 shows that there is significant difference between the observed frequencies and the expected ones. With regard to the ease of the language, clarity of sound and appropriateness of the sound effect the data obtained through interview is reported here. To begin with, sound clarity can hinder the radio programs utilization.

> *The radio programs in Tigray region were produced from Mekele only. Due to this reason adult basic education radio program has lack of clarity to those places which found remote from the center than those who are found closer to the center. (Interview with* adult basic education *coordinators in Tigray region 26/06/ 2001)*

According to the educational media supervisor of Tigrai region "the adult basic education radio program has acquit problem in western Tigray region. An informant in remote area from transmitting center like western Tigray has complained that there is problem of clarity". (25/06/2001)

The majority of the informant facilitators reflected that most of adult basic education radio program are presented by attractive and appealing voice and/or sound. However the informant in media center explained that

> *Adult basic education radio program failed to be voiced by actual cast or character. For a boy or a girl character a man or a woman are assigned to read it. This distorts the reality and facilitators and adult learners may*

be dissatisfied to use the programs. (Interview with TEMC head 25/06/2001)

Concerning the appropriateness of sound effects, all of the informant facilitator explained that sound effects are good to motivate adult learners to listen attentively. But some of the sound effects in adult basic education radio program are confusing to the adult learners and facilitators themselves. These are because of the fact that sounds used were not familiar to both the facilitator and the adult learner. In this regards, TEMC head also assured that since sound effects were not synchronized with pictures and or photographs, it is inevitable that facilitators and adult learners would be confused by sound effects. The resource person added that "to minimize confusion, it is recommended show pictures first and then present sound effects". (Interview with TEMC head 25/06/2001)

Besides, some of the informant facilitators indicated that classical music used as a mental rest and pause to respond to oral question can initiate the learners for inappropriate behavior. Some respondents also said that it creates disciplinary problems that hinder attentive listening. TEMC head agreed upon this argument and stated that:

> *I feel it is one of the short comings in our educational radio programs. Bridge music could not be selected randomly. I suggest using bridge music that could support the radio lesson.* (25/06/2001)

Besides, the quality of adult basic education radio program is assessed from their significance for personal enhancement as improvement of critical thinking, support retention, teaches and informs better than the face-to-face one. Majority of the respondent adults positively rated these quality aspects. The results are indicated in Table 6.

Table 6 Adult learners were asked to indicate there opinion on the personal enhancement (quality aspect) of adult basic education radio program with the following rating scale

1. Strongly disagrees. 2. Disagree. 3. Undecided. 4 agree. 5. Strongly agree.

No	Statements	Frequency and percentage of respondents (N= 280)					
		Strongly disagrees	Disagree	Undecided	Agree	Strongly agree	Chi-square
1	ABERP improve critical thinking	33 (11%)	52 (17.3)	27 (9)	88 (29.3%)	100 (33.3%)	71.1
2	ABERP support retention, because they easily clarify doubts in regular class	41 (13.7%)	46 (15.3%)	1 (0.3%)	109 (36.3%)	103 (34.3%)	138.1
3	ABERP teaches better than the facilitate or	25 (8.3%)	47 (17.7%)	22 (7.3%)	104 (34.7%)	102 (34%)	108.9
4	I am better informed through radio then with our radio.	90 (30%)	95 (31.7%)	36 (12%)	48 (16%)	31 (10.3%)	61.4

p>0.05

ABERP=Adult Basic Education Radio Program

Table 6 shows that, most of the respondent adult learners (64.4 and 70.6 %) have shown the opinion that adult basic education radio program improve critical thinking and support retention respectively.

On the contrary 28.3 and 29 % gave on the opinion that the programs didn't

improve critical thinking & supported retention respectively. The rest (9%) and (1%) were unable to decide on the issues under discussion

Besides, (68.7 %) of the respondent adult learners have given the opinion that they were better informed through radio than with out radio. The computed chi-square value in Table 6 shows that there is significant difference between the observed frequencies and the expected one.

In the same way, most of the interviewed facilitators reflected that "adult basic education radio program can teach and inform better than facilitators". But one of the respondent facilitator in central zone argued that "Adult basic education radio program are repetitions, facilitator can do better than the radio program". Those who favor radio teaches and informs better than facilitator added that "radio forces careless facilitators to be ready and to prepare teaching materials". Whereas those who didn't favor that radio teaches and informs better than teachers blamed that:

> *"Radio can not order the teacher to bring teaching materials that are not available in the adult basic education center, such as maps and charts".* (Interview with facilitators in south Tigray 08/07/2001)

The last but not the least point, used to assess the quality of adult basic education radio program is its novelty. The question states that adult basic education radio program provide new ideas in addition to the points found in the adult education support books. The response of adult learner is summarized bellow.

Table 7 Adult learners were asked to indicate there opinion on novelty (quality aspect) of adult basic education radio program with the following rating scale

1. Strongly disagrees. 2. Disagree. 3. Undecided. 4 agree. 5. Strongly agree.

No	Statements	Frequency and percentage of respondents (N=280)					
		Strongly disagree	Disagree	Undecided	Agree	Strongly agree	Chi-square
1	ABERP provide new ideas in addition to the points found in the adult support material book	112 (37.3%)	97 (32.3%)	29 (9.7%)	37 (9.7%)	25 (8.3%)	113.1

p>0.05

ABERP=Adult Basic Education Radio Program

Table 7 shows that few (20.6 %) of adult learners in the surveyed adult basic education centers responded positively on the inclusion of new ideas in adult basic education radio program on the contrary, most of the respondent adult learners (67.3 %) said that programs are direct copies of the book that is prepared for adults. The computed chi-square value in Table 7 shows that there is significant difference between the observed frequencies and the expected ones.

The results obtained from interviews on the novelty are congruent with the adult learners' responses. Concerning the inclusion of novel ideas in the contents of adult basic education radio program most of the informants (facilitators, media experts and wereda adult basic education supervisors) reflected that "ideas are directly uplifted from the supporting book". This, according to the respondents, is repetition and time killing.

Tigray educational media center head, program producers and team leaders also agreed that:

> *Novel ideas or examples that support* adult basic education *are not included in most of adult basic education radio program. (26/06/2001)*

According to TEMC head, radio contents are selected based on the following criteria

1. Contents that are taught in the same week with the facilitators
2. Suitability of contents to be presented through radio
3. Contents that can be used for causal or non –targeted listeners.

"But due to the fact that scripts were written in short period of time, pilot-broadcasts were not conducted. As result, new ideas that support the program are minimal" (interview with program production team leader *26/06/2001).* This can then hinder the effective use of radio for adult basic education. Facilitators also indicated that radio and facilitators didn't teach the same content at the same week.

In all the above and in the rest of tables the percentage of respondents under the "undecided" category seems to be big. This is because of the presence of respondents in adult basic education centers who didn't attend radio programs mainly because of the mismatch of broadcast time with their interest.

In general there is a gap in the quality of the programs in many aspects and this could minimize the effective utilization of radio in adult basic education.

4.3 STUDENTS' INTEREST

Table 8 Adult learners were asked to indicate there opinion about their interest toward adult basic education radio program with the following rating scale

1. Strongly disagrees. 2. Disagree. 3. Undecided. 4 agree. 5. Strongly agree.

No	Statements	Frequency and percentage of respondents (N=280					
		Strongly disagree	Disagree	Undecided	Agree	Strongly agree	Chi-square
1	I would prefer to continue ABE with radio support even if I had the choice not to participate in them	35 (11.7%)	60 (20%)	35 (11.7%)	70 (23.3%)	100 (33.3%)	49.1
2	Adult learner participate actively in ABERP	92 (20.7)	98 (32.7)	32 (10.7%)	40 (13.3%)	37 (12.3%)	69.9
3	ABERP transmit in appropriate time with the interest of the majority of adult learners	108 (36%)	104 (34.7%)	18 (6%)	27 (9%)	43 (14.3%)	123
4	ABERP is coincided with the need and interest of the learners	71 (23.7%)	73 (24.3%)	14 (4.7%)	65 (21.7%)	77 (25.7%)	45.3

p>0.05

ABERP=Adult Basic Education Radio Program

Most of the respondent adult learners (56%) positively rated to show their preference to learn with radio than without it (see table 8)

As far as the interest of the learners towards adult basic education radio program is concerned, all of the informants, facilitators and wereda supervisors asserted that the interest of adult learners towards adult basic education radio program is very high. In line with this, most of the supervisor confirmed that "the adult learners remind the radio period for the facilitator". The computed chi- square value in table 8 shows that there is significance difference between the observed frequencies and the expected ones.

In the above table only 25.6 and 23.3% of adult learners responded positively about the participation of adult learner for adult basic education radio program and the appropriateness of the time in which adult basic education radio program broadcasted respectively. In contrast to this the majority (63.4%) and (70.7%) adult learners responded that they do not participate actively and the time of the broadcast is not appropriate respectively. In line with this these interviewed facilitators agreed that "adult learners do not actively participate during the broadcast".

> *In Tigray region* adult basic education *broadcasted early in the morning and late in the afternoon. The region believed that the time is conducive for most of the adult learners. In addition to this the program repeated three times per week. One of them is on Saturday; as a result, the learners can get a chance to attend the missed program. So the time of broadcast is not considered as a serious problem (Interview with TEMC head 26/06/2001).*

With the exception of one facilitator and two adult basic education coordinators in eastern and central Tigray respectively all facilitators and wereda adult basic education coordinators share this idea. The lack of active participation of adult learner in adult basic education radio

head, regional education bureau and wereda education office personnel's. The adult learners' responses are follows.

Table 9 Adult learners were asked to indicate there opinion about technical factors on the utilization of adult basic education radio program with the following rating scale

1. Strongly disagrees. 2. Disagree. 3. Undecided. 4 agree. 5. Strongly agree.

No	Statements	Frequency and percentage of respondents (N=280					
		Strongly disagree	Disagree	Undecided	Agree	Strongly agree	Chi-square
1	ABERP broadcast is clear to hear the message	103 (34.3%)	109 (36.3%)	1 (0.3%)	46 (15.3%)	41 (13.7%)	64.2

p>0.05

ABERP=Adult Basic Education Radio Program

The frequency distribution from table 9 shows that the combined total proportion of adult learner who responded positively as to the audibility of radio broadcasts are 29 %. On the contrary majority (70.6% of adult learner indicated that the radio broadcasts are not clear to listen to adult basic education radio program.

The computed chi-square value in table 9 shows that there are significant difference among the observed frequencies and expected ones.

Concerning audibility of broadcasts, out of the interviewed facilitators only a single person was able to tell the wave line of the educational radio station from which they received radio signals. The rest fund the signal by trial and error. Due to this the audibility diminishes. In relation to this TEMC head explains that:

> *In central zone,* adult basic education radio program is *affected by the overlapping signal from the voice of Eritrean radio station. This is*

critical, particularly from 8; 00AM to9:00 AM in the morning. In Tigray region adult basic education radio program *broadcasted early in the morning and late afternoon. In addition to this due to distance, physical features and the long service of the transmitter, Mekele radio station is less audible for central and some part of Eastern Tigray. (26/06/2001)*

The Regional Education Bureau Head also asserted the less audibility of educational radio stations by stating that:

> *Transmitters and studio equipments are old, outdated. Technology that is used for educational media centers in our region is analogue. Quality of broadcast would be received from digital technology. As result educational radio broadcasts are less audible. (26/06/2001)*

In the same way, technical team leader at Mekele realizes the presence of broadcast quality problem. The reasons he gave for unclear sound broadcasted from stations include:

> *"Professional tapes are old, no shelf that protects reels from dust particles, and exposure of the transmitter for dust due to the location of the radio station at the main road". (26/06/2001)*

The audibility problem according to one of the respondent facilitator in eastern Tigray makes learners restless. And he added that:

> *"Radio broadcast in Tigray is full of harsh sounds. When I used radio I observed adults' turning their face to the left or right side to talk with their colleagues". (09/07/2001)*

According to TEMC head they used 10kw transmitter for formal educational radio broadcast and 1kw is used for adult education, diploma distance education for primary school teachers and entertainment programs the reason that they didn't use 10kw transmitter for adult basic education is that its electric consumption is high. It shows Tigray educational bureau give less attention to use radio in adult basic education. (Interview with TEMC head *26/06/2001*)

4.4.2 Antenna Installation

Antenna is used to improve the audibility of radio broadcast. However, it is not installed in all the surveyed centers. The reason for this, according to TEMC head is the lack of budget to install antenna in all adult basic education centers.

4.4.3 Maintenance services

Most of the surveyed wereda adult basic education supervisors and facilitators indicate that TEMC are responsible for radio maintenance. Wereda education office heads and non formal education desk heads argued that wereda collected radios from centers and call technical experts from media centers. However, due to the lack of spare parts many radios including solar radios are not maintained. Since the maintenance service from media centers is not satisfactory, some adult basic education centers tried to get maintenance from private shops and pay for the service.

Technical team leaders at Mekele were asked to comment on the provision of technical services. All of them asserted that, "due to lack of spare parts, mobile shop, budget and technical expertise providing satisfactory maintenance services has become difficult for most of adult basic education centers". According to TEMC head, "due to failure of the transmitter currently adult basic education radio program does not effectively broadcast through out Tigray since November, 2001. Due to lack of budget and technical expertise, it could not be repaired until now. By this time, the regional education bureau is prepared to use the transmitter of formal educational radio program for adult basic education.

In sum, it is easy to understand that technical support in surveyed areas is not satisfactory. It may then impede effective radio utilization in adult basic education.

4.4 Commitment of Educational Personnel

On the questionnaire, adult learners were asked to reflect their opinion on the commitment of facilitators and wereda adult basic education supervisors in accomplishing and facilitating radio utilization. Nine items were included in the adult learners' questionnaire in order to understand the commitment of facilitators and supervisors to use radio in adult basic education. Each of these items asked adult learners to check one of the five alternatives, indicating the degree to which each of them agrees with the statements of commitment. The alternatives include completely disagree, disagree, undecided agree completely agree. The Commitment of educational personnel in the present study is seen from readiness, cooperation and attention paid to perform the roles assigned to each of them so as to facilitate proper radio utilization in adult basic education. Based on this, adult learners were asked to rate whether or not facilitators and wereda supervisors are committed to perform their roles properly. Table 10 &11 show detail descriptions

4.5.1 Commitment of facilitators in performing radio activities

Table10 Adult learners were asked to indicate there opinion about the commitment of facilitators in adult basic education radio program with the following rating scale

1. Strongly disagrees. 2. Disagree. 3. Undecided. 4 agree. 5. Strongly agree.

No	Statements	Frequency and percentage of respondents (N=280					
		Strongly disagree	Disagree	Undecided	Agree	Strongly agree	Chi-square
1	ABE facilitators provided opportunities to discuss about the radio lesson before and after broadcast.	99 (33%)	114 (38%)	26 (8.7%)	27 (7%)	34 (11.3%)	122.6
2	ABE facilitators didn't waste time in searching the broadcast wave line	34 (11.3%)	31 (10.7%)	21 (7%)	114 (38%)	100 (33.3%)	112.6
3	ABE facilitator summarize the radio lesson after the broadcast	81 (27%)	114 (38%)	21 (7%)	38 (12.7%)	46 (13.3%)	92.6
4	ABE facilitators is committed to deliver radio programs one per week	70 (23.3%)	35 (11.7%)	35 (11.7%)	60 (20%)	100 (33.3%)	49.1
5	ABE facilitator encourages us to respond for radio questions	111 (37%)	89 (29.7%)	16 (5.3%)	41 (13.7%)	43 (14.3%)	100.4
6	ABE facilitator are committed to use additional teaching materials that support radio programs. e.g. map, chart	71 (23.7%)	73 (24.3%)	14 (4.7%)	65 (21.7%)	77 (25.7%)	45.3
7	ABE facilitators are effective in the utilization of radio program	101 (33.7%)	89 (28.7%)	20 (6.7%)	50 (16.7%)	43 (14.3%)	72.4

p>0.05

ABERP=Adult Basic Education Radio Program

In Table 10 the frequency distribution confirms that the total amount of the respondents who expressed their opinion that adult basic education facilitators were not ready to give opportunity for adult learners to discuss about radio lesson before and after broadcast, and didn't summarize lessons after broadcast, amounts 71% ,and 65%, respectively.

In the same vein majority of the respondent adult learners 71.3 % asserted that facilitators waste time in searching the broadcast wave line. This is also asserted during the interviews with adult basic education supervisors and facilitators. Facilitator didn't know where the wave line of Mekele educational radio station in the region. Identifying broadcast wave line didn't require training; instead committed facilitator can easily find it. Actually the researcher did not have the opportunity to conduct observation because there was no broadcast when the researcher conducts this study due to the failure of transmitter.

The majority of adult learner (56. 6 %) and (66.7 %) of respondents responded negatively on the commitment of facilitators to deliver radio program once per week and encourage adult learners to respond for radio questions respectively. From this one can understand that there is a gap of commitment on the discussed issues.

Half of the respondents (52 %) responded that the facilitators are not committed to use additional teaching materials. The computed chi-square for all items indicates the significant difference between the observed frequencies and the expected ones.

The finding from the interviews with facilitators indicated that almost all of them are willing to continue to use radio. But very few facilitators in eastern Tigray responded negatively. The reason for this according to facilitators' is "the facilitator can make better instruction than the radio can do, and that it is time killing". The researcher witnessed such

facilitator during the field work who was dictating old lecture notes for the adults.

Based on the interviews most facilitators are not committed to prepare radio lesson plan. The reason for this according to them is that radio teachers guide can be used as lesson plan. It is easy for one to understand the gap of commitment is wide in planning the radio lesson.

As indicated in Table 10, 62.3 % of adult learners responded that adult basic education facilitators are not effective in the utilization of radio program and 6.7 % & 31% fail to decide and agree the effective utilization of radio program by adult basic education facilitators respectively. Most of the interviewed facilitators in central and some part of eastern Tigray zone indicate that

> *Budget constraint to buy dry cells and less concern from wereda educational bureaus hinder the effective utilization of adult basic education radio program (09-12/07/2001)*

Educational bureau heads of all surveyed weredas turn the problem of effective utilization of radio in adult basic education to regional educational bureau. TEB head clearly explains that "the attention of government by now is to expand formal schooling. Non Formal Education left to wereda educational bureaus and non-governmental organizations".

4.5.2 Commitment of Adult Basic Education Coordinator in Performing Radio Activities

Table 11 Adult learners were asked to indicate there opinion about the commitment of adult basic education coordinators in radio activities with the following rating scale

1. Strongly disagrees. 2. Disagree. 3. Undecided. 4 agree. 5. Strongly agree.

No	Statements	Frequency and percentage of respondents (N=280					
		Strongly disagree	Disagree	Undecided	Agree	Strongly agree	Chi-square
1	ABE coordinator is committed to supervise the provision of radio program	96 (32%)	117 (39%)	11 (3.6%)	44 (14.7%)	32 (10.7%)	219
2	ABE coordinator shows readiness to safeguard radios from theft	108 (36%)	104 (34.7%)	18 (6%)	27 (9%)	43 (14.3%)	123

p>0.05

ABERP=Adult Basic Education Radio Program

The majority of adult learners (71and 70.7) % negatively rated the commitment of adult basic education coordinators to provide regular supervision and readiness to safeguard radio from theft, respectively. The computed chi- square for all items indicates the significant difference between the observed frequencies and the expected ones.

Interview results also indicate that committed coordinators allocate money for dry cells and radio sets, follow up whether radio lessons are used or not and give advice for facilitators to use radios. However, less

committed coordinators and facilitators blame simply on some one else. They didn't utilize the available resources to facilitate the use of radio programs for adults. For instance most of the adult basic education centers in central and eastern zone blame on budget constraints to buy dry cell while electricity is available in adult basic education center. They sometimes happened to buy dry cells. However, it was easy to install sockets in classrooms or install wire up to the tree shade to use electric power. This is not to advocate that listening under the shade of a tree is useful. It seems that most of the adult basic education coordinators are less committed to take time and think the easiest, less costly and sustainable way of utilizing the available resources.

4.5.3 Commitment of Educational Personnel at Regional Bureau, Wereda and Media Center in Performing Radio Activities

Adult basic education facilitators and coordinators were asked to comment on the commitment of educational personnel at top levels (regional bureau, weredas and media centers). Most of the informants indicated that:

> *Educational personnel at bureau, media center and wereda education offices are less committed to facilitate radio utilization. Instead they considered it as additional work. (Interview with facilitators of* Adult basic education *coordinators. 29/06-09/07/2001)*

Commitment can be expressed by their readiness, willingness and attention given to radio utilization. The aforementioned educational institutions are negligent to facilitate the utilization of technology under discussion. The supervision, inspection, budget allotment to facilitate radio utilization seems to be completely ignored in the surveyed adult basic education centers. They didn't establish feed back system. They also didn't ask whether radio programs are utilized or not. All are indicators of lesser commitments.

Wereda education office personnel also agreed that the commitment of educational media center at regional level is minimal. According to the respondents the regional bureau and media center didn't pay attention for radio utilization except broadcasting in the programs. There are consultation meetings twice a year and quarterly report evaluation meetings set by the education bureau, but issues in radio education in adult basic education were not considered at these meetings. The communication among bureau, media centers and wereda seems to be loose. In this regard, one of the wereda education office heads in central zone asserted:

> *There is a gap between regional education bureau, media centers and wereda education office regarding radio utilization in* Adult basic education. *What we facilitate is what we are asked to report from the bureau. The bureau pays attention to improve the number of students in formal education. (Interview with Werilek Educational Bureau head 17/06/2001)*

The resource person also confirmed that TEMC should arrange conditions to work in coordination and integration with the regional educational bureau conduct research and present during meetings arranged by the bureau. This can then attract attention and improve commitments.

The surveyed educational media program production team leaders and producers also confirmed that the attention, readiness and willingness of educational bureau regarding radio utilization are less. The most common argument according to the respondents is that higher bodies at regional bureau didn't allocate enough budgets; there is no moral incentive for media experts. Salaries assigned for media experts are lesser than other experts in the region and the same experts in the other regions. TEMC head also agreed with comments indicated by program production team leader and program producers. In this regard he explains;

We didn't give attention to use educational radio to attain the objectives of educational policy. It may be due to lack of awareness in the technology. The other basic problem towards commitment to facilitate radio utilization in adult basic education *is related to the attention given to organizational structure of the media centers. Their carrier structure is not attractive to the experts to stay in the organization. As a result, there is higher mobility of experts from the media center to other sectors even with in the region. Due to this, the region loses trained, well acquainted experts in the media center. Without stabilized experts, I think it is not possible to bring basic changes designed to be obtained through the medium (TEMC head 02/06/09).*

Moreover, the education bureau head asserted that, experts in the media are not able to integrate themselves with the education bureau. Rather consider them selves as detached bodies.' According to the resource person if media centers are able to bring new things that convince the regional educational bureau they would get positive response. He also added that the program producers have to evaluate the scripts whether they are standard , support the facilitator and the program, and synchronized with non formal education system or not. Of course there is some trial in this regard but it doesn't satisfy the critical points I mentioned (continuity, integration and organization). As a whole the resource person confirmed that the media centers need additional budgets to realize their objectives.

4.6 Radio Support Service

4.6.1 Radio Sets and Power Supply

Adult learners were asked to indicate whether or not shortage of radio sets, the reception quality of the radios and shortage of power (dry cell and electricity) hinder the effectiveness of radio utilization. Table 12 shows the results.

Table 12 Adult learners were asked to indicate there opinion about radio support service in adult basic education radio program with the following rating scale

1. Strongly disagrees. 2. Disagree. 3. Undecided. 4 agree. 5. Strongly agree.

No	Statements	Frequency and percentage of respondents (N=280					
		Strongly disagree	Disagree	Undecided	Agree	Strongly agree	Chi-square
1	Shortage of radio in our center hinders to listen ABERP	101 (33.7%)	86 (28.7%)	20 (6.7%)	50 (16.7%)	43 (14.3%)	72.4
2	Shortage of dry cell or power supply in our center hinders to use radio programs	111 (37%)	89 (29.7%)	16 (5.3%)	41 (13.7%)	43 (14.3%)	100.4
3	Reception quality of radio in my center is low	99 (33%)	114 (38%)	26 (8.7%)	27 (9%)	34 (11.3%)	122.6

p>0.05

ABERP=Adult Basic Education Radio Program

The majority, 62.4 % of respondents in the surveyed centers in the region agreed that shortage of radio sets hindered radio utilization and 38 % of the respondents didn't agree on shortage of radio sets. On the other hand, majority of the respondents 66.7 % rated that the reception quality

of radio sets is impeding radio utilization; whereas 28 % responded that quality of reception is not a problem in their center. As far as power is concerned, majority 71 % revealed that absence of electricity or dry cell hinders radio utilization. In contrast to this, 20.3 % of the respondents didn't agree in the shortage of power supply.

The frequency of respondents (adult learners) who indicated that the radio support service impedes radio utilization exceeds the frequency of respondents who responded against the question. This indicates the presence of a problem. As has been moved in Table 12 computed chi-square for all items is significantly different from the expected ones.

As far as radio support (radio sets, power supply, teachers' guide, utilization training and participation in radio content selection) is concerned adult basic education coordinators, facilitators, wereda educational offices, regional education bureau and media center heads and experts were interviewed.

Most of adult basic education coordinators in surveyed centers of the region commented that the availability of radio sets in their center is sufficient. But facilitators asserted the existence of acute shortage of radio seat hinder utilization of educational radio in adult basic education. The reason for the difference between the responses of the coordinators and the facilitators may be due to the fact that the coordinator in most of the centers are less committed to supervise the regular provision of radio programs (see table 11). Both coordinator and facilitators asserted that most of the radio sets available are non-functional, and some are of poor reception quality due to long service.

All surveyed centers have at least one tape recorder. But rural schools are not in favor of using it due to its higher dry cell battery consumption. In this regard, one of wereda education office head in central zone asserted that:

Adult centers asked the wereda education offices to change tape recorders by small radios that can consume fewer dry cells than which they have.(15/07/2001)

From this it is also possible to understand that power supply (dry cell) hinders radio utilization in the region.

Interview results also indicated that most weredas do not allocate finance to buy radios for centers, except one of the weredas in central zone. The reason for not allocating budget according to the respondents is a matter of priority. The Tigray national regional state educational leadership , organization, social participation and finance guide document (2004;33) indicated that one of the roles of wereda education offices is to allocate finance for purchasing radios, TV sets and dry cell and maintenance. But the present research identified the opposite; i.e. weredas assign centers to do so. This seems to show that less attention is given to the technology and low commitment of the respective bodies to use educational radio in adult basic education. In this line, one of the wereda education office heads argued that: "since it is possible to run adult basic education activities without the radio support, I found it unadvisable to prioritize it in budget allocation". (18/06/2001)

Regional Educational bureau heads, and media centers also asserted that there is shortage of radios in centers. According to them adult basic education centers are responsible to buy radio sets. In this regard TEMC explains;

> *Radio is a cheap electronics that every adult education center can buy. Now a day the society is building schools. For such a society buying radio can not be a problem.* Adult basic education *co-coordinator must take the responsibility for the society to contribute money to buy radio set and other necessary material to facilitate* adult basic education. *(TEMC head 02/06/09).*

4.6.2 Radio Teachers' Guide

Radio teachers' guide was found to be an impeding factor of radio utilization in many surveyed centers. Majority of wereda education office heads and non formal education desk heads revealed that "the distribution of radio teachers' guide is not fair". adult basic education coordinators and facilitators also reflected the same idea. At the same time, media center heads and program production team leader agreed on the shortage of radio facilitators guides. The reasons according to TEMC head is that:

> *When facilitators' transfer from one wereda to the other they usually do not give back radio facilitators' guides to the center and wereda education offices do not have statistical records that can help to redistribute from centers with extra copies to centers that do not have a copy." (TEMC head 02/06/09).*

Center facilitators that use adult basic education radio program without radio facilitators' guide explained that they use only 15 minutes radio broadcast with out consideration of pre and post broadcast activities. Shortage of radio teacher's guide may cause psychological problems. The facilitator may dislike the radio programs for they portray him/ her as he/she is not a committed facilitator.

On the other hand, one of the weredas in central zone tried to redistribute radio facilitator's guide from one center to the other based on the information that show distributions. This can indicate how far this wereda is committed to facilitate radio programs utilization.

4.6.3 Radio Utilization Training

Facilitators, adult basic education coordinators were interviewed to comment on their training conditions at college and/or teacher training institutions and in-service training on the radio utilization. Out of ten informant facilitators with long service (>10 years) most of them (8 in

number) asserted that they have received in-service trainings before 7 years. The rest facilitators 10 in number whose service years is less than 10years reported that they didn't receive radio utilization training at both college and in-service training. Concerning the training of coordinator out of eight interviewed respondents, five of them reflected that they have taken training for radio utilization at college during directors' summer course and in-service training before four year, on IRI (interactive radio instruction) English program. Others are not exposed to the radio utilization training. Thus it is quite clear that facilitators use radio broadcast in adult basic education based on trial and error basis.

Training of program producers and wereda education office heads and non formal education desk heads is also assessed. Due to restructuring of educational organizations, most of wereda education office heads and non formal education desk heads do not have radio utilization training. When the capacity of program producers is built through continuous training it is inevitable that the quality of programs produced can be improved, the capacity of producers to retrain facilitator, coordinator and other concerned educational sector personnel will be strengthened. But most of the program producers have one month training before 6years and more than that (interview with program producers 28/06/2001). This is also indicated by educational bureau head as follows;

> *Program producers have no external exposures and continuous training that would help them to accomplish their tasks and facilitate good conditions for radio utilization in adult basic education. Added to this most of the training conducted to facilitator, coordinator and producers is in combination with formal education radio program. The region did not give attention to the training of adult basic education facilitators for the effective utilization of radio in adult basic education.* (28/06/2001)

4.6.4 Participation in Radio Content Selection

All of the interviewed facilitator and adult basic education coordinator, except two in southern Tigray, reported that they were not invited to participate during radio content selection for adult basic education. The program producers also indicated that only few facilitators in southern Tigray were invited during radio content selection for adult basic education. In sum, the results of the finding from the facilitators' questionnaire and interviews with different educational personnel confirmed that the radio support service in surveyed areas is not satisfactory.

CHAPTER FIVE

5. Summary, Conclusions, and Recommendations

5.1 Summary of the Introduction and Research Methods

Radio is a powerful instrument to educational purposes. However, the full potential of this tool can only be realized if the source end and the receiving end understand precisely the best way of using it. The emphasis of this study was whether or not adult basic education radio program at adult basic education centers in Tigray region are effectively utilized to attain the intended objectives. More explicitly, this study was undertaken for the following specific purposes: to analyze the quality of adult basic education radio program, to assess the extent of technical services provided for radio utilization, to examine commitment of educational personnel at all levels in facilitating radio utilization in adult basic education to find out the condition of radio support service (radio set, facilitators guide, training, participation in planning etc) and to assess the impact of interest of the learners for the effective radio programs utilization. In accordance with these objectives the following basic questions were raised:

1. Is there full use of adult basic education radio program in Tigray region?
2. What are the major opportunities/threats of using radio broadcast for adult basic education in Tigray region?
3. What are the conditions that influence utilization of adult basic education radio program in Tigray region?

A multi method research approach study design was used as the basic approach of the present investigation. Both quantitative and qualitative data collection instruments were used to obtain adequate information. In the selection of sample zones (southern Tigray, central Tigray and eastern Tigray), Weredas, adult learning centers and adult learner criterion based purposive sampling technique was employed. To avoid gender bias an equal chance for both sexes was also given. Consequently 300 adult learners were

made to fill in questionnaires. Besides thirty three school personnel (adult basic education co-coordinators, facilitators), wereda education office, educational media centers head and educational bureau personnel at regional level were interviewed to fill the gap of information.

5.2 Number of Adult Basic Education Radio Program Used

Adult learners' questionnaire indicated that the number of Adult Basic Education Radio Program used vary from Wereda to Wereda in surveyed areas. In some Weredas programs were not used at all, in most adult basic education centers programs were used partially, and in any of the adult basic education centers was no full utilization of the programs. Congruent to this interview results of facilitators and coordinators most of adult basic education centers indicated that half of south east Tigray zone did not completely utilize adult basic education radio program. Some of the reasons explained by respondents were less attention given by TEMC and Weredas education offices and failure in quality of the programs due to a number of reasons as discussed in table three. Besides as informants indicated, due to different reasons all adult basic education centers are not used fully. Moreover there are also few disadvantaged centers in which they can not use radio broadcasts due to their location in depression areas. The regions did not prepared other alternatives for such disadvantaged areas.

5.3 Impediments in Utilizing of Adult Basic Education Radio Program

5.3.1 Quality of adult basic education radio program

Seen from the perspective of mode of presentations, it becomes clear that radio formats were not designed to engage adult learners. In learning enough pauses were not assigned for adults to respond. Interview results also agreed on these issues and added that actual experts in a given content

area were not invited to give professional explanations. Instead the program producers acted as if they were actual experts on a given lesson.

What is interesting is that, the radio teaching format that creates discussion between the radio teacher and radio learners was found to be used as a good model of creating learner centered teaching method. But the facilitators do not apply the instructional method used by radio teachers. In the same way when the quality of the program is assessed from the personal enhancement perspective, respondents positively rated that adult basic education radio program were important to improve critical thinking, support retention and to teach better than adult center facilitator's. When novelty as quality aspect is considered, most of the programs were directly copied from the support books. Due to this, facilitators considered the programs as repetition and time killing. Regarding the quality aspect of the radio programs mainly less interactive nature, insufficient pause, and direct repetition of the support books hindered the facilitator to use the radio lessons properly and regularly.

5.3.2 Students' Interest

The finding revealed that most of the adult learners (84%), in formant facilitators and adult basic education coordinators agreed that adults prefer to learn with radio. Thus, the interest of the learners is not an impeding factor for utilization of radio programs.

5.3.3 Technical Factors

The highest proportion of facilitators and adult basic education coordinators in surveyed areas expressed dissatisfaction with the audibility of the radio broadcast. The reasons for this problem were: the out-datedness of transmitters and other machines due to long years of service and other different reasons; lack of shelves to protect reel from dusts, long service of the reel for a given program, failure to tune the exact wave line promptly in

the part of the facilitators and failure of weredas to install antennas in centers.

For effective use of radio in education, repair and maintenance must be undertaken on time (Thomas, 2001). But media centers were not able to provide the service for the schools due to lack of spare parts and technical staff. As a result technical factors contributed for less radio utilization in the surveyed areas.

5.3.4 Commitment of Personnel

Commitment of personnel at both ends (producer and user) was not satisfactory. Results from questionnaire and interview revealed that facilitator's waste radio periods in searching the wave line, pre and post broadcasts time were not used effectively, additional teaching materials not used and facilitators are not committed to deliver programs once per week. This is due to less attention, readiness and focus towards using educational radio in adult basic education

The interview result revealed that the source of failure of commitment was the regional education bureau. Less attention paid for the media from the regional bureau caused the focus of the weredas to be low. This less attention of weredas again caused the adult basic education coordinators to be less committed to accomplish their tasks concerning educational radio in adult basic education centers. However, facilitators and adult basic education coordinators commitment in terms of their willingness to continue working with radio is high. This can indicate that there is a good base for the future utilization of radio programs effectively if the attention of regional bureau towards the media is improved.

5.3.5 Radio Support Service

For an efficient education, all the equipment to be used for radio broadcasts must be available in adult basic education centers (Neil, 1981). Seen from

the perspective of radio sets and power supply adult learners response from questionnaire and interviewed facilitators asserted that shortage of radios, power supply and less reception quality of the radios determine the utilization of adult basic education radio program.

The distribution of adult basic education radio facilitators' guide was not fair in surveyed centers. This may be one of the reasons that facilitators fell to prepare radio lesson plan.

It is acknowledged in educational mass media that for a good standard of efficiency in technological operation, programming, utilization of broadcast and evaluation the training of media manpower at different levels is vital (Asresse, 1988). But most of adult basic education facilitators, wereda education heads and experts in Tigray region were not exposed for radio utilization training. Along with this, most program producers were trained only for a month before six or seven years ago. Failure of the quality of radio programs in terns of interactivity, pause, uplifting the text can be attributed to lack of well trained producers.

Moreover, almost all teachers and adult basic education coordinators have never been involved in radio content selections for adults, this indicates lack of attention of the media centers and regional education bureau in involving the users during planning and producing the programs. As a whole, the gap that existed in the radio support service was also found to impede effective radio utilization.

5.4 Conclusions

From the findings of this study, the following conclusions can be drawn:

1. with varying degree, the conditions that contribute to the obstacle for proper utilization of adult basic education radio program in adult basic education center in Tigray region in clued the following:

A. quality aspect

Adult learners benefit when they are engaged in learning. But the present research identified that the adult basic education radio program were one way communication in which learners are passive listeners. At the same time the duration of pause was not enough for participation. Besides, the objective of radio programs is to enrich the program but not to repeat the support books. But the present adult basic education radio programs are directly copied from the support books.

B. technical factors

Since hearing is crucial during learning from radio clear audibility is essential. Programs that are not heard clearly develop attention deficit of the learners and facilitators towards the broadcast. But broadcasts in most parts of the region are less audible. Antenna can improve the audibility of the broadcast from distance radio stations. But almost all adult basic education canters failed to install it. Maintenance service provided for centers is not satisfactory. The shortage of functioning radios hinders to use programs.

C. Commitment of Educational Personnel

To broadcast quality programs and to utilize it effectively, readiness, willingness, attention and cooperation at both ends are essential. However, the finding in this study depicted that commitment of educational personnel at all levels was not satisfactory. The commitment of the regional education bureau and media centers (producing end) is found not to go beyond broadcasting the programs. The commitment of the user ends (centers) doesn't exceed more than switch on the radio in which pre and post-broadcast time doesn't have attention. In sum, due to less attention and readiness from the regional educational bureau, media center, weredas, educational radio in Tigray region is under utilized.

D. Radio Support Service

The highest proportion of adult learners and facilitators expressed dissatisfaction with supply and quality of receivers and power. Shortage of even one radio can hinder the regular use of the radio programs. At the same time due to poor quality radio reception, radio periods are wasted without benefit.

Unfair distribution of adult basic education radio facilitator's guide was also the impeding factor of adult basic education radio program in many of the adult basic education centers in the region. Furthermore, radio teaching without guide is wastage of time. Besides, facilitators that use the programs without guides ignore to use the radio programs.

One of the reasons for the failure of quality of the radio programs in terms of engaging adult learners in learning, providing enough pauses and presenting noble ideas is attributed to lack of training.

Participation of facilitators in radio content selection helps for the inclusion of contents that could be important for the learners and that the facilitators also feel of sense of ownership on the programs and increase willingness and readiness to use the programs effectively. However, facilitators' participation in radio content selection is almost none existent in all adult basic education canters in the region.

2. From the context of interest of the learners in using the media it is found that adult learners were highly interested to learn through radio. Facilitators and adult basic education coordinators also showed willingness to continue working with radio. Hence, strengthening such needs is vital. To do so, if due attention from regional educational bureau towards educational radio in adult basic education is paid, it could pave

the way to minimize the problems and thus the media can be effectively used.

5.5 Recommendations

A. Quality of the program

I. To see that adult basic education radio program is effectively utilized, particular emphasis should be given to produce interactive programs, and give enough pauses for the learners to respond orally and physically.

II. Since radio is expected to include novel ideas in supporting the programs that the facilitators can not do, adult basic education radio program should include additional explanations and examples that are not found in the supporting books to avoid a mere repetition.

III. The producer, being the overall in charge of program production, should be thoroughly trained to build his/her capacity to produce quality radio programs for adults. To minimize quality problems sample programs should be pre tested (pilot broadcast) before the actual broadcast in the areas where media centers in the region are found.

B. Technical Factors

I. Shelves that protect reel (recorded programs) in the radio stations should be made available. Centers are legally allowed to use their internal incomes, but not educational media centers. Therefore, since educational media centers serve hundreds of centers in the transmitter coverage area it should strive to convince the regional planning and finance bureau to use internal incomes to purchase shelves and fuel for the generator when electric power fails.

II. Antenna installation at adult basic education centers requires simple technical know how and small finance that could be afforded by weredas.

Therefore Weredas Should install antennas for adult basic education centers.

III. To alleviate shortage of technical staff the media centers should recruit additional technicians.

C. Commitment of Personnel

I. Lacks of attention and readiness is one of the reasons for failure of full and proper utilization and ignorance of some adult basic education centers to use the programs. To improve commitment of educational bureau, wereda education offices and adult basic education coordinators towards effective radio utilization, awareness should be created by the media centers. To do so, media centers should plan ahead to use consultation meeting.

II. Media centers need to integrate themselves with regional educational bureau; wereda education offices establish regular follow-up mechanisms to improve radio programs utilization in adult basic education.

D. Radio Support Service

I. Radio committee (club) should be established at the center to create awareness and income generating activities to buy radio sets and batteries etc.

II. To help the centers in purchasing quality radios that can receive weak signals specifications should be prepared by the media centers.

III. Producers should be able to obtain ideas from facilitators before writing programs through questionnaire from the cluster centers.

IV. Wereda education offices should survey the distribution of facilitators guide to re distribute extra copies for those centers with shortage of it. Or should copy it to satisfy the needs of the disadvantaged center.

V. Media centers need to organize training seminars. Program production and technical teams must create net works and request both national and external institutions to sponsor seminars and training programs.

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Appendixes

Appendix I

ADDIS ABABA UNIVERSITY

SCHOOL OF GRADUATE STUDIES

COLLEGE OF EDUCATION

DEPARTMENT OF CURRICULUM AND INSTRUCTION

ADULT AND LIFE LONG LEARNING UNIT

Questionnaire for adult learners

The purpose of this questionnaire is to learn about how radio is used in adult learning center and assess the extent of utilization of educational radio to facilitate adult basic education in Tigray region and identify impediment for effective utilization. It is believed that you are the right person who knows the issue and who can give relevant information. You are therefore, kindly requested to provide genuine information for the fact that the success of this study rests upon your responses. Your suggestions and opinion will definitely be keeping confidential and will be used only for research purpose. Thank you in advance for your cooperation.

No need of writing your name.

General background

1. Age _____
2. Sex male____ female _____
3. Woreda _____

Direction: Please indicate with a tick mark (✔) what your opinion is with regard to each statement ONLY in one of the five alternatives. The alternatives are completely agree (5), agree (4) undecided (3) disagree (2) and completely disagree (1).

Remark

A.B.E.R.P = Adult basic education radio program

A.B.E = Adult basic education

I	**Quality of A.B.E.R.P (content, method, sound, language, time, support material e.t.c)**	5	4	3	2	1
1	A.B.E.R.P fit learner ability and age level					
2	A.B.E. facilitator use radio support material like book, chart, e.t.c					
3	The language used in A.B .E. R P is appropriate					
*4	A.B.E.R.P use sound effects relevant to the lesson, e.g animals and cars sound e.t.c					
*5	A.B.E.R.P proceed from simple to complex					
6	Sound of A.B.E.R.P presenters is clear					
7	ABERP improve critical thinking					
8	ABERP support retention, because they easily clarify doubts in regular class					
9	I am better informed through radio than with out radio					

10	ABERP provide new ideas in addition to the points found in the adult support material book					
11	A.B.E.R.P provides enough pauses to respond for radio questions, to show maps and diagram.					
12	Speed of A.B.E.R.P presenter is coincide with the listening ability of adult learner					
II	**Interest of the learner**					
13	Adult learner participate actively in A.B.E.R.P					
14	I would prefer to learn basic education with support radio even if I prefer not to go to the A.B.E center					
15	A.B.E.R.P is coincident with the need and interest of the learner					
16	A.B.E.R.P transmit in appropriate time with the interest of the majority of adult learners					
III	**Commitment of facilitators and coordinators**					
17**	A.B.E. facilitators effective in the utilization of radio program					
18	A.B.E. facilitators encourage the learner to respond question from radio					
19	A.B.E. facilitators are ready to provide an opportunity to discus about the radio lesson before and after the broadcast.					
20	A.B.E. facilitators summarize the radio lesson after broadcast					
21	A.B.E. coordinator committed to supervise the					

	regular provision of radio program					
22*	ABERP broadcast is clear to hear the message					
23*	ABE coordinator shows read iness to safeguard radios fro m theft					
	Radio Support Service					
24*	Shortage of radio in our cent er hinders to listen ABERP					
25*	Shortage of dry cell or power supply in our center hinders to use radio programs					
26*	Reception quality of radio in my center is low					

Remark

* Additional item after pilot test

** Improved item after pilot test

Thank you in advance for your cooperation

Appendix II

I Interview guide line for adult basic education radio program producers of Tigray region

Remark

I. Extent of radio using centers

1. Could you tell me the extent of adult education centers that use radio broadcast regularly in your region

II. Quality of adult basic education radio programs **(content, method, sound, language, time, support material e.t.c of the program)**

2. I would appreciate if you tell me, in detail, the quality of adult basic education radio programs in Tigray region?

III. Technical factors (clarity of the program, maintenance e.t.c)

3. Would you please tell me the condition of radio utilization in relation to technical Services? (Maintenance, radio sates distribution etc…)

IV. Radio support services

4. I would appreciate if you to tell me in detail about radio support materials for adult basic education. in Tigray region?

5. I would like to hear in detail, about training of radio users and yourself

6. Could you please tell me the condition of participation of adult basic education learners and facilitators in radio content selection?

V. Commitment of educational personnel

7. I would appreciate if you comment on the commitment of educational personnel at all levels in facilitating adult basic education radio programs in Tigray region?

II. Interview Guide Line For Tigray Educational Bureau Non Formal Education Coordinators, Adult Basic Education Coordinators, Educational Media Center Heads, Wereda Educational Office Heads, Media Supervisors and Adult Education Facilitators.

I. Extent of radio using by adult basic education center

1. Could you tell me the extent of centers of basic education that regularly use radio broadcast?

II. Quality of adult basic education radio programs **(content, method, sound, language, time, support material e.t.c)**

2. I would like to hear, in detail, about the quality of adult basic education radio programs in Tigray region / in your wereda

3. I would like to hear how you could recruit adult education radio program producers inTigray region?

III Technical factor (clarity of the program, maintenance e.t.c)

4. Could you please tell me about the maintenance of radio sets in adult basic education centers?

5. I would appreciate if you could tell me the wave strength of educational radio broadcast in Tigray region?

IV. Commitment of educational personnel

6. Could you explain the commitment of media centers, wereda educational office and facilitators toward effective utilization of radio for adult basic education?

7. Could you please tell me, your effort to minimize problems of radio program utilization for adult basic education?

8. I would appreciate if you tell me your initiative to foster effective radio program utilization

V. Radio support service

9. I would like to hear your opinion about the distribution of radio support materials (radio, facilitator's guide, timetable, pamphlet etc.) in the region / wereda?

10. I would appreciate if you tell me the condition of training to build the capacity of educational personnel at media centers?

VI. General question on radio utilization

11. Would you tell me other factors that impede effective radio utilization?

Appendix III

Pilot test

Frequency Table

Age of respondent

Age	Frequency	Percent	Valid Percent	Cumulative Percent
17	1	3.3	3.3	3.3
18	3	10.0	10.0	13.3
23	1	3.3	3.3	16.7
24	1	3.3	3.3	20.0
25	2	6.7	6.7	26.7
26	2	6.7	6.7	33.3
27	1	3.3	3.3	36.7
28	1	3.3	3.3	40.0
29	2	6.7	6.7	46.7
33	2	6.7	6.7	53.3
34	1	3.3	3.3	56.7
35	1	3.3	3.3	60.0
36	2	6.7	6.7	66.7
37	1	3.3	3.3	70.0
38	2	6.7	6.7	76.7
42	2	6.7	6.7	83.3
45	1	3.3	3.3	86.7
44	1	3.3	3.3	90.0
32	1	3.3	3.3	93.3
42	1	3.3	3.3	96.7
40	1	3.3	3.3	100.0
Total	30	100.0	100.0	

Respondent's location

	ALC	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Hinzat	10	33.3	33.3	33.3
	Melka	10	33.3	33.3	66.7
	Misema	10	33.3	33.3	100.0
	Total	30	100.0	100.0	

Adult Basic Education Radio Programs Fit Learner Ability and Age Level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Completly disagree	10	33.3	33.3	33.3
	Dis agree	11	36.7	36.7	70.0
	Agree	6	20.0	20.0	90.0
	Completly agree	3	10.0	10.0	100.0
	Total	30	100.0	100.0	

Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded(a)	0	.0
	Total	30	100.0

a Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.813	16

Appendix IV

መደብ ቁዕሪ ሓደ
ተግባራት ጐዳእቲ ልምዲ

ድምፂ

መእተዊ ሙዚቃ

ተዛራቢ. 1 : ባህሊ. መብዛሕቲኡ ግዜ ኣካዳድና፣ ኣመጋግባ፣ ሳዕስዓትን ተዛመድቶምን ሓደ ሕ/ሰብ ጥራሕ ከምዝሾነ ተገይሩ ይውሰድ። ኮይኑ ግና ባህሊ. በዞም ኣብላዕሊ. ዝተጠቕሱ ነገራት ጥራሕ ዝተወሰነ ከምዘይኮነ ምሁራት ስነስብኣና ማሕበረሰብን ብዝተፈላለየ መልክዑ ገሊፆምዎም።

ተዛራረቢ 2 : ባህሊ. ፍልጠትን እምነትን፣ ስነጥበብን ሓቦን ከምኡውን ብልምዲ ዝርከብ ሕግን ዝሾነ ይኹን ኣካል ኣባል ሕ/ሰብ ብምኻኑ ከምባህሊ. እንትውሰድ ይረአ።

ተዛራቢ. 1፡ ብመሰረት ውሳነ ዩኒስኮ ባህሊ. ስነዕሑፍ፡ ጥራሕ እንተይኮነስ ኩነታት መነባብሮ፣ መሰረታዊ መሰላት ወዲ ሰብ፣ልምድታትን እምነታትኦውን ዝሓቖፉ።

ተራባቢ. 2፡ ሕቡእ ምስሊ. ባህሊ. ኣተሓሳስባኦ ። ድሕሪ ርኡይን ቁሳዊ ባህሊ. ብርክት ዝበሉ ኣንፈት ወሃብትን ሓበርትን ኣረኣእያታት ኣለውዎ። እዘ. ድማ ናይ ሓባር ዝኾነን መብዛሕቲኡም ኣባላት ማሕበረሰብ ዝኣምኑሙን ዝሰርሑሉን ዘይተባሕፈ ሕጊ ወይ ድማ ልምዲኦ።

ተዛራቢ. 1፡ እዘ. ፍዳመ ኣብ ኣተሓሳስባን እምነትን ጅማሩ ኣብ ማሕበራዊ ዕብየት ሕ/ሰብን ዕብየት ሓንቲ ሃገር ብዝህልዎ ዕልዋ ጥቕሙን ገድኡቱን ይምዘን። ብመሰረት እዘ. ድማ ጠቕምትን ጐዳእትን ተግባራት ልምዲ ተባሂሎም ይምቀሉ።

ተዛራቢ. 2 : ተግባራት ጐዳእቲ ልምዲ ኣብ ልዕሊ. ደቂ ኣንስትዮ፣ ህፃናትን ዝተፈላለዩ ክፋል ሕ/ሰብን ዐገም ጥዕና፣ ኣካላዊን ስነልቦናዊን ዐገማት ዘስዕቡ ተግባራትኦም። ዝሓሸ ምህርትን ፍርያትን ንምፍጣር ኣብ ዝግበር ዓፅሪ ድማ ዕንቅፋት ይኾነ።

ተዛራቢ. 1 : ባህሊ. መነባብሮ ሓደ ሕ/ሰብ ዝውስን ብምኻኑ እኳም ክፍሊ. ኣካላት እቲ ሕ/ሰብ ምርኣይ ኣገዳሲኦ። ኣተሓሳስባ ብጐዳእቲ ልምዲ ቀንዲ ዝጥቅዑ ኣካላት ደቂ ኣንስትዮን ህፃናትንኦም።

ተዛራቢ. 2 ፡ ካብ ዕሸል ዕድመአን ጀሚሩ ኣብ ልዕሊ. ደቂ ኣንስትዮ ዝፍፀም ግርዛት ዕድመ ልክዕ ቅልውላው ጥዕና'ን ስነ - ልቦና'ን ይፈጥር ። ኣብ እዋን ጥንስን ሕርስን ዝፍፀሙ ተግባራት ጐዳእቲ ልምድታት ዝለዓለ ሕማም'ን ስቓይ'ን ዘስዕቡን ንሞት ዝዕድመሉን እዮም።

ተዛራቢ. 1 ፡ ኣብ ልዕሊ. ህፃናት'ውን ከይተወለደ ጀሚሩ ድሕሪ ምውላድውን ኣብ ኣመጋግባ ፣ ከምኡ'ውን ኣብ ዝተፈላለዩ ኣካላት ክፍሊ ዝፍፅሙ ተግባራት ጐዳእቲ ልምዲ ምዝዛፅ ስነ ልቦና'ን ዘኽፍእ ቅልውላው ጥዕና'ን ሓደጋ ሞት'ን የስዕቡ'ዮም።

ተዛራቢ. 2፡ መብዛሕትኦም ተግባራት ጐዳእቲ ልምድታት ምስ እምነታት'ን ማሕበራዊ ርክብ'ን ዝተላመዱ ይመስሉ። ይኹ'ንምበር እዞም ተግባራት ብልምዲ ዝፍፀሙ'ምበር ምስ ሃይማኖት ዝኾነ ይኹን ዝምድና ዘይብሉ'ም ምኻኖም ይፍለጥ።