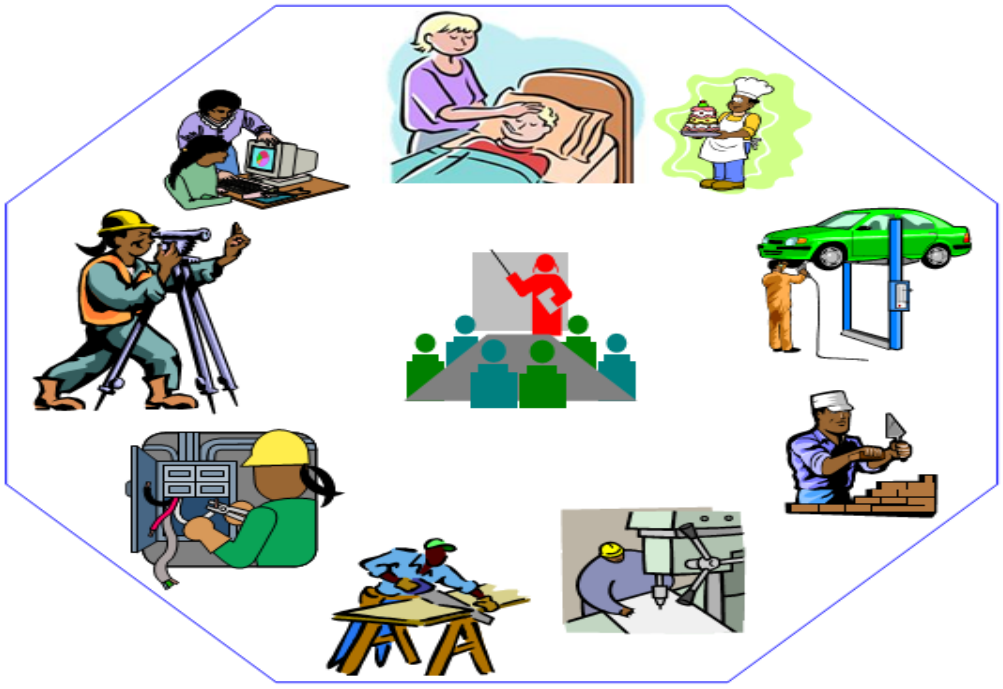
Crop Production

Level-I

Based on December 2022, Version-4 Occupational standard



Module Title: - Apply Agricultural Extension Communication

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Table of Contents

Introduction to the Module

This unit covers the knowledge, skills and attitudes required to perform Agricultural Extension activities. This module covers Understanding the concept and evolution of agricultural extension, applying extension methods and approaches, applying agricultural extension communication and facilitation for technology production, conducting training, and recording and documenting data.

LG #1	LO #1- Understanding the Concept and Evolution of Agricultural Extension

Instruction sheet

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:

- The concept of Agricultural extension
- The evolution and progress of agricultural extension
- The role of extension in agricultural development
- The importance of Agricultural extension

This guide will also assist you to attain the learning outcomes stated in the cover page. Specifically, upon completion of this learning guide, you will be able to:

- Understood the concept of Agricultural ext**ension**
- Express the evolution and progress of agricultural extension
- Understand the role of extension in agricultural development
- Determine the importance of Agricultural extension,
- Understand extension planning to determine extension activities

Learning Instructions:

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described below.
3. Read the information written in the information Sheets
4. Accomplish the Self-checks

Information Sheet 1

1.1 The concept of Agricultural extension

1.1.1 Historical roots and evolving conceptions of extension

The meaning of the term 'extension' has evolved over time, and has different connotations in different countries. In this section we touch on such different conceptions.

1.1.1.1 Origins, early meanings and international terminology

Throughout history, and across the world, there have existed patterns of agricultural knowledge exchange, with some people (e.g. religious leaders, traders, elders, etc.) often playing special 'advisory' roles in this respect. According to Jones and Garforth (1997), more or less institutionalised forms of agricultural extension existed already in ancient Mesopotamia, Egypt, Greece and Phoenicia. The term 'extension' itself is more recent; it originates from academia, and its common use was first recorded in Britain in the 1840s, in the context of 'university extension' or 'extension of the university'. By the 1880s the work was being referred to as the 'extension movement'. In this movement the university extended its work beyond the campus. In a similar vein, the term 'extension education' has been used in the USA since the early 1900s to indicate that the target group for university teaching should not be restricted to students on campus but should be extended to people living anywhere in the state. Here extension is seen as a form of adult education in which the teachers are staff members of the university.

Most English-speaking countries now use the American term 'extension'. In other languages different words exist to describe similar phenomena. The Dutch use the word **voorlichting**, which means 'lighting the pathway ahead to help people find their way'. Indonesia follows the Dutch example and speaks of lighting the way ahead with a torch (**penyuluhan**), whereas in Malaysia, where a very similar language is spoken, the English and American word for extension translates as **perkembangan**. The British and the Germans talk of advisory work or **Beratung**, which has connotations of an expert giving advice but leaving the final responsibility for

selecting the way forward with the client. The Germans also use the word **Aufklärung** (enlightenment) in health education to highlight the importance of learning the values underlying good health, and to emphasise the need for arriving at more clarity on where to go. They also speak of **Erziehung** (education), as in the USA where it is stressed that the goal of extension is to teach people to solve problems themselves. The Austrians speak of **Förderung** (furthering) meaning something like 'stimulating one to go in a desirable direction', which again is rather similar to the Korean term for 'rural guidance'. Finally, the French speak of **vulgarisation**, which stresses the need to simplify the message for the common man, while the Spanish sometimes use the word **capacitacion**, which indicates the intention to improve people's skills, although normally it is used to mean 'training'.

1.1.1.2 Evolving definitions

Enlightenment definitions of extension

Initial meanings of the term 'extension' – as well as international equivalents of the term – have been influenced significantly by 'enlightenment thinking'. Although different nuances exist, the basic thrust is that 'the common folk' are to a degree 'living in the dark', and that there is a need for well-educated people to 'shed some light' on their situation by means of educational activities. This reflects that the early conceptions of extension were somewhat paternalistic in nature; that is, the relationship between the extensionist and their clients was essentially looked at as being similar to the teacher/student or parent/child relationship, placing the extension agent in an 'expert' and 'sending' position and their audience in a 'receiving' and 'listening' role. In line with this tradition, many definitions of agricultural extension emphasise its educational dimensions:

'Extension is a service or system which assists farm people, through educational procedures, in improving farming methods and techniques, increasing production efficiency and income, bettering their levels of living, and lifting social and educational standards.' (Maunder, 1973:3)

'Extension is an ongoing process of getting useful information to people (the communicative dimension) and then assisting those people to acquire the necessary knowledge, skills and

attitudes to utilize effectively this information and technology (the educational dimension).' (Swanson & Claar, 1984:1)

It must be noted that each definition is a product of its time. When 'enlightenment' conceptions of extension were formulated there was still a firm belief in the potential and blessings of science as an engine for modernization and development, and there was a genuine concern that everybody should be able to pick the fruits of science. The belief then was that by adopting science-based innovations, and by grounding their practices and decisions in rational scientific insight and procedures, farmers and agriculture would benefit almost automatically. In view of the experiences of the last decades, however, science has nowadays become much more contested and the belief in science as a neutral and objective engine to progress has eroded significantly (Knorr-Cetina, 1981a; Callon et al., 1986; Van der Ploeg, 1987; Beck, 1992; see also Chapter 6). Although science has contributed significantly to agricultural change and production increases in high potential areas, its impact in other regions has remained much more limited. Moreover, science-based agriculture in high potential areas was accompanied by a number of serious problems related to, among other topics, the environment and health (see Chapter 1). Furthermore, even in high potential areas scientists regularly produced innovations and recommendations that were of limited use to many farmers. It was realised that successful innovation required as much input from farmers themselves as from scientists.

In line with 'enlightenment' thinking, there was great concern in the 1950 to 1970 period with the 'adoption and diffusion' of science-based innovations. Extension scientists developed an interest in so-called adoption decisions. In the context of diffusion, it was also recognised that farmers could gain a lot from each other's knowledge and experience (regarding new technologies, among other topics) when solving agricultural problems (Van den Ban, 1963). Inspired by such interests and insights, the emphasis in definitions of extension shifted slightly from 'education' to supporting decision making and/or problem solving:

'Agricultural extension: Assistance to farmers to help them to identify and analyse their production problems and to become aware of the opportunities for improvement.' (Adams, 1982:xi)

‘Extension is a deliberate and systematic attempt – by means of the transfer of knowledge and insight – to help and/or develop someone in such a way that the person is able take decisions in a specific situation with a maximum level of independence, consciousness, and conformity with his own interest and wellbeing.’ (Van Gent & Katus, 1980:9, translated by the authors)

‘Extension involves the conscious use of communication of information to help people form sound opinions and make good decisions.’ (Van den Ban, 1974; Van den Ban & Hawkins, 1996:9)

The last definition is the one which was used in the predecessor of this book (Van den Ban & Hawkins, 1988, 1996). Like most definitions presented so far, it still carries the idea that extension is mainly about ‘help’ in the interest of the farmer.

Intervention definitions of extension

The definitions mentioned so far are in essence normative definitions, in that they indicate what the authors feel extension should be and/or should do. In other words, they ‘prescribe’ what the authors would like extension to look like ideally, e.g. as a practice that is experienced as ‘help’ and ‘assistance’ and leads to ‘good decisions’ and ‘development’. Alternatively, one could also try to define extension more descriptively in terms of what people who call themselves extensionists actually do, which frequently might not correspond with normative definitions (see also Röling & Kuiper, 1994). When taking a closer look at what extensionists do in practice, one might, for example, discover in some cases that their work has little to do with ‘help’ but rather with imposing technologies and/or enhancing state control over farmers(e.g. Ferguson, 1990). Along these lines, it was recognised during the 1980s that extension could not just be regarded as ‘help’ and ‘being in the interest of the recipient’. It was realised that extension is in many ways also an intervention that is undertaken and/or paid for by a party who wants to influence people in a particular manner, in line with certain policy objectives. Thus, it was realised that there was often a tension between the interest of the extension organisation (and/or its funding agency) and the interest of recipients such as farmers. Government extension services could, for example, aim at increasing the production of export crops, while farmers would be more interested in other issues or crops. In this more descriptive conception of extension, there needed at least to be a partial overlap or link (see Röling, 1988) between the interests of clients and extension

organisations, otherwise people would obviously not be willing to change (unless they were forced/persuaded to by other means than just extension messages). In line with such views new definitions of extension emerged:

'Extension is helping behaviour consisting of – or preceding – the transfer of information, usually with the explicit intention of changing mentality and behaviour in a direction that has been formulated in a wider policy context' (Van Woerkum, 1982:39, translated by the authors)

'Extension is a professional communication intervention deployed by an institution to induce change in a voluntary behaviour with a presumed public or collective utility' (Röling, 1988:49)

The phrase added by Röling on 'presumed public or collective utility' is important, because it was used to distinguish extension from other forms of communication intervention such as:

- Commercial advertising, where the goal is to sell products in the interest of a limited group (salesmen, shareholders).
- Political propaganda, where the goal is to influence people's ideological beliefs and/or perceptions of reality in order for some to gain or maintain power.
- Public relations, where the goal is to manage one's own reputation or public image.

At the same time, this phrase exemplifies that these definitions still contain normative elements. After all, it is more or less implicit in Röling's definition that extensionists should not be involved in, for example, trade, advertising or political propaganda, and if they are this cannot be regarded as 'extension'. As Röling and Kuiper (1994) point out, it is impossible to avoid normative elements in a definition of extension if one's purpose is not only to study extension as a societal phenomenon, but also to inform extension practitioners on how they can do better. From a purely descriptive point of view, the definition of extension would be something like:

'Extension is everything that people who think of themselves as extensionists do as part of their professional practice.' (Leeuwis, C., 2004, 3rd ed.)

1.2 The Evolution and Progress of Agricultural extension

1.2.1 Historical evolution of agricultural extension

Although agricultural extension has roots as far back as 1800 BC, formal extension in most countries did not start until the late 1800s AD. The first modern extension service was started in Ireland during the potato famine in 1845 (Swanson et al. 1997). In the United States and Canada, formal extension started during the late 1800s. France began a national service in 1879 using itinerant agriculturists; Japan and many of the British colonies also started extension services during this time.

As mentioned earlier, the word extension derives from an educational development in England during the second half of the nineteenth century. Around 1850s, discussions began in the two ancient Universities of Oxford and Cambridge about how they could serve the educational needs of the rapidly growing populations in the industrial, urban area, near their homes. It was not until 1867 that a first practical attempt was made in what was designated as 'university extension' but the activity developed quickly to become a well-established movement before the end of the century. The dissemination of relevant information and advice to farmers however has a long chequered history prior to the emergence of modern forms of agricultural extension in the nineteenth century.

In the early years of this century, extension services in their formative stage were relatively small in scale and limited in the scope of their work and contact with farmers, and their organization was often somewhat haphazard even though based on legislation. They were organized predominantly either by central or local governments, or by agricultural colleges, usually in close association with experiment stations, or by farmers' organizations, or combinations of these parent bodies. As the century has progressed, the organizations have matured in that changes have often occurred to their parent affiliations, government funding has become broader, especially in 'the north' and the extension workers have become better trained and more professional.

Fifty years ago, agricultural extension organizations in developing countries mirrored the administrative traditions of the former colonial powers (Axinn and Throat 1972). Like other agricultural support services, they were geared to production and marketing of export commodities. Accordingly, crop-oriented extension programs were common. However, as noted by Antholt (1994), the scope of extension programs expanded in the fifties as the newly independent states of Asia and Africa sought to increase food production and to spread the benefits of improved farming techniques more widely. Extension organizations therefore began to aim at broad national and farming system coverage. The economic strategies of these pioneering years relied on heavy state intervention, import substitution and rapid industrialization. Extension programs often relied on the proposition that farming productivity was held back not so much by technological and economic constraints but by farmer apathy, inadequate social arrangements and lack of local leadership. Often, extension agents came to be viewed as the foot soldiers of 'nation building' campaigns aiming at multiple economic and social objectives.

The structure of the original extension services varied. Many were state-funded and used itinerant extension agents. Demonstrations were an important aspect of extension. In the United States, extension was linked with the 'land-grant' universities, or schools mandated by Congress in 1862 to extend university knowledge to non-students. Extension clientele of the original services were mostly larger landholders, many of whom were growing commodities and export crops. This was especially true in colonial areas in the tropics.

Initial extension structures were top–down, with information coming from the University or Ministry of Agriculture, and filtering to the farmers through extension agents. Farmers were involved only to receive information; they did not pay for services nor give much input as to their needs.

A good example of this was the early United States extension model. The US system is structured as a 'cooperative' system in terms of funding and control between federal, state, and county (Seevers et al. 1997). The US system is one of the older models of extension that has proved very successful in certain areas. This model is also known as 'transfer of technology' because technology is developed on research stations and universities and then transferred through extension agents to farmers.

Another model, developed essentially by the British and other colonial powers to fully develop their cash crops is the commodity-based extension service. This tends to be quite top–down in terms of structure. The commodity group conducts research, which is shared with extension agents who pass the information on to farmers. The commodity group funds the extension service. Commodity extension uses vertical linkages, which allow for effective management.

Developing country extension models are usually top–down structures as well, often located within the ministry of agriculture. It is not usually formally associated with universities (Boone 1989) and therefore has poor linkages with research.

A number of necessary conditions were identified for agricultural extension to evolve (Swanson et al. 1997). These include:

- Information has been assembled, systematized and made available on good, progressive, or new agricultural practices suited to a particular environment, and is based on either or both the accumulation of experience or findings from research.
- This information is used among other things, to educate professional agriculturalists who may further enlarge or refine this body of knowledge or become active promoters and disseminators of it.
- An appropriate administrative or organizational structure exists within which the dissemination activities may be established and conducted.
- There is a legislative or some other official mandate or influential proponents, which prescribes or enables that agricultural extension work is desirable and must occur.
- There are invariably a variety of antecedents, which have attempted protoforms (basic frames, used until a more suitable form can be found) of agricultural information and advice dissemination.
- The incidence of critical situations, such as famine, crop failure, soil exhaustion, or altered economic conditions or relationship may create an immediate cause for initiating the organization of extension work in the form of mass campaigns.

1.2.1.1 Pre-independence

In this era, emphasis was placed on commodity programs—expatriate 'rural agents' to organize communities and serve as contact points for government authorities, input and credit suppliers and buying agents. Their broadly defined roles often extended into human health, census taking and tax collection.

1.2.1.2 Immediate post-independence

Characteristics of the period between the late 1950s and 1960s:

- institutionalization of many national extension services
- agricultural extension became attached to the Ministry of Agriculture
- confidence in western technology led to the adoption of 'diffusion model' or 'Technology Transfer model' of extension delivery—a hierarchical process of technology transfer backed by advances in mass media focus was also on interpersonal communication and community development
- the agricultural service was multifunctional, with weak connections to agricultural research
- extension agents were entrusted with a variety of functions ranging from credit delivery, inputs distribution, and sundry coordination duties such as: clerical, statistical, or even political chores.

1.2.1.3 Extension in the 1970s

During the 1970s, the extension systems in developing countries changed as the realization came about that there was a need to reach more farmers and to better train extension agents. The main developments included integrated rural development approaches, and the emergence of Training and Visit (T&V) extension systems. The 'diffusion model' of extension gave way to the 'get the technology right' model, where farm-level constraints explained non-adoption of technology, with a prescription to ease the constraints through integrated packages of services (Axinn 1988).

This ushered in the World Bank-sponsored Training and Visit System (T&V). This system used contact farmers in order to multiply extension's effect. Being highly structured, this system was top–down and characterized by rigidity and high costs. Funding often came through loans from the World Bank. Working mainly with contact farmers stifled diversity, because many were large scale male farmers who had little in common with small-scale resource-poor farmers.

The T&V system was designed to address some of the weaknesses in the previous extension approaches, such as weak linkages with research and limited training of field extension workers. As its name suggests, the basic premise of T&V was training (instilling professionalism in extension agents) and regular visits to farmers by the agents. The T&V model is described in detail in Chapter 3 of this source book.

Whatever the arguments, there are indications that T&V had many shortfalls. Some feel that T&V focused so much on training that the system lost sight of the goals of meeting farmers' needs and improving their livelihoods. It was essentially a supply-driven and top–down system, promoting agricultural messages that had been designed and developed by research scientists, with limited input by the ultimate users of the technologies (the farmers). The delivery method was perhaps efficient, but the messages often irrelevant, according to farmers surveyed. At the end of the Kenyan T&V system in 1998, the extension service was characterized by weak management, a lack of strategy for the service, and general ineffectiveness (Gautam 2000).

Training and Visit, like the general extension approach, was characterized by limited feedback from farmers. The packages were somewhat mechanistic, and not flexible enough to meet the needs of the large variety of farming systems. T&V relied on contact farmers, and tended to neglect the larger rural population (Moris 1991). In the Kenyan experience, there were no real mechanisms for choosing contact farmers who truly represented many of the farming systems in the areas. The hierarchical structure set up by the Bank prevented innovation, partnering and efficiency. Despite a supposedly improved system, farmers before and after the Kenyan T&V system said that they were not receiving advice from extension, or else not the advice that they needed (Gautam 2000).

This period saw the emergence of the farming systems approach to research and extension (FSR-E).

1.2.1.4 Extension in the 1980s

Extension during this period was characterized by:

- increased emphasis on participatory approaches
- preoccupation with increasing productivity of women and preserving ecosystems along with attempted cost recovery and privatization schemes (World Bank 1990)
- continued emphasis on training and visit extension system and growth of FSR-E
- focus on institutionalization of FSR-E.

The public sector extension was criticized for not being relevant, adequately effective, efficient and, at times, for not pursuing programs that foster equity.

Support for extension declined in the 1980s and donors were unwilling to fund large-scale public-sector recurrent expenditures, which led to further under financing, staffing shortages, and contraction of extension services (Amanor and Farrington 1991). Given the fiscal restraint, there was extreme pressure to demonstrate the pay-off to investment in extension and explore alternatives to public financing by involving the private sector, local authorities and producer groups.

1.2.1.5 Extension in the 1990s

Extension in this decade bore these characteristics:

- new approaches were piloted in an environment of fiscal stringency
- direct farm level links were stressed between researchers and farmers
- institutionalization of systems approach to research and extension continued
- emergence and wider acceptance of participatory research methods
- more sustainable approaches to extension funding involving greater flexibility and multiple partners (Gustafson 1991)—pluralism in service provision

- fall of T&V systems and the emergence of the new approaches such as Farmer Field Schools (FFS)
- new role for extension staff—a more facilitating and catalytic role
- greater focus on changing the mindset of change agents.

1.2.1.6 Current scenario: Diversity and institutional pluralism

Much literature (Schwartz and Kampen1 1992; World Bank 1995; Contado 1997) suggested the need for a pluralistic extension system because public extension services need to be accountable to both the clients of the services and the wider population. Contado (1997) identified a number of advantages that a national pluralistic policy of extension will bring about:

- It encourages wider participation in providing resource support and control of the extension program of the country. As a consequence, more resources are allocated for extension or at least a clearer accounting of resources devoted to extension is achieved.
- It creates complementarity and synergy in the use of resources for extension by different donors, which are recognized as part of the pluralistic extension policy.
- Research and extension linkage is made functional in the field.
- It creates a cohesive critical mass of extension people who could address large numbers of farmers as well as the increasing variety and complexity of subject matters needed by farmers.
- It lessens the resource burden upon the central government, or on a single agency, or on the private sector or on farmers themselves.

National reforms and other initiatives that in essence aim at an optimum mix of institutional pluralism have followed different paths for achieving their objectives. Grassroots associations, the NGO sector, farmers' associations are major stakeholders in this process.

Potential providers of agricultural extension services (Table 2.1) fall into three main groups: the public sector, the private nonprofit sector and the private for-profit sector. Distinctions between various providers are important because of the range of services each typically offers, and the incentives they have for delivering these services. The private (profit) sector includes all agents

whose objective is to generate profits directly or indirectly for their owners, members or shareholders. The private nonprofit sector differs from the profit sector in one important respect: rather than distributing the residual earnings (if any) to individuals who exercise control, it reinvests profits to finance future activities (Umali-Deininger 1997).

The private-for-profit sector comprises three main sets of actors. Commercial suppliers of agricultural inputs provide 'free' information and advice linked directly to the use of their technology. They are increasingly concerned to ensure that accurate information is passed on by input dealers at point of sale and so may be involved in training and providing technical support to their dealer networks. At the other end of the production process, companies which purchase, process and market agricultural produce provide information and services in order to assure quality and reliability of supply. Much less common in developing countries is the autonomous emergence of for-profit organizations (firms, partnerships) or individuals specializing in providing consultancy and advisory services. However, some reforms, especially in Latin America, have helped to facilitate this in the context of a shift of both delivery and funding from the public sector.

Table 1.1. Providers of agricultural extension services

Public sector	**Private sector (non-profit)**	**Private sector (profit)**
• Ministries and Departments of Agriculture • Agricultural Research Centres	• Local and international NGOs • Bilateral and multilateral aid projects • Universities • Community boards, associations and foundations (including farmers' groups) • Other noncommercial associations	• Commercial farmer, or farmer group operated enterprises (including cooperatives) where farmers are both users and providers of agricultural information • Commercial production and marketing firms (such as input manufacturers and distributors) • Agro-marketing and processing firms

		• Trade associations • Private consulting and media companies (publishing and telecommunication firms)

Source: Adapted from Umali-Deininger (1996).

The key issue of creating a pluralistic service, and one suggested by various authors (Schwartz and Kampden 1992; Ameur 1994; Dinar 1996; Holden et al. 1996; Umali-Deininger 1997; Zijp 1998) is a need to find an appropriate 'mix' of public and private funding and delivery mechanisms for extension, which will achieve differing agricultural goals and serve diverse target populations.

Three major lessons for extension are:

- It is important to make new things visible: An important role of extension is to make visible the state of the environment and the extent to which present farming practices are untenable. In addition, extension can demonstrate the feasibility of sustainable practices. Even more important is to give farmers the tools for observation and to train them to monitor the situation on their own farms.
- The use of farmers' knowledge: The location-specific nature of sustainable agriculture implies that extension must make use of farmers' knowledge and work together with farmers. Often, indigenous practices, which have been ignored under the impact of chemical farming, can be fruitfully revived. Indigenous technology development practices and farmer experimentation can be an important 'entry point' for introducing sustainable farming practices (Brouwers and Roling 1999).
- An emphasis on facilitating learning: Instead of 'transferring' technology, extension workers must help farming 'walk the learning paths'. Extension workers should seek to understand the learning process, provide expert advice where required, convene and create learning groups, and help farmers overcome major hurdles in adapting their farms. (Anandajayasekeram P, et. al.2008)

1.2.2 History of Agricultural Extension in Ethiopia

Though agriculture has a long history in Ethiopia, it attracted the recognition of the country only in 1908 when the then 'yeirsha Mesriabet' was officially established through a proclamation. The ministry, when established, had the following objectives:

(a). Advisory service on and monitoring of both crop and livestock production
(b). Animal health service
(c). Forestry development and conservation
(d). Collecting agricultural statistics

These objectives were set with the consent that anyone violating the proclamation would be punished while those who really stick to it would be rewarded. Before the establishment of this ministry through proclamation, however, there were sort of **'extension type'** activities going on in the country (1890-99) mainly in the areas of:

- Eucalyptus development
- Irrigation
- Improved agricultural production practices

Different agreements were also signed between the Ethiopian government and foreign experts representing their country with an aim to improve the agricultural sector of the country.

In 1931 the "Yeirhsa Mesriabet" was restructured through a proclamation, and its name changed to Ministry Of Agriculture (MOA). The objectives set when this ministry was established were also improved.

In 1943 and thereof, however, there were somehow organized and concerted efforts made, as a result of which a number of demonstration sites were established throughout the country some of which include:

- Sholla Poultry Demonstration Center,

- Andasa (Gojam) and Adami Tullu (Shewa) ranches, and
- Intoto, Kundi, Kofele, Bale, Jijiga and Amed Guya sheep ranches for mutton production.

These demonstration sites were serving as improvement centers and demonstration centers that aid farmers to get an understanding of improved production practices.

During 1948, emphasis was given to animal health, as a result of which an agreement was signed between FAO and the Ethiopian government to start vaccination program. Besides, for the first time in the history of Ethiopian agriculture, professionals were sent abroad for training, particularly on animal health.

Even though there existed the conceptualization and some efforts of improving the agricultural sector, there were many problems, which heavily constrained the extension activities. These include:

- lack of properly organized research centers,
- lack of adequately trained manpower,
- failure to assess farmers' problems and situations, as well as
- lack of responsible body to effectively carry out the extension service.

Generally, before 1953 the agricultural extension service was not properly organized as a result of which its objectives were not clearly defined, and it was not clear which farmers it is targeting, what extension method(s) was/were employed, how it was organized, and its contents were not properly defined. Nevertheless, evidences showed that there was sort of "**extension type"** activity going on in the country until 1953.

1.2.2.1 Agricultural Extension Service Under Alemaya College of Agriculture (ACA)(1953- 1963)

Agricultural extension and research in a well established form have started operation in Ethiopia in 1953 when the then Alemaya College of Agriculture (now AUA) was established through a technical support agreement signed between the Ethiopian government and the US government.

The college was established under the administrative control of the Oklahoma State University with triple mandates of Research, Extension and Training. It was, therefore, nationally mandated to administer the agricultural extension service.

1.2.2.2 The Conventional Agricultural Extension Service (1963-67)

In 1963 when the administration of the ACA was transferred to the then HSIU, the agricultural extension service was transferred to the MOA, and the college only retained its research and training programs. The extension service rendered during that time is referred to as conventional.

1.2.2.3 Agricultural Extension Service under the Comprehensive Package Projects (CPPs) (CADU, ARDU and WADU)

The first, Comprehensive Package Project was that of Chilalo Agricultural Development Unit (CADU) which was established in 1967, with Swedish Government and multilateral (World Bank) assistance. This project operated in the Chilalo province until the end of its second phase, in 1975. Thereafter, it was upgraded to cover the whole Arsi Administrative Region.

The second Comprehensive package project was initiated in the Wollaita province in 1970 under the Wollaita Agricultural Development Unit (WADU). The first phase of this project extended until 1974.

Similarly the Ada District Development Project (ADDP) was established in 1972.

There were also other Comprehensive Package Projects initiated in other administrative regions, which included the Tach Adiabo and Hedekti Agricultural Development Unit (TAHDU) in the Northwest of Tigray Administrative region and Southern Region Agricultural Development Project (SORADEP) in the vicinity of the town of Awassa, and the Humera Agricultural Development Project (HADP) around the Setit Humera areas. However, the latter's were not actually implemented.

In general, the contribution of CADU and WADU to economic growth in the respective target areas had been significant. They have helped to improve the productivity of dairy cows through cross breeding and animal nutrition. They had also developed better farm implements and helped farmers to adopt these implements through an extended credit and extension system.

As early as the 1970's it was apparent that it would not be feasible to implement the comprehensive package projects through the whole country, since it was found to be very expensive in terms of finance and manpower and could not be duplicated in other areas of the country. Thus, the initial plan to reach 90 percent of the farming population within fifteen to twenty years through large-scale intensive package projects becomes an attainable. Hence, the Minimum Package Programme (MPP) was initiated in Ethiopia with a claim to address the problems of the comprehensive package projects and to reach the largest segment of the farming population in the shortest possible time with relatively low cost.

1.2.2.4 Minimum package projects

The Minimum Package Projects (MPPs) were designed to cover large areas so that as many farmers as possible could be reached for extension, input supply, credit provision and marketing services. Like the comprehensive projects, the aim of the MPPs were to increase the productivity of the smallholders through the provision of farm inputs on credit, extension services and other supporting services in order to raise the production of agricultural commodities and improve the life of these farmers. But, the MPPs were based upon the concept of concentrating only on few innovations or a minimum package of innovations that were developed and tested in the comprehensive package projects. The major components of the proven innovations were fertilizer and improved varieties of cereals accompanied with improved cultural practices. Minimum package areas were selected from all over the country on the basis of the availability of tested innovations for the area, favorable demand prospects for the product that can be grown in the area, importance of small scale farming in the area, availability of an all weather road passing through the area and on the basis of past experience with respect to farmers' response to innovations and their attitude towards change.

The MPPs were launched in two different phases. The first phase called MPP I and the second phase was MPP II

1.2.2.5 T & V Pilot extension Project

The Training and Visit extension system was initiated as a pilot project in 1983 with the assistance of the World Bank. The approach emphasized regular Visits to contact farmers by the Development Agent (DA), monthly training or DAs by subject matter specialists (SMSs) and contact of SMSs with researchers every 3 months for seasonal training. The aim of the project was to test the appropriateness and suitability of the extension approach for Ethiopia. The project was tested in three areas: Ada-Lume, Arsi Negele-Shashemene and Tiyo-Hitosa, and was planned to terminate in 1991 (Adugna et al. 1991). However, a modified approach in which about 1300 farmers are assigned per DA was applied in the Peasant Agricultural Development Programme (PADEP) which was a follow-up to the MPP II.

1.2.2.6 Peasant Agricultural Development and Extension Project (PADEP)

The Peasant Agricultural Development Program (PADEP) was designed on the basis of the experience gained from MPP I and II with the aim of increasing food production and improving farmers' productivity of the major grain producing areas. The time between the termination of MPP II (1985) and the start of PADEP in 1988 was emphasized in the food self-sufficiency program, financed by the Ethiopian Government. The implementation of PADEP had been delayed because of the government resistance to conditions laid down by donor agencies. The PADEP acknowledged regional differences and stratified the country into 8 relatively homogeneous agro-ecological zones. 235 districts (181 cereal and 54 coffee producing districts) were selected as surplus producing districts. The program adopted the modified T & V extension system (about 1300 farmers are assigned per DA in different from the conventional T& V which used 1 DA for 800 farmers).

1.2.2.7 Participatory Demonstration and Training System (PADETES)

With the change in government in 1991 also the modified T&V extension approaches continued to use until Participatory Demonstration and Training System (PADETES) replaced it as the national agricultural extension system in 1995. PADETES adopted the merits of past extension approaches particularly that of T & V and the SG 2000 experience. The principle of the PADETES approach is to ensure the participation of the farmer in the delivery of extension in the country. This approach was based on on-farm demonstration plots approach known as Extension management Plot (EMTP). EMTPs are managed by participating farmers. The DAs serve as facilitating role in the management of the plots as well as train both participating and neighboring farmers to adopt the improved recommended packages. PADETES primarily focuses on the supply of improved technologies particularly (improved seeds, fertilizers, pesticides) and technical advise to raise agricultural productivity and income of the farming population. However, although this approach serves a number of farming community to increase the agricultural productivity, particularly some cereal crops (like maize, wheat, etc.), it fails to raise their income on sustainable manner mostly due to drop of out put prices. Cognizant of this fact, currently, there are additional approaches introduced like family based extension packages and area based specialization approaches. These approaches are focused to help farmers to produce what the market wants. But whether this approach will replace the PADETES and adopted all over the country as a sole methodology or as a part of PADETES remains to be seen.

1.3 The Role of Extension in Agricultural Development

The Role of Extension in the Promotion of Agricultural Development.

There are many different views about what constitutes development. Some think it is an increase in the average per capita income on the consumption that people will then be better off. More attention however is now given to improving the quality of life, using indicators such as health, education and housing as although average incomes have risen in many countries the difference between rich and poor have widened and a large pardon the population is even woos off. But what is agricultural development?

Def. **Agricultural development** is a shift from traditional production practices to improved production practices while maintaining productivity & environmental protection.

Ministries of agriculture use agricultural extension as one of their instruments to promote agricultural development, agricultural development often being seen as an increase in agricultural production and/or the productivity of land, labour and capital in agriculture. Of course significant increases have been achieved in this way in recent decades, often with a decreased labour input in the case of industrialized countries.

There are doubts whether this kind of agricultural development is always desirable as our judgment about this desirability depends partly on our insight into its consequences and partly on our values. Hence it is important whose values influence decision regarding the direction to be taken in development.

The agricultural development of the last two decades has decreased food process, thus increasing the purchasing power of the urban poor. Small farmers have adopted modern varieties of crops, fertilizer and herbicides to the same extent as large farmers in the same area, usually increasing their income.

The introduction of modern agricultural technology is one step in the process of modernizing the whole society. The consequences of this process are however hard to predict and then people

responsible for agricultural extension find them hard it influence. It is therefore in this seemingly complicated situation that agricultural extension plays a significant role in fostering agricultural development.

Agricultural extension will however seldom bring about agricultural development. In an interesting book published long time ago (1966) Mosher pointed out that agricultural development requires a mix of elements of which the following are the major ones.

- Market for farm products
- A constantly changing agricultural technology
- Local availability of supplies and equipment's
- Production incentives
- Transportation facilities
- Agricultural extension

This therefore clearly demonstrates the fact that the role of extension in fostering agricultural development is determined by the availability and efficient operation of the elements of the mix and their effective linkage. It is only if agricultural extension operates in combination with all these elements that it will bring about effective agricultural development.

1.4 The Importance of Agricultural Extension

Increasing food production, stimulating economic growth, increasing the welfare of farm families and rural people, reducing poverty and social inequalities, sustainable use of natural resources, and participatory development, are all governmental goals to which agricultural and extension policies and activities can make a significant contribution. So extension and its role and function must be seen in relation to a country's overall socio-economic situation, the situation of different population groups, and the government policies adopted by a country for (rural) development and agriculture. (Hoffman, V., et al. 2009)

Agricultural extension in its broadest sense is considered an important instrument to support farmers' efforts in agricultural development in changing environment. According to World Bank figures, worldwide agricultural extension in 1997 employed at least 800,000 extension workers and hundreds of thousands more farmer technicians or farmer leaders, amounting to about1,200 million people. It is estimated that 6 billion US$ are spent every year on agricultural extension activities. These figures may have decreased in the past fifteen years, but still give an impression of the enormity of this institution.

At all times – and even more so these days – there have always been different understandings about the objectives of extension and extension services, the roles and tasks of extension staff, and specially how these services can be organized and financed.

Extension is classified as an accelerator for rural and agricultural development. Following MOSHER'S classification from 1996, which talks about accelerators and essentials for agricultural development, we can enlarge the list and formulate **elements favoring rural development** (Table below). The essentials must be in place. if any are missing or inadequate, the whole development process will become stuck or will be hampered. Accelerators are additional factors that aid and enhance the development process to anticipate and avoid problems or to minimize the negative effects of development on certain categories of actors in rural development.

Food and nutrition security specifically in the so-called LDCs (least developed countries) is often a problem for the rural poor, particularly since a large proportion of them depend on agriculture for their livelihood. Food security in towns and the fate of natural resources depends on their work. So by helping to improve farming and farm yields, agricultural extension can be a very powerful tool for personal development and the organization of community life.

There are many effective methods and instruments to influence behaviour and behaviour change. Governments can provide subsidies, administer taxes and levies, they can prohibit and sanction activities, and private companies can be encouraged to contract their services. These methods should be used when behaviour change is necessary, be it in the public or private interest, and they should not be replaced by extension work. Misuse should not damage the relationship of trust between advisers and clients, because we need extension to influence behaviour in a voluntary way, by motivating and enabling humans to acquire new insight and a better understanding of their own situation and the options for improving it. Insight cannot be administered, transferred, or bought: it must be gained through one's own efforts – by learning – and this process is facilitated and supported by extension work. Insight drives and directs behaviour and behaviour change.

Table 1.2 Elements favoring rural development: essentials and accelerators

The **essential** for rural development promotion	The accelerators for rural development promotion
• Sound rural development policy • Basic education • 'Democracy' and peace • Health services • Legal certainty and reliability of institutions • Credit availability • Basic infrastructure specifically for agricultural development - rural markets for farm products	• Extension services • Education and training • Self-help promotion • Community development work specifically for agricultural development - production incentives (subsidies) - conserving, improving and expanding agricultural land - farmers' organizations (associations, groups, cooperatives)

(which includes demand for farm products at local, regional and international level, a marketing system and the reliability of fair prices) - new technologies to increase production local availability of supplies and equipment	

Based on MOSHER, A., 1996

In agricultural extension, we deal with subsistence farmers, market-oriented farmers, professional groups (herders, seed production associations, vegetable producers), social groups (women's groups, micro credit groups), traders, and all kinds of actors in the value chain of land use products, as well as employees of governmental and non-governmental organizations. …

1.5. Extension Planning

1.5.1 Planning Extension Programme

1.5.1.1 Introduction

What is Planning?

(1) Planning is a phase between policy formation and concrete implementation of the policy. It is the preparatory activity for the implementation of policy decisions.
(2) It is a process of giving direction in all phases of carrying out the policy, from policy formation to policy implementation. In this sense rational planning, democratic planning, etc. are usually used.

Many decisions have to be taken in order to ensure effective extension work. These decisions must be in tune with each other. This implies that extension requires systematic planning. Hence, planning an extension program involves decision-making about the work of an extension organization.

Our analysis of the program planning process is based on Bos' decision-making model, which makes a distinction between the choices which have to be made and the knowledge which has to be gathered to make these choice. (Refer to Bos' decision-making model; (A. W. van den Ban and H. S. Hawkins, 1999)

Extension agents have to decide, either by themselves or jointly with others, about:

- the goals they are aiming at;
- the target group they wish to help with opinion formation and/or decision-making;
- the content of the extension message;
- the extension method or combination of methods to be used, and how they will be used; and

- the organization of all activities, including who should do what, when and how.

On the pathway towards knowledge, extension agents need information about:

- the goals;
- their target group;
- the behavioral alternatives for the target group, and the results expected from these alternatives;
- the media/methods they use or could use; and
- additional resources available to them.

There are two major difficulties when planning extension program like this:

a. The five decisions mentioned above will influence each other.

e.g. If different goals are selected, then usually each one of the other decisions will also change.

b. An extension program tries to change farmers' behavior either faster or in a more desirable direction. However, whether or not these objectives are achieved depends predominantly on the farmers rather than the extension agents themselves.

This chapter attempts to show how to overcome the above two difficulties. We begin the chapter by discussing pathways towards gaining knowledge; then we consider how we choose from one of the five decisions given earlier. Finally, we propose in which way these decisions can be taken, paying special attention to the role of farmers.

Before we commence our discussion, we should point out that many extension services do not work with systematically planned extension programs. Much of their time is spent reacting/responding to farmers' questions/needs (reactive extension work).

Despite the importance of reactive extension work, the main aim of an extension program is to initiate change. The program indicates how agricultural extension can contribute to agricultural development. The extension service has to start activities to initiate these changes because many farmers do not ask for help when it is needed most.

Good decisions require us to travel frequently from the pathway towards knowledge to the pathway towards choice and back. In order to avoid confusion, we will discuss these pathways separately in relation to decision-making about an extension program.

1.5.1.2 The Pathway towards Knowledge

A. Goal

Definition: Goal refers to the end towards which actions, e.g. extension programs, are moving.

An extension program is usually one of the policy instruments within a larger development program. Thus, we need to understand the whole program and, especially, the way other different policy instruments are combined with the extension program. We have to know the sub-goals of the development program which can be activated through education and communication. As a rule, these sub-goals will become the goals of the extension program. For example, the development program may also use agricultural research, irrigation, supply of inputs and credit, pest control and marketing procedures to increase maize production. In this case, we would have to ask exactly what the role of extension is with regard to these policy instruments. Some expectations regarding this role may be unrealistic, but this must be made clear in order to be able to plan a successful development program.

B. Target Group

Target group analysis is one of the important methods for deciding which problems an extension program should be aimed at. We also speak of 'needs assessment' which relates on the one hand, to the needs felt by the target group and, on the other, to the needs for change recognized by the extension agents or their organization. Target group analysis is also important for selecting the

most effective communication methods and content. This analysis should provide information, especially on the following points:

(a) What is the current behavior of the target group in the area in which the extension organization operates?

e.g. An extension organization wishing to promote marketing cooperatives should have to know how farmers currently market their produce, what problems they have with marketing, their experiences with cooperatives and how they feel about them.

(b) What do target group members consider to be their problems?

(c) What knowledge, skills, and attitudes do the target group members have towards what they consider to be their problems and towards the problems for which extension agents consider extension help is desirable?

(d) Which members of the target group make which decisions, and who influences these decisions?

(e) Which communication channels do target group members use now and which ones can they use in the future? What is known about this from the evaluations of previous extension programs, if any? What language or dialect is used by the target group?

(f) How do members of the target group relate to the extension agent? Do they trust his/her expertise and objectivity?

(g) What resources do different categories of the target group have access to? Are there possibilities for obtaining more resource? If there are, which ones?

(h) What is the target group's situation and how does this influence target group behavior?

(i) What differences are there in the target group towards variables that can be used to segment the group into different but more homogeneous subgroups which can be given the same message through the same communication channels?

(j) What are the descriptive variables, such as education, age, gender, socio-economic status, sources and importance of non-form income and locality?

C. Alternative Behavior

We also require information about alternative behaviors and their expected consequences from which the target group can select possible solutions to their problems.

D. Media/Methods

Extension agents need some insight into the expected effects of a method/medium or channel if they are to make effective choices. They should have to use general information about media effects that is available. Moreover, they should have to make use of specific information about the target group, as mentioned in point 5 of Section B.

E. Resources

The resources available will influence the type and quality of extension that can be given. Here, factors such as the number, quality and interests of the extension agents, organization and persons with whom they can cooperate and the means available for transport may be included. There may be opportunities to increase available resources by giving refresher courses or in-service training to extension agents, or by acquiring extra funds for special campaigns.

1.5.1.3 The Pathway towards Choice

A. Selecting Program Goals

The following points must be considered when choosing extension program goals:

- Our perception of the present situation
- Our vision of the desired situation

- Our perception of why the present situation deviates from the desired situation
- What possibilities we see for bringing about changes through extension with available resources and manpower

Note that:

-The question about what we wish to achieve with extension finally rests on value judgments.

-There may be considerable difference of opinion between those involved about which value judgment must be used. However, if the differences are expressed, there is a greater probability that a well considered decision will be taken.

-In addition to value judgments, insight into the causes of a certain undesirable process or situation play a role in determining the desired situation.

-Choice of objectives for an extension organization will be influenced by the opportunities its management can see for achieving the desired situation, as well as the vision management has of the present and the desired situation.

-We must ask why the desired situation has not been achieved. We have to ask, for example, whether there is insufficient knowledge or skills. If yes, which knowledge and skills are lacking, and among which groups of farmers?

-We must direct our efforts at variables which can be changed by extension and for which we have the manpower and resources available to bring about change.

Hierarchy of Goals

Many extension program goals are expressed vaguely, for instance, helping farmers to help themselves, which is not vary helpful. Changes in knowledge, still, attitude and behavior sought by the extension agents/organization must be specified exactly if they are to deduce which educational experiences must be included to achieve these goals. We must differentiate between

different levels of goals in order to specify program goals concretely. This means the extension agents will have to develop a hierarchy of goals.

Generally, there are two levels of goals. These are:

a) Ultimate goal:

- referees to the final goal to be achieved by the extension agent/organization/farmers
- is often determined when setting up the extension organization

b) Intermediate goals:

- show how we think we will achieve the ultimate goal.
- refer to goals that should be achieved in order to achieve the ultimate goal.

B. Selecting the Target Group

A good extension program is directed at a precisely defined target group. It is only if the target group is precisely defined that clear and appropriate decisions can be made about choice of goals, of content, of methods and resources as well as the manpower needed to achieve these goals.

We must ask ourselves whether we should direct our attentions and efforts to those who have asked for extension help or to those who know little of the results of scientific research and/or do not take this into account in their behavior.

The target group is normally larger than the group of farmers the extension agent contacts personally or via the mass media. We also hope to contact others indirectly through those who have direct contact with the extension agent. We may attempt to do this purposely by choosing an intermediate target group such as opinion leaders.

It is usually desirable to segment the target group into several different groups which can be approached in different ways. With this target group segmentation, we may form sub-groups which have to make more or less the same decisions, which need the same type of help to make their decisions, or which can be reached through the same channels. We have to segment the

target group according to their available resources and their access to inputs, credit, etc. because these resources have a major influence on the recommendations they can follow.

Policy makers can also be an important target group because they have to be well informed about the overall situation, the problems and farmers' reactions in order to develop effective policies.

Asking the following questions, when selecting the target group, is of paramount importance:

a) Is it clear on which group the extension agents will or will not concentrate their attention?
b) Have the reasons why they should concentrate on this group been well thought out?

Do we know enough about the target group's specific extension needs and the way we can reach the group?

c) Can we achieve our goal if we succeed in reaching this group?
d) Have we segmented the target group?

Is each segment more or less homogeneous with regard to extension needs and/or with regard to the way the segment can be reached?

e) Is it possible to reach the target group with the means and manpower available?

C. Selecting Extension Content

The contents of the extension message depend very much on the goal of the target group, and also on the extension strategy. It is important that the message, which might also be called recommendations, can be implemented by farmers using resources they have already, and with inputs available locally. For those farmers having resources, who can only bear very small risks, we can start with recommendations which require no extra expenditure, but which will increase yields or reduce costs.

Usually, a message is assumed to be ready for use in extension before it is in a suitable form to be utilized by farmers. For example, many research results may appear to be relevant, but first, they must be integrated creatively into a practical usable solution. Innovative farmers and extension agents jointly play roles in creating such solutions. A solution must first be tested on a limited scale so that any difficulty can be sorted out before it is used on a large scale.

In choosing the message contents, questions from the target group as well as the need they feel for information are of great importance. Furthermore, the contents should relate closely to the knowledge and attitudes of the target group in order for this information to be used for decision-making and formation of opinions.

We can judge whether the contents of an extension program have been well chosen by asking the following questions:

- Do the contents match the chosen goals?
- Are the contents described precisely?
- Are they based on the latest scientific insights and on the experiences of successful farmers?
- Are the contents adapted to the time available?
- Are the farmers overloaded with new information?
- Do the contents link up well with what farmers already know, are able, are willing to do and actually do?

D. Selecting Extension Methods

As discussed earlier, it is usually most effective to use a combination of extension methods. The preferred methods depend on:

-the goal;
-the size and the educational level of the target group;
-the level of trust between the target group and the extension agents;
-the extension agents' skills; and
-the manpower and resource available.

The effectiveness of the program is influenced not only by the choice of methods, but also by the way in which these methods are used. The following questions may be asked to judge whether or not the method(s) is/are well chosen:

a) Is the chosen method adapted to the question of whether we wish to achieve a change in knowledge, skill, attitude or behavior?

b) Are the educational activities clearly specified so that we know what the farmer will see/observe, hear, discuss and carry out?

c) Are the different methods integrated in such a way that they reinforce each other?

d) Does the planned scale make it possible to carry out all these activities well?

e) When choosing learning activities, have the needs, skills and means of the target group been considered adequately?

E. Organization of Activities

A well run extension program requires definite commitments about who will contribute what and when. Therefore, an extension program should be well organized in terms of all activities and be put on paper so that all agreements are recorded. This can be looked at from two aspects:

a) Organization of activities within the extension program, and

b) Organization of cooperation between contributors to the extension program and/or a wider change program of which the extension program is a part.

It must also be clear that the extension program should not be too rigid. Extension agents should be flexible in their reactions to changes in the situation, and especially to the reactions and emerging needs of the target group. Agreements about who should do what and when should be made only is so for as the situation is clear. One may go further by reaching agreement on procedures which will be followed to make new decisions to adjust to the changing situation.

The following questions are very helpful in order to judge whether an extension program is well organized or not:

a. Is there an action plan in which the time scale and responsibilities are clearly indicated?

b. Do all concerned know what their tasks are and when they must carry them out?

c. Are all activities well integrated with each other?

d. Do all concerned have sufficient time to prepare themselves for their tasks?

e. Can the program be carried out in the time agreed? Is it flexible enough to allow

changes if necessary?

f. Are all the necessary written and visual aids available or will they be ready in time? Who is responsible for preparing these aids?

g. Does the program need temporary experts, administrative or technical assistance? If yes, who will take care of these arrangements?

h. Have other organizations or societies organized other activities for the same target group? If yes, is there coordination between these activities and the extension program?

i. Have the formal and informal leaders of the target group been sufficiently involved with planning and execution of the program?

1.5.1.4. The Planning Process

We have seen that decisions about goals, target group, messages, methods and organization influence each other. But it is impossible to pay attention to all the decisions at the same time. To overcome this problem, the ideas from Bos' decision-making model may give the best lead. The extension agent who follows this method first has to make a series of general decisions about these points and then returns to them several times to decide each point precisely. Thus, it is desirable to begin with the point that has the greatest influence on the other decisions. Usually, this will be the goal or the target group.

The extension agent can follow the spiral to a greater or lesser degree depending on time available and the importance of the extension program. (for more detail on this point see Van den Ban p. 197)

The decision about who contributes what to the process of planning an extension programme should be unanimous. It is particularly important for the specialists and generalists to integrate their contributions, and to clarify the role farmers or their representatives play in this process.

Self-Check 1	Written Test

Directions: Answer all the questions listed below. Use the Answer sheet provided below.

I. Chose the best answer from the given alternatives and put your answer on the space provided

___ 1. According to Van den Ban agricultural extension defines:

A. Assistance to farmers to help them identify their production problems

B. A service which assists farm people to improve farming methods

C. The conscious use of communication of information to help people form sound opinion

D. The ongoing process of getting useful information to people

___ 2. Which of the following statements is correct?

A. Agricultural Extension in most countries did not start until the late 20^{th} century,

B. The word extension derives from an educational development in England

C. Agricultural extension in developing countries mirrored the administrative traditions of their respective governments

___ 3, Based upon the different views about what constitutes it, development is:

A. An increase in income B. Improvement of quality of life

B. The betterment of people in their life D. All of the above E. None of the above

___ 4. Which of the following differs from the rest concerning requirements for Agricultural development?

A. Market for farm products B. Production incentives

C. Agricultural Extension D. Foreign aid

___ 5. Which of the following is not included in the goals of governments to which agricultural and extension policies and activities can make a significant contribution.

A. Increasing food production B. Stimulating economic growth

C. Reducing social equalities D. Sustainable use of natural resources

II. Essay type: Define the following terms in short

6. Agricultural Development: _____

7. Planning: _____

Note: Satisfactory rating - 10 points **Unsatisfactory - below 10 points**

You can ask you teacher for the copy of the correct answers.

Name: _____ Date: _____

LG #2	LO #2-Apply Extension Methods and Approaches

Instruction sheet

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:

- Extension methods
- Extension approaches
- The importance of extension methods and approaches
- Applying appropriate extension methods and approaches

This guide will also assist you to attain the learning outcomes stated in the cover page. Specifically, upon completion of this learning guide, you will be able to:

- Understand extension methods to provide Extension services based on organizational standard, extension systems, extension strategy and extension guide lines
- Understand extension approaches for implementation of extension services
- Understood the importance of extension methods and approaches for Agricultural extension service delivery
- Applied appropriate extension methods and approaches to transfer agricultural technologies, based on organizational standard, extension systems, extension strategy and extension guide lines,

Learning Instructions:

5. Read the specific objectives of this Learning Guide.
6. Follow the instructions described below.
7. Read the information written in the information Sheets
8. Accomplish the Self-checks

Information Sheet-2

2.1 Extension approaches

2.1.1 Introduction

Extension has traditionally been defined as the delivery of information and technologies to farmers. This leads to the technology transfer model of extension, seen by many as the main purpose of agricultural extension (Moris 1991). This is based on the idea that 'modern' knowledge and information is transferred through extension agents to recipient farmers. Swanson et al. (1997) defined agricultural 'extension', as extending relevant agricultural information to people. The World Bank defines extension as 'the process of helping farmers to become aware of and adopt improved technology from any source to enhance their production efficiency, income and welfare' (Purcell and Anderson 1997cited in Anandajayasekeram P., et al. 2008)

It might be useful here to make a distinction between approaches, and methods of agricultural extension

Approach

The approach is the essence of an agricultural extension system. The approach is the style of action within a system and embodies the philosophy of the system. It is like a doctrine for the system, which informs, stimulates and guides such aspects of the system as its structure, its leadership, its program, its resources and its linkages.

Each approach can be characterized by seven dimensions:

(a). The dominant identified problem to which the approach is to be applied as a strategic solution;

(b). The purposes it is designed to achieve;

(c). The way in which the control of program planning is carried on, and the relation of those who control program planning to those who are the program's main target audience;

(d). The nature of the field personnel including such aspects as their density in relation to clientele, levels of training, reward system, origin, gender and transfers;

(e). The resources required and various cost factors;

(f). The typical implementation techniques used;

(g). How it measures its success.

Methods

Methods refer to the techniques used by an extension system as it functions. For example demonstration, visit by an extension agent to a farmer etc.

Having tried to make a distinction between the two terminologies, the following sections outline some of the predominant Approaches, employed in agricultural extension worldwide, and in the next section we will see the details of Extension Method

2.1.2 Extension approaches

This section describes different extension approaches that are in use. What is to be noted, however, is that in actual practice, any agricultural extension system, at a particular time, will emphasize one approach over another, but it will usually have some characteristics of other types. Thus, the approach is the starting place for a particular style of action, not the ending place. It is the essential ideology which differentiates that particular approach from others. Also each approach has certain advantages and disadvantages. Since all approaches described here are merely different approaches to the same agricultural extension phenomenon, there are common characteristics that all of them share. For example:

- all function through non-formal education
- all have content related to agriculture
- all use communication techniques and aids
- all seek to improve the capabilities of rural people.

Extension comes in many sizes and shapes. Axinn (1988) identified eight different approaches to extension work. Although the following classification, made primarily for agriculture, is not complete and the distinctions between the types are not absolute, it gives an idea of the

possibilities and opportunities that exist for the extension planner and for the policy and decision-maker at the national level (Rivera et al. 2001). The approaches are briefly summarized below.

2.1.2.1 The general agricultural extension approach

This approach assumes that technology and knowledge that are appropriate for local people exist but are not being used by them. The purpose is to help farmers increase their production. The approach is usually fairly centralized and government-controlled. Planning is done on a national basis by the central government 'which knows better than farmers'. This is a typical case of top–down planning. Field personnel tend to be large in number and high in cost, with the central government bearing most of the cost. The rate of adoption of important recommendations and increases in national production are the measures of success. A survey of agricultural extension programs indicated that agricultural extension generally was part of the Ministry of Agriculture, with field extension officers at the bottom of the hierarchy and a minister at the top. This approach lacks two-way flow of information. It fails to adjust messages for each different locality. Only farmers who seek advice benefit and these tend to be large-scale wealthier farmers. This approach does provide farmers with information on a number of production alternatives from one single source.

2.1.2.2 The commodity specialized approach

The key characteristic of this approach groups all the functions for increased production—extension, research, input supply, marketing and prices—under one administration. Extension is fairly centralized and is oriented towards one commodity or crop and the agent has many functions. Planning is controlled by a commodity organization for the purpose of increasing production of a particular commodity. Highly trained scientific personnel equipped with expensive vehicles and field scientific apparatus are employed. Techniques recommended must produce financial benefits for farmers, and be demonstrable on farmers' own fields. New inputs must be accessible, a credit scheme established, and the ratio between farm-gate inputs and commodity prices considered. Technology tends to be appropriate and distributed in a timely

manner because it focuses on a narrow range of technical concerns. Interests of farmers, however, may have less priority than those of commodity production organizations.

2.1.2.3 The training and visit approach

Training and Visit (T&V) is one of the best known of the recent approaches, which was adapted by all of the East African countries to support the development of state extension services during the early 1990s. The training and Visit (T&V) system was operating in more than 40 developing countries. It is a system, which emphasizes simplicity in both objectives and operations. It provides continuous feedback from farmers to extension agents and to research staff; it allows for continuous adjustment to the farmers' needs. It has spread rapidly around the world because it is seen as an effective means of increasing farm production and a flexible tool at all levels of any agricultural ministry's operation.

The purpose of the training and visit approach (often called T&V) is to induce farmers to increase production of specified crops. This fairly centralized approach is based on a rigorously planned schedule of visits to farmers and training of agents and subject matter specialists. Close links are maintained between research and extension. Agents are only involved in technology transfer. Planning is controlled centrally and field personnel tend to be numerous and dependent on central resources. Success is measured in terms of production increases of the particular crops covered by the program. The T&V approach is again a top–down approach. The emphasis is on disseminating unsophisticated, low-cost improved practices, and teaching farmers to make best use of available resources. There is pressure on the government to reorganize it into a more integrated service, and to send extension officers into the field to meet with farmers. It provides closer technical supervision and logistic support, but at a high cost. Actual two-way communication is lacking and there is little flexibility.

This builds on a combination of the individual and group approaches. In this system, the extension staff are trained every fortnight on relevant extension issues for that time of the year and the staff then extend these messages to contact farmers who receive special attention. Field days and other visits are arranged on the farms of contact farmers so that their neighbours can also benefit from the knowledge they have gained. Under T&V, the extension system changed its

way of reaching out to farmers by using agents who focused mainly on technology diffusion (Picciotto and Anderson 1997). T&V extension agents would meet with a small group of 'contact' farmers who were expected to disseminate information to the members of their respective communities and convey farmer's opinions back to the agents, thus creating a feedback mechanism absent in the prior system (Birkhaeuser et al. 1991). T&V did, however, have its critics. With continued budgetary crises of less developed countries, some argued that it was too expensive and impossible to implement over extensive regions. Highly dispersed farmers could never establish frequent contact with extension agents. And their needs varied widely and could not be addressed with a single, inflexible technology package (Picciotto and Anderson 1997; Feder et al. 2001).

With T&V, the frontline worker becomes the vital link in a chain, which ensures two-way communication between research institutions and farmers. The T&V system focused on regular visits and making the extension agent responsible for diffusion in target farmers and region. The system also upgraded the technical capacity of the extension service through the creation of the regional specialist positions to give inputs to the field agents in direct contact with the farmers. Unfortunately, the T&V system took the emphasis off the adequacy of the technology and put it on organizational questions and increased the costs of operation by focusing on increasing field visits and upgrading the technical capacity.

2.1.2.4 The farming systems development approach

This approach assumes that technology which fits the needs of farmers, particularly small-scale farmers, is not available and needs to be generated locally. A key characteristic of this type of extension is its systems or holistic approach at the local level. Planning evolves slowly and may be different for each agroclimatic farm ecosystem. This approach is implemented through a partnership of research and extension personnel using a systems approach. Close ties with research are required and technology for local needs is developed locally through an iterative process involving local people. Analyses and field trials are carried out on farmers' fields and in homes. The measure of success is the extent to which farm people adopt technologies developed by the program and continue to use them over time. Control of the program is shared jointly by local farm families, extension officers, and researchers. Advantages of this system include strong

linkages between extension and research personnel, and the commitment of farmers to using technologies they helped to develop. Costs can be high, and results can be slow in coming.

Farming systems/participatory methods

Researchers in developing nations first recognized the need to apply new thinking to the 'problem' of slow or non-adoption (Dunn et al. 1996). Small-scale farmers living in risk-prone, complex environments are often unable to take advantage of many of the technologies developed on research stations for large-scale farms. Researchers working around the world noticed the unique problems of the smallscale farmer livelihood system, and developed strategies to solve these that are now known as the farming systems approach (Collinson 2000; Escobar 2000; Harwood 2000; Norman 2000; Hildebrand 2001).

Starting in 1982, development practitioners began emphasizing the notion that research activities should begin and end with farmers. Rhoades and Booth (1982) coined the term 'farmer-back-to farmer'. Chambers developed this into the 'farmer-first' philosophy. Along with these were other slogans: 'Putting People First' and 'Farmer Participatory Research' models (Farrington and Martin 1988, as cited in Dunn et al. 1996), on-farm research with farming systems (OFR/FSR) perspective of CIMMYT, and on-farm client-oriented research (OFCOR) of ISNAR. The linear model does not show the many innovations that come from sources other than formal research. Bunch (1985) and many others (described in Haverkort et al. 1991) have shown that farmers are experimenters.

In response to concern for small-scale farmers, farming systems research and extension evolved simultaneously on three continents (Latin America, Africa and Asia) during 1965–80 (Hildebrand 2001). This system was marked by greater emphasis on smallholder farmers and their livelihood systems, as researchers realized that such people were not being reached effectively with the traditional extension approaches. They thus began to use what is known as the farming systems approach to research and extension. In eastern Africa, this was initiated through the work of Michael Collinson with CIMMYT (Collinson 2000). Farming systems is a holistic approach that looks at the entire farm as a system with various subsystems. It provides for greater dialogue with and input from farmers, and for enhanced linkages between research, extension and farmers. This model was marked by participation at the farm level (through farmer

input on research and on-farm trials) and by interdisciplinary linkages and a systems approach to extension.

The farming systems approach was characterized by:

- a holistic approach viewing the farm as a whole
- involvement of farmers and their priorities
- research reflecting the various subsystems' interactions and linkages and
- reliance on informal surveys or 'Rapid Rural Appraisal (RRA)'.

Farmer participatory extension then evolved because of emphasis on the needs of resource-poor farmers, gender equity and the value of indigenous knowledge systems. Diversity is heavily encouraged in this type of system, and linkages are numerous and diverse.

Current dissemination thinking takes a much more participatory, farmer-centred approach than the diffusion of innovations theory. Farmers are involved in every aspect of technology, from generation to testing to dissemination. However, it has not always been this way.

The farming systems approach also emphasizes strong on-farm research components where farmers, extension agents and researchers work together as a team.

In participatory approach, participation is concerned with the organized efforts to increase control over resources and regulative institutions in given social situations on the part of groups and movements of those hitherto excluded from such control (Pearse and Stifel 1979). Participation is a process through which stakeholders influence and share control over development initiatives and the decisions and resources that affect them (World Bank 1994). It can also be seen as a process of empowerment of the deprived and the excluded in terms of political and economic power among different social groups and classes.

In this respect, community participation is an active process by which beneficiary or client groups influence the direction and execution of a development project with a view of enhancing

their well being in terms of income, personal growth, self-reliance, or other values they cherish (Paul 1987). Moreover, participatory development stands for partnership, which is built up on the basis of dialogue among the various actors, during which the agenda is jointly set, and local views and indigenous knowledge are deliberately sought and respected. Thus people become actors instead of being beneficiaries (OECD 1994).

2.1.2.5 The participatory agricultural extension approach

This approach assumes that farmers are skilled in food production from their land, but their levels of living could be improved by additional knowledge. Active participation by farmers themselves is necessary and produces a reinforcing effect in group learning and group action. Much of the work is through group meetings, demonstrations, individual and group travel, and local sharing of appropriate technologies. This approach often focuses on the expressed needs of farmers' groups and its goal is increased production and improved quality of rural life. Implementation is often decentralized and flexible. Success is measured through numbers of farmers actively participating, and the continuity of the program. There is much to be gained by combining indigenous knowledge with science. Expressed needs of farmers are targeted. The system requires that extension workers, who are also animators and catalysts, stimulate farmers to organize for group efforts. Local people evaluate their own programs and play a role in establishing research agendas.

The participatory agricultural extension approach costs less, fits needs well, and is more efficient. However, it is more work for extension agents to organize and motivate farmers. It requires agents to live and to socialize with farmers. Where a government job is seen as a reward, the 'hardship' implied by this approach dooms it to failure. The agent is present only 'part time' and has no personal stake in the outcome.

Participatory Extension Approach (PEA)

Agricultural extension services link research workers, policy makers, and other providers of support services with the farmers. They play a dual role of providing innovative knowledge as well as feedback. With the realization of the need for empowerment, local ownership and the pluralistic approach to service provision, the role of the traditional public sector extension

services is gradually changing. The extension staff, rather than being mere agents for concepts or technologies imposed from outside, need to become facilitators/catalysts, helping communities achieve the goals they have defined. This section describes an approach called Participatory Extension Approach (PEA) that emerged from the community development activities in Zimbabwe (AGRITEX 1998).

Although termed an approach, PEA is included with other emerging FSA-related methods because it is sufficiently specific with respect to extension to be integrated within the FS approach.

Characteristics of the participatory extension approach

PEA, as developed and understood in Zimbabwe, is an extension approach and concept which involves the transformation in the way extension agents interact with the farmers. Community-based extension and joint learning is central to PEA. The PEA process emphasizes the participatory facilitation role of extension staff. Main characteristics of PEA are as follows:

- It integrates community mobilization for planning and action with rural development, agricultural extension and research;
- It is based on an equal partnership between farmers, researchers and extension agents who can all learn from each other and contribute their knowledge and skills;
- It aims to strengthen rural people's problem-solving, planning and management abilities;
- It promotes farmers' capacity to adopt and develop new and appropriate technologies/ innovations;
- It encourages farmers to learn through experimentation, building on their own knowledge and practices and blending them with new ideas, in other words, 'action reflection' or 'action learning'; and
- It recognizes that communities are not homogeneous but consist of various social groups with conflicts and differences in interests, power and capabilities. Each group then makes its collective decisions, and also provides opportunities to negotiate between groups

The role of extension is to facilitate this process. Under the emerging model, good extension work means talking with farmers, working with farmers, learning from farmers and suggesting

new approaches to farmers. A number of lessons have been developed based on past experiences. The key findings are:

- Outsiders are rarely able to determine the 'best practices' for rural people. Farmers are the only people who can make effective decisions about how to manage their farms within the many environmental and social constraints they face. There is also a multitude of social and cultural factors affecting how a farmer will choose to farm;
- Building of farmers' management and problem solving capacity requires joint learning by doing in the field;
- The spreading of innovations depends on the interaction between rural people and their social organizations;
- The role of the extension worker changes from a teacher to a facilitator. Facilitation means providing the methodology for the process; facilitating communication and information flow; and providing the technical backup options. The extension worker in fact coordinates and organizes the knowledge acquisition from several sources. Another role of the extension worker is to train the community's own facilitators. In addition, the extension worker documents farmer knowledge and experience and produce simple guidelines for the farmers;
- The research agenda is fuelled by farmers' needs, except in the case of basic research. The main difference between the Transfer of Technology model for extension and the participatory extension method are summarized in Chambers (1993). Unfortunately Chambers (1993) assumed a linear technology development and transfer model. However, if one considers the FSA to technology development and transfer and participatory extension methods, the differences are not that significant. The PEA process emphasizes the participatory facilitation role of extension staff.

2.1.2.6 The project approach

This approach concentrates efforts on a particular location, for a specific time period, often with outside resources. Part of its purpose is often to demonstrate techniques and methods that could be extended and sustained after the project period. It uses large infusions of outside resources for a few years to demonstrate the potential of new technologies. Control is at the central

government level and there are often considerable financial and technical inputs from an international development agency. Short-term change is the measure of success. In the aquaculture project in Nepal, for example, a loan from the Asian Development Bank was used by the Ministry of Agriculture to support extension work by fisheries officers in many different locations throughout the country. They were able to introduce pond fisheries through an effort which combined the project approach with the specialized commodity approach. One problem with this approach, however, is that a flow of ideas outside the project rarely occurs (Axinn 1988).

Integrated approaches aim at influencing the entire rural development process. Extension is only one though often crucial element in this strategy which targets the entire population in a given area but emphasizes work with disadvantaged groups. Integrated approaches are generally implemented in the form of large-scale and foreign-funded projects aiming at alleviating mass poverty in rural areas on the basis of 'a simultaneous improvement in the utilization of natural resources and of human potential' (Rauch 1993, 6). Measures to promote production are coupled with a strong emphasis on self-help. The underlying concept is typically multi-sectoral.

Evaluations of more than a decade of integrated rural development (IRD) projects have revealed serious shortcomings in reaching the goal of mass poverty alleviation (IBRD 1987; BMZ 1990). Sizeable numbers of the poor were not reached by project activities, nor were positive effects consolidated on a sustainable basis. Project deficiencies were in part management related and very often due to a serious underestimation of the great complexity of multi-sectoral programs with ambitious goals. The disregard of the target group principle and of due consideration for framework conditions (economic and institutional) played an even more important role, as did the lack of compatible technical solutions.

Recent efforts to improve regional rural development (RRD) projects and enhance chances for a broad and sustainable impact (Rauch 1993) are relevant for all general extension approaches. The key concept is the availability of locally adapted solutions established on a common basis. This requires not only participatory technology identification, test and dissemination, but also an active role by the change agency in mediating between different institutions involved and their interests. A particular emphasis is laid on dealing with adverse framework conditions, explicitly

taking them into account and attempting to influence them in favour of clients. Finally, in order to achieve these improvements, new efforts must be made to specify and operationalize (extension) objectives and concepts (sustainability, participation, gender-specific target-group approach and poverty alleviation).

2.1.2.7 The cost sharing approach

This approach is based on local people sharing part of the cost of the extension program. Its purpose is to provide advice and information to facilitate farmers' self-improvement. It assumes that cost-sharing with local people (who do not have the means to pay the full cost) will promote a program that is more likely to meet local situations and where extension agents are more accountable to local interests. Control and planning is shared by various entities and is responsive to local interests. Success is measured by farmers' willingness and ability to provide some share of the cost, be it individually or through local government units. Problems may arise if local farmers are pressured into investing in unproven enterprises.

2.1.2.8 The educational institution approach

This approach uses educational institutions which have technical knowledge and some research ability to provide extension services for rural people. Planning is controlled by those determining the curriculum of the educational institution. Implementation is through nonformal instruction in groups or individuals through a college or university. Attendance and the extent of participation by farmers in agricultural extension activities are the measures of success. Ideally researchers learn from extension personnel who, in turn, learn from farmers. However, this rarely occurs in practice. The advantage of this approach is the relationship between specialized scientists and field extension personnel.

While the Cooperative Extension Service (CES) of the United States is still the only system in which the main extension function remains within the university, some developing countries, notably India, have integrated educational institutions into practical extension work. Within the United States of America, state universities have traditionally cooperated with local counties and the US Department of Agriculture in doing extension besides education and research. Within the

last 130 years, extension goals of the land-grant colleges have shifted from practical education to technology transfer and, more recently, to a much broader concept of human resource development.

With the emergence of strong private and other public sector research and development organizations and dramatic changes within the agricultural production sector, CES is facing new challenges with regard to coordination and cooperation. Apart from its traditional roles, networking will become a primary role (Bennet 1990). In this model, industry as well as intermediate and end users of knowledge become part of the extension system.

While in most countries, the main contribution of educational institutions to extension will be the training of qualified, dedicated, and responsible personnel, some Indian agricultural universities have come close to the US model without taking over the full load of extension work. In the field, they have taken over functions which are only inadequately performed by the ministry, thus supporting general extension work. Remarkable features are direct assessment of clients' needs, user-oriented research, quality training for state personnel, and a strong linkage between academic education and field practice. Models vary from state to state. The Punjab Agricultural University (PAU) has its own multidisciplinary extension team in each district, engaged in adaptive research, training and consultancy. Backed up by extension specialists on campus, they are transmitters and receivers of experiences from researchers, farmers and state extension workers. At PAU, a unique system of processing these experiences is practised. Regular workshops are held which unite university and department staff from research and extension together with outstanding farmers. New findings and feedback are presented, evaluated and published as a 'Package of Practices' to be used by all extension staff for the next season (Nagel 1980).

In the Philippines, which works with ministry-operated extension, university field contacts have been combined with practical development work. The University of the Philippines at Los Baños (UPLB) has its own 'social laboratory' in rural areas. Transfer of ideas is not limited to production technology, but includes the testing of communication strategies as well as helping farmers to organize themselves. Experiences are channelled back into UPLB teaching and research.

2.2 Extension methods

2.2.1 Extension methods

Extension Methods refer to the techniques used by an extension system as it functions. In this section we will discuss several of the methods extension agents commonly use to help farmers form opinions and make decisions. The success of extension depends to a very great extent on the choice of suitable methods. An extension agent's choice of any of the many methods available will depend on his or her specific goals and on the circumstances in which he or she works. The extension agent also must decide how to use these methods.

Individual or face-to-face, group and mass media extension methods are discussed in turn. Print and electronic media such as newspaper, radio and television help extension agents to reach large number of farmers simultaneously. However, there is little opportunity for these farmers to interact among themselves or to provide feedback to the extension agents. Group methods reach fewer farmers but offer more, if somewhat variable, opportunities for interaction and feedback. Formal lectures normally provide fewer opportunities than group discussions, although informal talks usually involve adequate interaction and feedback opportunity. Individual extension consists mainly of a dialogue between extension agent and farmer

None of these methods can be singled out as the best one: all of them have their advantages and disadvantages. The choice of methods depends on various factors such as the tenure system in the area, community organization, and resources available for extension. A combination of extension methods is more effective than just one method. For example, in an area where tenure is communal, or land management is based on communal efforts, a group approach is likely to be more effective than an individual approach. Meetings, field days and approaches to schools may also be good options.

Usually decisions have to be made communally, and the best entry point may be through established decision-making systems, such as community meetings. Knowledge of traditional systems for making decisions is essential, particularly in pastoral areas where such systems are often still of great importance.

Even if the tenure is individual, communal management practices often exist. For example, postharvest grazing, changes in behaviour in this respect may be very desirable since uncontrolled postharvest grazing is a constraint to tree growing and soil conservation, and a change in this practice can best be achieved if the whole community is addressed. It may be difficult for an individual to introduce restrictions in this situation since the neighbours expect grazing to be free for all. In communities where group work is common, and groups have already been organized for various tasks, a group approach may also be more feasible than an individual approach.

2.2.2 The individual/household extension Method

An extension worker, interacting on one-to-one basis with the people, is utilizing an individual method. Through working individually with the clientele, the extension worker learns about the people of the area, how they think, what their needs are, and how they carry on their work. In addition, it provides the opportunity for the local citizens to get to know the extension worker so that the personal bond between the extension worker & the community can be established. It also provides the opportunity for mutual discussion (dialogue) between the extension workers and the farmers.

Individual extension alone is not a very effective way of promoting the well-being of the mass of small farmers or reaching large numbers of clients, but as the most intensive form of communication between farmers and extension workers, it plays an important role in private extension as well as in complementing group and mass extension methods, if the outreach of extension is defined geographically.

Generally, individual extension method involves the process of meeting the farmer individually. We can have several methods of individual extension. Some of these are

- **Individual counseling of contact farmers and functionaries in client group organizations:**
  - ✓ communication of difficult technical matters;

- ✓ organizational advice on setting up and running group organizations;
- ✓ preparation of meetings, programs and campaigns;
- ✓ communication of up-to-date information;
- ✓ working out solutions to problems together.

- **Discussion with individual members of the client groups**

The advisor can have discussion with individual farmers on an ongoing basis in order to:

- ✓ gather information that he needs for checking the content and methods of extension work;
- ✓ find out reactions to the development measures on offer;
- ✓ give farmers the chance to talk about issues which they would not discuss in the presence of others;
- ✓ avoid giving the impressions that they are only willing to talk to contact farmers and officials.

2.2.2.1 The extension talk

Extension talks differ from a normal conversations, an enquiry, or an interrogation. It is always the client and his/her way of perceiving a problem that is the focus and starting point of the extension worker. We distinguish between **formal** and **informal** extension talks. Formal talks usually take place on the farm or in the advisor's office. The aim of these sessions is to isolate concrete problems and work out ways of solving them. In contrast there are informal contacts that can occur in numerous occasions, and the extension worker may well find this is the easiest way of getting to know the wishes and difficulties of client groups and of establishing contact with them.

The course and function of extension talks should be determined by the objective of **clearly identifying** existing **problems and their causes** and trying to arrive at **possible solutions** together.

During this process of identification of problems, we often find that farmers and advisors have a different appreciation of problems. A discussion can only be productive if a common way of

looking at a problem can be found, and this depends on the existence of mutual respect, empathy and patience on both sides. This is particularly relevant in those cases where the client gives only vague expression to difficulties. The advisor must not be tempted to impose a solution on the farmer even though he might be in a position to do so on account of his superior knowledge and power of expression.

Understanding problems becomes easier when the person to be advised is **respected as an individual**. It is not uncommon to find prejudice, a desire to impress, and a moralizing, disapproving attitude on the part of the extension worker, which may give rise to a defensive attitude on the part of the client and make supportive extension work an impossibility. (Hoffmann V., et al., 2009:123)

Going through the process of problem solving together with the client poses a challenge for the extension worker. It also demands much patience. Extension workers should not be afraid to face this challenge.

Individual extension talks are a key instrument of extension, if serious specific decisions need to be taken in order to help clients in solving complex problems. However, individual extension talks are time consuming. If used as the only tool, they will constrain the extension worker's ability to collaborate adequately with all his or her clients. Different forms of group extension are more effective when extension staff has to deal with larger numbers of clients.

2.2.2.2 Individual extension on the farm

The extent to which discussion can take place in the fields or on the farm depends on the local conditions, the farmer's routines, the time of day or year, and the content of the counseling session. A **discussion at the farm** offers the following advantages compared with other methods of individual extension work:

- The farmer/client feels secure in his surroundings and is more willing to discuss matters openly.

- Problems such as plant diseases, soil fertility, cropping methods, animal keeping or farm organization can be investigated directly on the spot.
- It is easier to get farmers to see the benefit of innovations when they are in familiar surroundings.
- The advisor is in a position to check the validity of any claims the farmer makes. With the result of his own observations and on the basis of any additional information, the advisor finds it much easier to work together with the farmer to arrive at possible solutions.
- Regular visits to the farm mean a regular exchange of ideas, which is necessary if the content and methods of extension work are to be continually brought up to date. This is essential for training contact farmers and functionaries in the context of group extension procedures.
- If the advisor is already familiar with the farm, his visit can be restricted more and more to just dealing with essential technical matters.

2.2.2.3 Individual extension in the office or home of the field advisor

Visits by farmers to the office or home of the extension worker in developing countries are not very common. The reasons for this include the often considerable distance to the nearest advisor, transport problems and costs, perhaps bad experiences (having to wait a long time, having business differed, empty promises), and personal inhibitions about presenting their problems. Better educated and financially secure farmers with experience of dealing with authorities are more likely to seek out the adviser for themselves, a fact which encourages selective counseling of the better-off farmers and reduces the chances of the poorer client groups. (Hoffmann V., et al., 2009:126)

2.2.2.4 Individual extension by telephone and through letters or e-mail

Meeting personally is absolutely necessary at the start of an advisor-client relationship. Later on, if a positive and trusting relationship exists, not every activity must involve personal contact. Where possible, shorter messages and standard information can also be transmitted impersonally,

e.g. by letter, fax, e-mail or SMS. Telephone calls are intermediate means of contacts that allow for a direct exchange of information and an immediate response to a message, meaning that misunderstanding can be better prevented compared with one-way communication. The diffusion of mobile telephone networks even to remote areas makes things much easier. But the more critical phases in complex problem solving call for physical presence and direct personal contact.

2.2.2.5 Individual extension in the market place or at religious places

Being present at markets or near the church or mosque may make it easier for clients to approach the adviser. The hurdle clients have to overcome may be lower compared to calling by phone or going to the office, so that after a few words of greeting and small talk, the client can indicate that he or she has problems and needs support. Then an appointment for a meeting can be made. Beginning to talk about the problem immediately is generally not appropriate: the situation is too public, not confidential enough, and too much noise and disturbance limits the efficacy of interaction.

Advantages of the individual method:

- Unclear messages that have not been fully understood can easily be clarified;
- The extension officer is able to secure cooperation and inspire confidence in the family through personal contact;
- It facilitates immediate feedback on the effectiveness of the measures discussed;
- It may be the best way to ensure that everyone in the family participates in decision-making.

Disadvantages of the individual method:

- It is expensive in terms of time and transport;
- Only a few farmers may be visited, and sometimes they may be mainly the extension worker's friends;
- The area covered is small since all the effort is concentrated on a few farmers.

2.2.3 Group Extension Methods

By meeting people in-groups it is assumed that an extension worker can contact & influence, more clients than by contacting them individually. This will improve cost effectiveness to the extent that it achieves more with the same resources or the same with fewer resources.

This method involves working with groups or the community at large. It is suitable when discussing matters related to the whole community (such as postharvest grazing, protection, and management of indigenous forests) and when there are activities to be undertaken by a group (e.g. group nurseries). The advantages and disadvantages of the group approach for agricultural R&D is described in detail in Chapter 4. (Anandajayasekeram P., et al. 2008:104) The direct target group may be a women's group, a church organization, a cooperative society or the community in general. Extension work can be carried out at meetings, either organized specifically for the selected purpose or by making use of meetings that were already organized for some other purpose. Meetings are effective venues for receiving information from the community, for discussing issues of communal or individual interest and for spreading new ideas. Field days and demonstration are best organized on individual farms.

In group extension work, several members of the client group who are linked by formal or informal ties are addressed at the same time. The advantages of group work are made clear by the following points.

- A large number of farmers can be reached, even if the material and staffing provision of the extension service is limited.
- There are definite time savings compared with individual extension work.
- Extension costs per head of the client group are reduced.
- Group methods permit more participants by the client group.
- Group extension work means increased observation of the advisor's performance by the farmers, which is an incentive to greater effort on his part.
- Farmers exchange their views of a problem, their experiences and judgments, and this is more convincing than the same content coming from the advisor.

- Techniques of group dynamics can be used to accelerate the spread of information and increase the willingness of the farmers to make decisions.
- If the advisor does not express himself adequately, he is frequently "translated" by the members of the group.
- Advantages and disadvantages can be weighed up more thoroughly in group discussions: a group as a whole is prepared to accept a higher risk than an individual, and the potential for superior performance of groups and teams compared to individuals can be activated for extension purposes.

Group Extension work is therefore the **most important method** for advising and promoting the interests of a large number of farmers. The more it is supplemented by individual and mass extension, the greater are its chances of success. DARR (2009) provides empirical proof of better adoption of innovations through extension groups. But group extension work is not always the best way of communicating particularly difficult and complex subject matters. (Hoffmann V., et al., 2009:128)

2.2.3.1 Settings for work with groups

The classic setting is a **discussion group** in a circle or round table arrangement, be it outside or inside. But there are also other group settings important for extension work, such as **demonstration**, **field days**, **excursions** and **visits**. Finally, more education-oriented group work can be part of extension work in training centers or in rural schools. …

A. Group discussion

The group discussion is comparable in its aims to the discussion between an advisor and an individual, but it becomes more difficult for the extension worker when there is a large number of people taking part and he or she has quite a different role to play. The success or failure of group discussion depends largely on the level of preparation.

The advisor must **prepare the group session carefully** in order to present the necessary information effectively to put appropriate and stimulating questions to the group. If it is not

possible to prepare leaflets or handouts, there should at least be a blackboard or some other item of presentation equipment available. Practical demonstration should be fully rehearsed beforehand. Questions of detail should be clarified in preparatory discussion with other advisers or by consulting specialists. When their presence is necessary, they should if possible be brought into the group discussions.

Running group discussions

The discussion should begin as **punctually** as possible. Advisers arriving late offend participants who have made an exhausting trek or have to get on with urgent work in their fields.

At the beginning of the discussion the **agenda** should be briefly presented again and any additional items included.

The freer the group members feel to speak, the more the discussion will eventually be based on sound reasoning. It is the job of the discussion leader to encourage timid and diffident **individuals to take part**. Equally, he or she should prevent domination of the discussion by pompous and long-winded talkers, **limiting their speech** and keeping strictly to the agenda.

A group discussion should be considered if it is certain – or highly expected – that various opinions on a given topic are represented within a group or when there is no general agreement about a certain issue. The objective is the exchange of knowledge and information between the participants.

B. "Extension group" – extension circle

Specific forms of group extension are extension groups or extension circles. These are a group of farmers (e.g. farm managers) who decide to meet regularly in order

- to exchange experiences and learn from each other and
- to solve common problems

C. Demonstration

Demonstration display different levels of complexity, from demonstration plots with a single crop or cropping practice, or a contact farmer who can show several innovations on his own farm or on neighboring farms, through to a pilot farm that provides an example of a complete best practice farming system.

A demonstration should be a **clear** and **practical** presentation of production techniques. We usually distinguish between **demonstrations of results** and **demonstrations of methods**. **Result demonstration** compares the results achieved by various production techniques. It shows why a practice should be adopted by physically showing how a new or different practice compares with a commonly used local practice. Method Demonstration presents a new technique, that means method demonstrations is done to show how something is done step by step for the purpose of teaching new teachings & practices

D. Field day.

It is a day or days in which an area containing successful farming is open for people to visit.

E. Excursions

Farmers are shown farms & experimental fields outside their own areas. Its function is to make participants aware of innovations away from their home.

2.2.3.2 Mass media

This method involves the use of the mass media (e.g. radio, posters, drama, television, newspapers, films, slide shows) to inform the public. Mass media are mainly used to create awareness.

A. Function of media

i. Setting agenda of important discussion

Media can have important influence on what we think and talk about, even though they may not decide what we must think. e.g. media can draw attention to problems faced by a population during famine, etc... They can stimulate farmers to discuss points with extension workers.

ii. Transferring knowledge

We learn only part of what we know about the world through our observations & direct experiences, or from hearing about other people's experiences & observations. We gain much of what we know about the world from the media. Knowledge is more likely to be transferred successfully if it meets a need or fills a vacuum. New ideas diffused through media are more acceptable if they link-up with existing knowledge than when they attempt to modify it.

iii. Forming and changing opinions

Mass media play an important role in developing opinion when members of the public do not have strong views about particular issues. Media also have important effects in changing opinions when the position they advocate differs only slightly from one's own opinion.

iv. Changing behavior

Mass media can be used to change patterns of behaviors, especially where these changes are small and relatively unimportant or where they help us to fulfill an existing wish, e.g. Adverts draw consumers attention to products they felt a need but didn't know existed.

We tend to assume that receivers are resistant when media fail to achieve behavioral change, although logically the source of the message may also be responsible. Source credibility, reliability & relevance are very important. Credibility will generally be higher if the source is considered to be an expert, if he agrees with the receivers on important points.

2.2.3.3 Advantages of mass extension methods:

• These methods can increase the impact of extension staff through rapid spread of information;
• Many people can be reached within a short time, even in remote areas.

2.2.3.4 Disadvantages of mass extension methods:

• The amount of information that can be transmitted is limited;

• Radio and television reception is poor in some areas and the target group may not own sets, particularly TVs;
• It is difficult to evaluate the impact since there is no immediate feedback;
• Production of both programs and printed materials is costly and requires special skills.

Components of effective extension methods

An effective extension system has several key components:

- The most important factor is that it is participatory in nature, i.e. participation by all involved leads to more effective programs, development of suitable technologies and sustainability;
- Because funding is a limiting issue in most countries, a pluralistic system where different types of extension providers play a part is an effective extension system. This includes the ministry of agriculture or comparable government institutions, private companies, non-governmental organizations and farmers' groups. Funding would come from various sources including the government budget, donors, private companies and payment by clientele;
- An effective system has limited bureaucracy, yet is accountable to funders and clientele and provides monitoring and evaluation throughout the entire project;
- An important aspect of an effective system is that diversity is encouraged. Issues such as gender, age and ethnicity are examined and addressed.

2.3. The importance of extension methods and approaches

2.3.1 Approaches to Extension

By **approaches to extension** we understand the fundamental **Concept and functional** method of extension adopted in order to fulfill its aims, especially in the planning phase. To be helpful, any **description of an approach** covers two main aspects: a more or less complete description of the extension system and its elements, and a sequence showing where to start and how to develop the system into higher levels of performance. (V. Hoffman et.al., 2009)

Two basically different classes of approach can be distinguished, namely the **production technology approach** and the **problem-solving approach**. The logical consequences of the problem-solving approaches are:

- Advice directed specially towards client groups and sub-groups and the development of approaches to problem solving which are tailor-made for their problem situation
- Active participation of client groups and sponsoring institutions in the planning, implementation and evaluation of extension measures
- The planning and implementation of development and extension projects, doing justice to the requirements of participation and not pre-empting important decisions

2.3.2 Extension methods

Extension methods in general are systematic ways of reaching objectives. But as the objectives are so many in our case, it is not really easy to classify methods according to objectives. **Extension methods** consist of **techniques of communication** between extension workers and client groups with the aim of motivating and enabling them in final ways of solving their problems. This leads to questions like:

- How to proceed under the “given conditions”
- How to understand the specific context of a situation?
- Who are the clients and other stakeholders in the situation, and what do they want?

- What is the capacity, the potential and task of extension in such a situation?
- Which aim or goal should be envisaged in this situation

If we do not know the situation well enough, we have to analyze it, and if this does not bring about enough certainty, we should start some tentative activities, evaluate reactions and so gradually develop our methodology. Methods relate to influencing processes, so determining methods means thinking in terms of phases and sequences and of how it might be best to proceed. It also means change towards improving situations, so our interest has to be focused on those factors that can be altered by our joint activities with the clients.

2.3.3 Importance of Extension Methods and Approaches

As mentioned above extension methods and approaches have prominent importance in designing and developing extension programs, implementing different development activities, sharing information, disseminating technology, etc. In addition to the abovementioned advantages extension approaches and methods have different importance as mentioned below.

2.3.3.1 Information and Technology Dissemination

Extension Methods and approaches are important in disseminating information/technology whether through transfer or diffusion.

2.3.3.2 Delivering Extension Messages

Farmers need different information from different sources. Extension agents deliver required information to farmers to satisfy need using extension methods

2.3.3.3 Increase Knowledge of Farmers

The delivery of information or extension message to farmers by extension agents increases farmers' knowledge. The increase in farmers' knowledge in turn improves their activities.

2.3.3.4 Bringing Attitude Change

The main purpose of extension is to change clients' attitude. It is only making clients' change their attitude that would make them accept new ideas and change or improve their way of doing things. Through organized and appropriate approach extension professional bring attitude change in clients by using relevant methods.

2.4. Applying appropriate extension methods and approaches

2.4.1 Introduction

An extension agents' choice of any of the methods available will depend on his specific goals and on the circumstances in which he works. A substantial number of proven educational techniques exist from which the extension worker may choose to setup learning situations and maximize the transfer of information and skills to young and adult learners.

Once the needs of an area or community have been identified, it is the task of extension workers to choose the teaching methods that will be most effective in achieving their objectives.

2.4.2 Principles of selecting Extension method

2.4.2.1 No single extension method is better than another

The extension worker should choose those technique (s) best cited to the situation. None technique is considered superior to another

2.4.2.2. Use a number of teaching methods

Experience in extension work has shown that the more the number of ways new information is presented the faster an individual learns

2.4.2.3. Methods will overlap

For instance, if a demonstration stimulates group discussion, two methods are utilized which will reinforce the information considered in the demonstration.

2.4.2.4 Use visual aids and written materials when possible

Teaching can be reinforced and supported by use of visual aids and written materials because they facilitate understanding.

2.4.3. Extension Approach

Extension Approach refers to the dominant guide and style of action of an extension system to achieve the system goals and objective more effectively. It is the dominant factor in extension management and administration. It influences the management of agricultural organisation in planning subject matter coverage, methods, targeting, resource allocation and monitoring and evaluation.

There are different extension approaches among which we can choose to accomplish a required objective. Based upon the environment we are working in, it is important to choose the appropriate approach to bring required change in a specific situation.

Self-Check 2	Written Test

Directions: Answer all the questions listed below. Use the Answer sheet provided below.

I. Choose the best answer from the given alternatives and write the letter of you choice on the space provided

___ 1. Which of the following statements is correct about Extension approach?

A. It is the essence of an agricultural extension system

B. It is the style of action within a system

C. It embodies the philosophy of the system

D. All of the above E. None of the above

___ 2. Which of the following is correct about extension method?

A. It refers to the techniques used by extension system

B. Extension agents use it to study the concept of agricultural extension

C. The success of extension depends on the choice of suitable method

D. The choice of method depends on the goal of the extension agent

___ 3. The importance of extension methods and approaches include:

A. Increasing farmers spare time B. Delivering extension message

C. Bringing attitude change D. Increase farmers knowledge

___ 4. Which one of the following differs from the rest concerning the selection principles of extension method?

A. Methods will overlap B. No single extension method is better than another

C. Use visual aids D. Written materials are not used

Note: Satisfactory rating - 10 points Unsatisfactory - below 10 points

You can ask you teacher for the copy of the correct answers.

Name: _____ Date: _____

LG #3	LO #3- Apply Agricultural Extension Communication and Facilitation for technology promotion

Instruction sheet

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:

- The concept**,** principle and type of communication
- Identifying, understanding and solving communication barriers,
- Elements of communication
- Audio visual techniques
- Roles and characteristics of extension communicator
- The basic concept of facilitation
- Roles and responsibilities of a facilitator
- Conflict resolution skills
- The skills of a facilitator

This guide will also assist you to attain the learning outcomes stated in the cover page. Specifically, upon completion of this learning guide, you will be able to:

- Understand the concept**,** principle and type of communication to have good extension communication knowledge & skill
- Identify, understand and solve communication barriers to undertake effective communication
- Define and use elements of extension communication to create positive environment for communication
- Understand audio visual techniques to provide Agricultural Extension and communication delivery services
- Recommend roles and characteristics of extension communicator to improve the communicator's performance
- Understand the basic concept of facilitation to improve facilitation skills
- Apply the roles and responsibilities of a facilitator to progress facilitation skills

- Conflict resolution skill is understood to enhance homogeneity
- The skills of a facilitator are applied for communication & technology promotion

Learning Instructions:

9. Read the specific objectives of this Learning Guide.
10. Follow the instructions described below.
11. Read the information written in the information Sheets
12. Accomplish the Self-checks

Information Sheet-3

3.1. The concept, principles and types of communication

3.1.1 Meaning of communication

The word communication originates from the word ‘communis’; which means common. So communication is an act by which a person shares the knowledge, feelings, ideas, information, etc. in ways such that each gains a common understanding of the meaning, intent and use of the message. The sociologists, the educationists and the psychologists have defined communication in various ways and according to the disciplines to which they belong.

But, it can be generalized that communication is a process of social interaction, i.e., in a communication situation two or more individuals interact. They try to tangibly influence the ideas; attitudes, knowledge or feelings taking place between two individuals. In a face-to-face situation communication is not a mere exchange of information but something more, because in such a situation, along with the information one passes, the gestures, expression, language, the manner of expression and tone - all these combined together, create a sort of impact on both. Some kind of change occurs as a result of interaction. This change may be visible in terms of knowledge and behaviour.

Communication can occur even without uttering words

Communication can occur even without words. Our four senses - audio, visual, touch and smell communicate. The ringing of an alarm clock communicates to us that we are to get up, the peep outside the window i.e., the visual sense, gives us the indication of weather - rain, snow, fog, storm, etc; the touch of a pot, whether hot or cold, communicates to us whether it can be handled or not; the sense of smell gives us knowledge whether meat or eggs are being cooked for breakfast.

So when a message is sent from a source to a receiver and produces a specific mental or physical response communication occurs.

Communication - a two way process

The index of communication may not always be a positive reaction. Therefore, it is essential that the transmission of facts or information is carried in such a manner that the meaning intended and the use of messages is understood by the communicators, so that it becomes a two - way process.

3.1.2 Importance of communication in Extension work

Communication has attained great importance in Community Development and Extension Programmes. It is through this process that the aims and objectives of the programme are to be widely disseminated to the people and useful information to solve their problems is to be passed on to them. This necessitates that the extension workers should have a thorough understanding of the communication process.

The extension worker cannot expect to bring about change unless he is able to communicate effectively. He has to create a conducive situation where information can be transmitted with greater impact on the people. The new knowledge acquired through research has to be disseminated to effect change in the methods of farming or living and in improving them. The central challenge, therefore, to the extension worker is to help people to adopt innovations for increasing the agricultural production. The better the communication the earlier will be the development of a society.

3.1.3 Scope of Communication

Scope, in this context, refers effectively to the sphere of operation (or influence) of the communication. There are two aspects to this: 'audience scope' and 'subject scope'. **[Principles of Communication: n.d. p 12. No Author name]**

Audience scope

First and foremost, it is essential for the communicator to clearly identify the target audience of the communication. This will allow the recipient to decide "Is this communication intended for

me?"It will also allow the communicator to tailor the communication (especially the language used) to the particular needs of the audience.

Most technical communications are not aimed at specific people, but at groups of people, or more likely, at job functions or users of particular products. It may also be the case that the communication is aimed at 'the general public'. In each case, the communicator must ensure that the target audience is clearly identified.

Subject Scope

In order to allow readers to further ascertain whether a communication contains information that they need to know, or that they may be looking for, a communication should always clearly identify the subject scope of the communication. The subject scope is a specification of the information covered by the communication.

Obviously, any specification of the scope of a communication should appear as near to the start of the communication as possible. The whole point in specifying the scope is to allow the reader to decide whether the communication is relevant to them.

3.1.4 Functions of communication

One of the functions of communication which man has developed to his extreme social advantage is that of communicating to some living aspect of the environment in order to establish, maintain, exploit or alter the relationship with that person. According to Lee Thayer the basic functions of communication may be categorized as under:

The information function

The basic element of adapting oneself to the environment or adapting the environment to oneself is information. We must have some information about going on in our environments to concern ourselves about it. And we must have some information about ourselves, our intentions, goals, etc., in order to have something to be concerned about. So the getting or giving of information thus underlies all communication encounters, either directly or indirectly. Information is basic to

all of the other applied functions of communication. Communication is not going to occur unless someone is acquiring and consuming some information about himself or his environment.

Usually, when we speak of informative communication, we refer to 'international' communication. That is, we refer to the consequences of reactions intended or sought by the originator.

Command or instructive functions

Those who are hierarchically superior (in family, business, military, civic or personal life) often indicate communication either for the purpose of informing their subordinates or for the purpose of telling them what to do, how to do, etc.

One of the expectations that properly socialized subordinates bring to their relationships with superiors is that they are obliged to accept certain kinds of orders from certain superiors to do certain kinds of things. When the rules about who can order whom to do what things, are mutually understood, neither the supervisor nor the subordinate expects to engage in a dialogue.

The command and instructive functions of communication are more observable in formal organizations than they are in informal organizations. Individuals who are hierarchically superior within an organizational structure are both privileged and obligated to command (and/or to control) certain task-related behavior of their subordinates.

Influence or persuasive functions

The sole purpose of communication is to influence. We communicate to influence, to effect with intent the behavior of other person(s).

Aristotle defined the study of rholotic (communication) as the search for all the available means of presentation. So he clearly implied that the main aim of communication was 'presentation'.

Integrative functions

The major function of communication at the interpersonal level is that of self-integration or of continuously off setting any disintegration, (i.e. entropy that might otherwise occur).

At the level of formal organizations, larger than face-to-face human groups, integrative functions are provided in part by bureaucratization, proceduralisation, industrialization, etc. When a social system exceeds the integrative limits of face-to-face encounters, the necessary integrative mechanisms become embedded in that social system, literature, art, folklore, mythology, beliefs, orientations, etiquette and institutional practices.

Undoubtedly there is some advantage both to the individual and to the organisation in the relative integrity of their perspective structures.

All communication behavior has its purpose, its goals, and the production of a response. When we learn to phrase our purpose in terms of specific responses from those attending to our messages, we have taken the first step towards efficient and effective communication. The failure to affect the receiver in ways that were intended can be attributed to one or both of the two causes - inefficiency and/or misperception.

3.1.5 Principles of Communication

It is comprehensively understood that to enrich one's lives, it is necessary for the individuals to promote communication processes in an effective manner. But these can be promoted in an effective manner, when the individuals acquire an understanding of principles of communication. Through the principles of communication, the individuals are able to generate information in terms of ways that are necessary to put into operation the communication processes in a worthwhile and efficacious manner. It can be stated that principles of communication are meaningful in enriching the communication processes. (Kapur R., n.d. (The Principles of Communication)) .

The principles of communication comprise of factors, which are necessary in making the communication processes worthwhile and efficient. In various types of settings, it is vital for the individuals to augment one's understanding in terms of these principles. Furthermore, they need to be put into operation by all the members. These have been stated as follows:

Trustworthiness – Effective relationships are built on **trust**. Within the working environment, when the individuals trust each other, they will be able to communicate in a well-organized manner.

Within a working environment, individuals are required to work in collaboration and integration with each other. When superiors assign various types of job duties to their subordinates, they trust that they possess the essential skills and abilities that are necessary to carry out their job duties well and generate the desired outcomes. In order to make the communication processes meaningful, it is vital to have trust. When individuals experience barriers and difficulties within the course of the implementation of job duties, it is apparent that they will need support and assistance from others. When the individuals trust others, only then they approach them to seek assistance and support. Trustworthiness is therefore regarded as one of the indispensable principles of communication.

Effectual Speaking Skills – Possession of effectual speaking skills is regarded as one of the indispensable principles of communication. It is vital for the individuals to recognize the significance of speaking skills to participate in number of tasks and activities including interviews, group discussions, oral examinations, competitions, presentations and so forth. In enhancing ones speaking skills, it is vital for the individuals to work towards up-gradation of their language skills.

Active Listening – Active listening is referred to focusing entirely on the person speaking. Active listening is also regarded as one of the important principles of communication. When individuals are communicating with the main purpose of providing support and assistance to others, it is vital to implement active listening. Active listening is a difficult task and takes practice. The reason being, in most cases, the individuals are willing to talk rather than listen.

Good Writing Skills – Written communication is also regarded to be of utmost significance. It is vital for the individuals to pay attention and focus on the up-gradation of writing skills as well. Good writing skills not only enable the individuals to communicate well, but also perform their tasks and activities in a well-organized manner.

Good Reading Skills – Reading skills are also regarded as an important principle of communication. At all levels individuals need to focus on the up-gradation of their reading skills. The up-gradation of reading skills is crucial for all individuals, irrespective of their job positions in all types of settings. Quick, efficient and imaginative reading techniques are essential in order to achieve success.

Non-Judgemental – Judging others is not regarded as good basis for building relationships. It is easy to say that one should be non-judgemental, but it is a difficult principle to follow. Being non-judgemental is regarded as an indispensable principle of communication, as it enables individuals to depict broad-mindedness, leniency and easy-going nature. Individuals in leadership positions are required to be non-judgemental. When they have identified the inconsistencies in others' performances, it is vital for them to give feedback in a constructive manner. When individuals receive constructive feedback, they usually form positive viewpoints and aim to bring about improvements. Furthermore, non-judgemental attitude enables individuals to augment their skills and abilities.

Value Difference – Value difference is referred to valuing the different contributions of the individuals that one interacts with in order to reinforce ones terms and relationships. It is comprehensively understood that individuals are different from each other in terms of natures, attitudes, competencies and abilities.

No Assumptions –Individuals can interpret words they listen to in a manner that was not intended to the person who said them. When someone has said something and others take those words as completely different, then the communication processes has not taken place in an effective manner. Hence, when individuals are speaking to each other or communicating in a written form, they need to ensure that they are able to understand each other well. It is important to understand clearly, what others mean, rather than making assumptions. When individuals make assumptions and they prove to be incorrect, then they may have to experience detrimental effects. It is worthwhile and favourable to check the understanding of individuals, particularly the ones, with whom one is communicating with. To clarify that individuals have understood the aspects clearly, one should not make assumptions. Therefore, when there are not any assumptions, communication takes place in an efficient manner.

Authenticity – Authenticity is referred to genuineness, reality, validity and truthfulness. When individuals are communicating with each other, it is of utmost significance for them to put into operation the trait of authenticity.

Developing Interest and Curiosity – Developing interest and curiosity are regarded as important principles of communication. These are essential on the part of speakers and receivers of information. When the speakers are speaking, they need to possess efficient knowledge in terms of topics and depict clarity and fluency. In addition, it is vital for them to depict interest in the implementation of their job duties. Hence, when they will develop interest and curiosity, they will be able to generate the desired outcomes. On the other hand, development of interest and curiosity is essential on the part of receivers as well. The receivers are supposed to pay attention and acquire an efficient understanding of the concepts that are being imparted to them.

3.1.6 Types of Communication

3.1.6.1 Intrapersonal Communication

Intrapersonal Communication — is the kind of communication that occurs within us. It involves thoughts, feelings, and the way we look at ourselves.

Because intrapersonal communication is centered in the self, you are the only sender-receiver. The message is made up of your thoughts and feelings. The channel is your brain, which processes what you are thinking and feeling. There is feedback in the sense that you talk to yourself, or discard certain ideas and replace them with others.

Even though you are not directly communicating with others in intrapersonal communication, the people and the experiences you have had determine how you "talk" to yourself. For example, if you had a good day, you are likely to look at your-self in a positive way. If a teacher was disappointed with your work, or if you had a fight with a fellow student, you are likely to focus more on your depression or anger. You can never look at yourself without being influenced by the relationships you have with others.

3.1.6.2 Interpersonal Communication

Interpersonal communication occurs when we communicate on a one-to-one basis— usually in an informal, unstructured setting. This kind of communication occurs mostly between two people, though it may include more than two.

Interpersonal communication uses all the elements of the communication process. In a conversation between friends, for example, each brings his or her back ground and experience to the conversation. Outing the conversation each functions as a sender - receiver. Their message consists of both verbal and non-verbal symbols. The channels they use the most are sight and sound. Because interpersonal communication is between two (or a few) people, it offers the greatest opportunity for feedback. Psychological noise is likely to be minimal because each person can see whether the other is distracted. The persons involved in the conversation have many chances to check that the message is being perceived correctly. Interpersonal communication usually takes place in informal and comfortable settings.

3.1.6.3 Small-Group Communication

Small - group communication occurs when a small number of people meet to solve a problem. The group must be small enough so that each member in the group has a chance to interact with all of the other members.

Because small groups are made up of several senders-receivers, the communication process is more complicated than in interpersonal communication. With so many more people sending messages, there are more chances for confusion. Messages are also more structured in small groups use the same channels as interpersonal communication, however, and there is also a good deal of opportunity for feedback. In view of their problem - solving nature, small groups usually meet in a more formal setting than people involved in interpersonal communication.

3.1.6.4 Public Communication

In public communication the sender-receiver (the speaker) sends a message (the speech) to an audience. The speaker usually delivers a highly structured message, using the same channels as in interpersonal and small-group communication. In public communication, however, the channels are more exaggerated than in interpersonal communication. The voice is louder and the gestures are more expansive because the audience is bigger. The speaker might also use additional visual channels such as slides, flip charts, and so on. Generally, the opportunity for verbal feedback in public communication is limited. The audience members may have a chance to ask questions at the end of the speech, but usually they are not free to address the speaker as he or she is talking. However, they can send nonverbal feedback. If they like what the speaker is saying, they may interrupt the speech with applause. If they like what the speaker is saying, they may interrupt the speech with applause. If they dislike it, they may move around a lot of simply stop paying attention. In most public communication the setting is formal.

3.1.7 Dimensions of Communication

Human communication processes are quite complex. We differentiate verbal and nonverbal, oral and written, formal and informal, and intentional and unintentional communication. [Communication Principles. n.d. p. 6]

Verbal and Nonverbal Communication

When we think of communication, we usually think of spoken messages. However, experts usually divide communication into two primary categories: **verbal** and **nonverbal** communication. **Verbal communication** involves the use of symbols that generally have universal meanings for all who are taking part in the process. Verbal communication may be spoken or written. These spoken or written verbal symbols are known as words. For example our name is a symbol that represents us. Democracy is a symbol for a particular political system. Additionally, verbal communication is highly structured and uses formal rules of grammar. **Nonverbal communication** involves the use of symbols other than the written or spoken word, such as gestures, eye behavior, tone of voice, use of space, and touch. Although nonverbal symbols have socially shared meanings, they have no formal structure or rules of grammar.

3.2 Identifying, understanding and solving communication barriers

3.2.1 Barriers to Effective Communication

Ineffective communication may be attributed to many different types of human and technical barriers. They may be classified into four categories: **intrapersonal**, **interpersonal**, **organizational**, and **technological**.

3.2.1.1 Intrapersonal Factors — Communication within one person

Selective Perception: The relationship between perception and communication is complex. The way in which we perceive a subject or an event affects not only the way we conceive of it but also the way in which our thoughts about it are converted into a form of meaningful communication. For example, it is a well-known fact that people have a tendency to see and hear only what they are emotionally prepared (or want) to see and hear. Furthermore, research suggests that people seek our favourable messages and ignore unpleasant ones. In other words, they reject or inaccurately perceive information that is inconsistent with their previously established beliefs and expectations.

In addition to differing in their perceptual ability, people also differ in their ability to develop and apply **basic communication skills**. Some people are **incapable of expressing themselves verbally** but are able to **write very** clear and concise messages. Others are **effective speakers** but **poor listeners**. In addition, many people **read slowly** and find it difficult to understand what they have read. When such difficulties exist, they are potential barriers to effective communication.

Without understanding, there can be no communication. Unless people comprehend the information directed at them, they certainly cannot be expected to act effectively upon it.

3.2.1.2 Interpersonal Factors (Interpersonal Communication between two persons)

Climate: Within an organizational context, the relationship between two people largely derives from the treatment each receives from the other and from the way in which this reciprocal behaviour is interpreted. As the two people interact, the feelings that arise either limit or encourage both the content and the frequency of their communications, as well as the methods in which they attempt to communicate with each other. This combination of attitudes comprises the climate of an interpersonal relationship. The lack of a positive climate can easily lead to a restricted flow of communication, gamesmanship in the manipulation of information, and widespread distrust and antagonism. The resulting decay of group and enterprise effectiveness has been well documented.

Trust: The communication process is a transactional relationship between a sender and a receiver. The transfer of information is meant to have a reciprocal effect on both interacting parties. A major characteristic of all such relationships is trust. Distrust and suspicion between two people can serve only to increase defensiveness and decrease the frequency of open expression, subsequently decreasing the likelihood of effective communication.

Credibility: Closely related to trust, "credibility" refers to the perceived characteristics of a source of information. Empirical research has identified four distinct elements of source credibility: honesty or general trustworthiness, expertise or competence, dynamism or enthusiasm, and objectivity or open-mindedness. These characteristics are not necessarily possessed by a given source but are attributed to that source by individual receivers. Thus, the credibility of a source is actually receiver determined. For example, when presented with identical communications from different sources, people will most often believe the one coming from the source that they perceive to be the most qualified, honest, fair and forceful.

Sender-Receiver Similarity: Research generally indicates that the accuracy of communication between two communicators is directly related to the extent to which they perceive themselves to be similar. The degree of similarity between communicators in terms of such characteristics as age, sex, intelligence, race, and socioeconomic status and such factors as common attitudes, interests, values and abilities influences the ease and openness with which they communicate.

Communicators who perceive themselves as being similar are generally more willing to accept the viewpoints of one another and to express common agreement.

3.2.1.3 Organizational Factors

Status: A person's status in an organization depends largely upon the prestige associated with the position he or she occupies. The influence of status on the direction and frequency of organizational communication has been the subject of numerous studies. Evidence indicates that (a) people generally prefer to direct their communication to individuals of higher status; (b) persons of higher status generally communicate more with one another than they do with persons of lower status; (c) the wider the status differential, the greater the likelihood that information will flow from the higher to the lower status persons rather than vice versa (d) high status persons generally dominate conversations with lower status persons; and (e) low status persons often attempt to gain the favour of those with higher status by displaying respect, offering praise and agreeing with their views.

These findings clearly suggest that status is a major influence on the process of communication. From an organizational viewpoint, there are at least two reasons that people prefer to communicate with individuals of higher status. First, such interactions can be an effective way to gain peer group recognition and prestige. Second, communicating with higher status superiors who possess the capacity to gratify or deprive is often perceived as a means of increasing one's chances of satisfaction. Hierarchical Transmission: Hierarchical differentiation is a structural aspect of the development of an organization. As organizations grow, hierarchies develop not only to facilitate the accomplishment of broadened activities but also because they are necessary to communication. Information must be systematically channeled to all parts of an organization. Although hierarchical transmission is thus desirable, it does give rise to numerous communication difficulties. For instance, the more levels a message must pass through, the longer it takes to reach its destination and the less likely it is to be accurate. In addition to the factors associated with both the efficiency and the effectiveness of vertical information flow discussed earlier, certain individual processes also serve to distort the hierarchical transmission of information. Such distortions have been shown to take a number of systematic forms: condensation, closure, expectation, and association. These distortions contribute to both the

selective retention (sharpening) of certain details in a message and the selective omission (leveling) of other details.

Condensation: Research indicates that the recipient of a message who in turn is responsible for passing it on to another person typically distorts its content (especially in word-of-mouth transmissions) in a predictable manner. That is, what he or she repeats will be shorter and less detailed than what he or she received. Often only the salient points of the message are forwarded, and most often in a condensed form; certain portions of the message are therefore intensified, and others are ignored. Condensation frequently occurs in situations where inferences are drawn from a sum of evidence and the inferences, rather than the evidence itself, are communicated. Interestingly, it seems that, as a message is relayed, its midsection is more likely to be condensed (that is, edited) than either its beginning or its end. In addition, the longer the period between the time a message is received and the time it is relayed to the next level and the larger the number of people involved in its transmission, the more likely it is to be distorted.

Closure: Relayers of ambiguous messages, which rumours quite often are, tending to fill in- that is, to close gaps in the information that they are transmitting.

Expectation: Evidence further suggests that relayers of information are often prone to bias communications in the direction of their own attitudes and expectations.

Association: Research further indicates that when events or outcomes have occurred together in the past, they are often associated with one another at a later date. For instance, if past errors have been attributable to a particular person, that person is likely to be linked to any recurrence of the original errors, often without justification.

3.3 Elements of communication

3.3.1 Communication Process

Communication process refers to the creating, transmitting, receiving and interpreting of messages between a source and a receiver. Like any process, communication process has steps or stages. First there should be a reason (stimulus) and interest (motivation) to create a message and transmit it from the senders' side. The sender then encodes the message, that is, the sender incorporates the message into a signal (spoken work, a drawing on the chalkboard, or printed materials) to convey it to the receiver. The sender puts the message into transmittal form (signal) and sends it via a communication medium.

To achieve the desired results, the sender must first get the attention of the receiver. The sender must send the message in such a way that the receiver can understand it, accept it and do or act accordingly. The receiver upon receiving the signal tries to make sense out of it. That is the receiver decodes the message. Decoding is the interpretation activity by the receiver of the message received. In the process there are various distorting factors referred as noise that act on the signal as it is being transmitted.

Noise is interference or barrier in the communication process. It can happen from any one the elements of the communication process or from the environment. Example of noise in the classroom setting include background sounds, glare on the chalkboard, and flickering lights. Other noises like semantic noise (e.g. difficult words), written material too small to be read; and difference in field of experience between the sender and the receiver creates barrier in the communication process.

It is important to remember the meaning as such cannot be transmitted. What is actually transmitted are the symbols of meaning, such as words or pictures. The sender can only transmit verbal or pictorial symbols from which the receiver constructs his/her own meanings. The communication process is the interaction between the elements of communication. Thus, to understand the communication process better, it is worthwhile to look at the elements of communication, which can be depicted by models.

3.3. 2 Elements of Communication

The important elements of communication are:

3.3.2.1 The communicator:

The qualities of a good communicator are:

A. What he knows: These include his objectives, the needs of his audience, their interests and abilities.

B. What is his interest in his audience and its welfare, his message and how it can help the community?

C. His preparation: and

D. His skills in selecting and treating the message

3.3.2.2 The message:

A message is the information the communicator wishes his audience, or community to receive, understand or accept and act upon. The message may be scientific information about agriculture, homemaking, livestock raising, etc. A good message should be clear and understandable by the audience.

3.3.2.3 Channels of communication

Channels are the connecting links between the communicators and receivers. For effective work, the communicator should take the following factors into consideration:

- The specific objective of the message
- The nature of the message
- The needs, interests and knowledge of the subject
- Channels of communication available
- Time available to the communicator and audience

3.3.2.4 Treatment of message:

Treatment of a message relates to the technique or manner of performance necessary in presenting the message. Its purpose is to make the message clear, understandable and realistic to the community. It requires original thinking, deep insight into the principles of human behaviour and skill in creating and using improved techniques of presentation of a message.

3.3.2.5 The audience:

The audience could be members of the community. It may consist of one person or more in occupational groups or interest groups. The more homogeneous an audience, the greater the chances of successful communication. At the primary level, there are only two audiences.

(i) Intended audience, and
(ii) The unintended audience, i.e., all others in the geographical area

3.3.2.6 Feedback

One is constantly communicating back to the other, thus, "the return process is called feedback", and it plays a very important role in communication. Communication often involves an action, reaction and interdependence. The communicator can use the reaction of the receiver as a check for his own effectiveness and a guide to his own future action. The reaction of the receiver is a consequence of the response of the source. As a response consequence, it serves as feedback to the source. When a source receives feedback that is rewarding, he continues to produce the same kind of message. When he gets non-recording feedback, he will eventually change his message.

3.3.3 Communication Model

Some sociologists, educationists, psychologists, anthropologists and rural sociologists have described the process through various models. Their usefulness lies in the manner in which they are used.

3.3.3.1 Aristotle's model

Fig 3.1 Aristotle's Model

Aristotle says that all those three ingredients or elements are essential for communication. These can be organized to study the process through the person who speaks, the speech he produces and the person/audience who listens. Such communication takes place in a face-to-face situation, or in direct communication. The speech is either a message, an idea, a thought or a feeling.

3.3.3.2 Shammon - Weaver Model

Fig. 3.2 Shammon - Weaver Model

If we translate the source into speaker, the signal into speech and destination into listener we have the Aristotle's Model Plus two more ingredients: a transmitter which sends out the message and the receiver which catches the message to take it to its destination.

3.3.3.3 Westley and Machean Model

Fig. 3.3 Westley and Machean Model

This also has five elements/ingredients on the lines of the Shammon & Weaver's Model. Here the sender encodes the message which is passed through a channel and is then decoded and its meaning is drawn, after which the message is clear to the receiver.

3.3.3.4 Leagan's Model

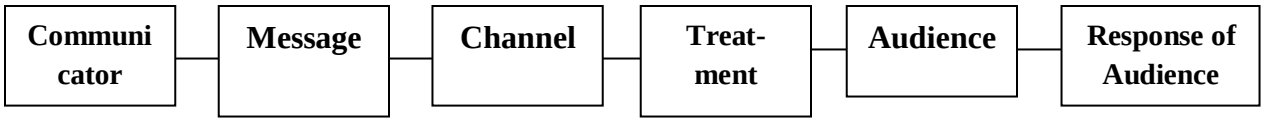


Fig. 3.4 Leagan's Model

This has six elements. It is more or less designed on the pattern of the Westley and Machean's model. Though the terminology is different, most of the elements are common. Audience response is the sixth elements about which Legean says that it is vital to the process, especially when it is meant to bring about change in people.

3.3.3.5 Berlo Model

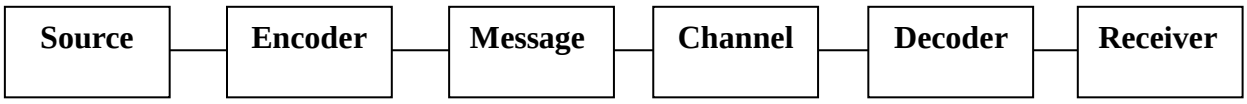


Fig. 3.5 Berlo Model

This has also six ingredients. The difference from the Wesley and Machean Model is that Berlo adds message to his model.

3.4. Audio visual techniques

3.4.1 Importance of Audio-visual Aids in Teaching and Learning

Teaching is a reciprocal communication between and among pupils and teachers. Learning is essentially a social process. Teaching is only instrumental to learning and it uses everything for the guidance of the learner into profitable educational experiences.

Audio-visual aids influence the effectiveness of teaching by lessening some of the learners' difficulties, eliminating some hindrance in the communication process and expediting teaching. Thus creative use of a variety of media increases the probability that the audience will learn more, retain better, recall lessons learned and improve their performance of the skills they are expected to develop. This is because audio visual materials evoke the maximum response of the whole organism to the situations in which the learning is done.

Audio visual aids are resources for learning. Research findings indicate that human beings learn more easily and faster by audio-visual processes than by verbal explanation alone. This is because audio-visual materials permit teachers and students to interact and to use their environment to their own best advantage. But audio-visual devices misused will contribute less to education than to confusion. Before using audio-visual materials, analysis of the audience is necessary in order to know their needs, capabilities, their special interests and motivation, and their styles of learning. One has to evaluate also the strengths and weaknesses of the instructional media to see whether the media match with the instructional objective. From among alternative learning experiences (e.g. learning by doing, learning by observing) one chooses that offering best promise to achieve for the students the sought outcome, and the audio-visual materials that can perform better that particular learning experience chosen.

In short if appropriate media are used. Teaching and learning can be simplified with a best result and fast concept building on the subject matter or idea taught or communicated.

3.4.2. Advantages and disadvantages of media

Some extension situations may require a personal visit to a farmer. The cost of an individual visit is high and organizations are now concentrating on group visits backed up by media.

Communication Media

Advantages:

- Can reach large audiences.
- Relatively inexpensive per person reached
- Can reach the isolated
- Only a small staff required
- Can give out timely news
- Can reach people every day in their own homes

Disadvantages:

- The cost of equipment is initially high
- Maintenance and repairs may be expensive and difficult
- Not easy to obtain good feed back from the audience

Personal Visit

Advantages

- Personal contact can sometimes be very effective in motivating farmers
- Good feedback can be obtained

Disadvantages

- Visits to farmers can be very expensive and can only be done at intervals
- Often only the more advanced farmers are visited
- Many staff are required to give good

Every personal visit should always be backed up by using communications media as it makes the visits more cost-effective. However as farmers become more motivated and as the communications media improve face-to-face communications can be reduced. In situations where the farming community is well motivated the use of media alone is effective.

Sometimes farming people rely almost exclusively on media for their information. The radio or television gives them weather or market news and also information about outbreak of insect pests. The commercial media inform them of good buys in machinery, fertilizer, stock, seed, buildings etc. The farming press and magazines provide more detailed information and articles

about farming enterprises. The radio may even broadcast farm family serial programmes which creates interest and may provide some knowledge and motivation.

3.4.3 Relative effectiveness of various aids

Visual media are particularly important since research suggests that most of what we learn is through our eyes, rather than through our ears touch or sense of smell. Thus as the Chinese apparently said one picture is worth a thousand words. What people remember some days after being presented with a message is much more important than what they recall immediately afterwards. Research shows that a combination of words and visuals after a three day time lapse is some six times more effective just words.

	Recall after 3 hours	**Recall after 3 days**
Words only	70%	10%
Visuals only	72%	20%
Words and visuals	85%	65%

3.4.4 Classification of instructional media

Audiovisual materials are classified in a number of ways by different authors. Among these are:

a. Audio, visual and audiovisual
b. Printed and non-printed
c. Projected and non-projected
d. Hard ware and soft ware

3.4.5 Non-projected visuals

3.4.5.1 Introduction

Non projected visuals include all aids which are seen, or can be used without the help of a projector. They do not require electrical power. They are simple and direct, and can be prepared

by you yourself quite easily. In addition, they are generally relatively inexpensive and can be made from locally available materials.

Non projected aids can help to translate ideas into a more realistic format. For example, you can draw on a flipchart the different stages in the lifecycle of an insect.

Caution remains necessary, as when using any aid:

- Some visuals may require special attention; a cartoon is symbolic rather than a direct representation.
- Does the audience indeed get the same idea as you meant them to get?
- Some visual aids are too small to use for large groups. You may have to use the method of circulation or distribution. Or, you can decide to use a projected visual aid such as the overhead transparency.

In the paragraphs below, several non-projected visual aids will be introduced and discussed.

3.4.5.2 Posters

Posters help to focus attention on a particular message. They are commonly used in extension (agriculture, health, education, social issues, etc.)

A principle of developing and using posters, displays and calendars, is that all pictures, drawings and illustrations must be checked to make sure their message is clearly understood by the intended target group.
Posters can be divided into 2 main categories:

- motivational
- instructional

3.4.5.3 Extension folders

What are extension folders?

- simple publications used in extension, education and advertising
- single sheets of paper, folded in 1 or more places (creating 4, 6, or 8 panels)
- used to present (agricultural) information to farmers and other extension clientele e.g. a new maize variety, warning about a pest problem, advise on marketing

Characteristics of an effective extension folder

- idea
- simple language
- written in personal tone ('you' and 'we')
- brief and concise, using as few words as possible to convey the message clearly
- well illustrated
- simple and attractive design
- stimulates action

3.4.5.4 Flipcharts

Flipcharts are a very simple and effective training media. They can be made and used in various ways and for different sorts of training sessions or number of trainees.

Flipcharts consist of a series of large paper sheets fastened at the top end so that they can be flipped over each other. Sometimes these sheets are blank pages on which instructional materials are written during the training. However, they can also be designed in advance and be arranged sequentially to communicate a message.

There are 4 sorts of flip charts:
a. Sheets of newsprint paper which can be used in the training session and can be written up then and there, using the suggestions of the trainees.
b. Hand drawn flipcharts can be prepared before the training sessions and shown to support a prepared talk.
c. Flipcharts can be designed and printed. These can be used by lots of trainers and so can be professionally produced and illustrated.

d. Flipbooks can also be designed, illustrated and printed and can work like small flipcharts. The book can be self supporting and is useful with small groups.

3.4.5.5 Newsletters

Newsletters are printed materials designed to provide information and news for a specific audience. They may be designed and used as training materials, especially in extension training. Organisations publishing newsletters also use them for promotional purposes.

3.4.5.6 Cloth Boards

Cloth- or flannel boards consist of a rough-textured cloth, such as a blanket or a piece of felt, on to which drawings, photographs or words can be placed. The drawings have sandpaper (Birchuko waraket) glued to the back which makes them stick to the fluff of the cloth.

3.4.5.7 Displays

The words 'display' and 'bulletin board' are sometimes used to indicate the same media. Indeed, sometimes they are the same. A bulletin board is a type of display. However, a display can be many other things, and can show both printed and real objects and models.

Displays are media that are often overlooked. When used well, they can be very effective in training. They can be made for all kinds of visual and written subjects. They can be printed and distributed widely, or they can be one only (e.g. a product made by trainer or the trainees).

'To display' means: to show, place or spread out so that there is no difficulty in seeing. A shop may display their goods in the windows. An architect who may show the intended building with help of a display; some models and drawings. A biology teacher may change the display in the classroom each week; depending on the topic of the class. A trainer may lay out several books on tables, for the trainees to look through. An extensionist may display different seeds and varieties to effectively teach about the different morphologies. A display is used intentional and deliberately.

3.4.5.8 Chalk boards

The most common display surface in the classroom is, of course, the chalkboard. Once called black boards, they, like chalk, now come in a variety of colours.

3.4.5.9 Real Objects

The best visual aid is the real object and this should be used whenever possible. The audience should be allowed to see and feel the object, e.g. seeds, fertiliser, a piece of equipment, coins, etc.

3.4.5.10 Models

Models are three-dimensional representations of the real thing. A model may be larger, smaller, or the same size as the object it represents. It may be complete in detail, or simplified for instructional purposes.

Models can provide learning experiences that real things can not. Important details can, for example, be accented with colour. Some models can be disassembled to provide interior views, not possible with the real thing.

Models are useful when describing things which are difficult to bring into the training room as real objects. This can be because the real object is too large, too small to be seen effectively, potentially dangerous, or hard to get, e.g. a model of a building such as a dairy parlour, a model of the planetary system, a model of a cow's stomach, a model of a car engine, etc.

Models can take a lot of time to make yourself. They are more often used in exhibitions. The scale of the model should be shown, and you must make sure that things which are small in reality are not shown too large on the model. If they are out of proportion, they might not be recognised.

Models and real objects are the recommended media when realism is essential for learning - with concepts that involve three dimensions; tasks that require identification by size, shape, colour, and hands-on or laboratory practice.

When considering students' learning styles, teachers often give models and real objects a high priority. Most learners, including adults, when given a choice express a preference for hands-on experiences rather than a passive listening.

3.4.6 Projected Visuals

3.4.6.1 Introduction projected Visuals

Projection equipment is different kinds of mechanical devices that can be used to project visuals. They are important bridges that enable us to bring a wealth of visual materials of many types into the experience of an audience.

With a general knowledge about projection equipment, one can make needed adjustments and minor repairs which will often yield greatly improved feature on the screen. Hence, knowledge of the following principles of projection equipment is essential to all who try to improve the teaching- learning or any communication situation.

For better understanding projection equipment can be classified according to their projection system:

a. Direct projection system
b. Indirect projection system
c. Reflected projection system

The difference between these projection systems is the method by which light is directed from the source through, or reflected from, the object to the screen.

3.4.6.2 Direct projection system

This is the most commonly used system. By this method, the light passes directly from the projector lamp through the condense lenses, through the material, through the objective lens and to the screen. A minimum of light is lost by the direct projection system. Thus, direct projection system requires all materials to be inserted upside down in a vertical position, with front side next to the lamp.

Projection equipment that come under this system are:

A. Still picture projectors

i) Slide projectors

ii) Film strip projectors

B. Motion picture projectors

a) 8mm, motion picture projectors

b) 16mm, sound motion picture projectors

c) 35mm, sound motion picture projectors

3.4.6.3 Indirect projection system

In this system light passes indirectly from the projector lamp through the condenser lenses on to a mirror, reflected light from the mirror passes through the FRENZEL lens (converges the light). The converged light passes through the objective lens and on to the screen.

Indirect projection is used for special purposes. An example is an overhead transparency projector with an indirect light source and using mirror. The projection can be used in well lit room.

3.4.6.4 Reflected system

Reflected projection is only found in the opaque projector. Opaque materials such as pictures, book pages, objects and other types of flat or semi-flat objects can be projected by reflected

method. In the opaque projector, condenser lenses are not used to spread the light evenly over the object being projected, instead a series of mirrors surrounds the flat platen of the projector. These mirrors reflect all possible light on the picture or object.

The image is reflected in a large mirror immediately above the object through a large objective lens to the projection screen. The reflected projection system absorbs a great deal of light making it mandatory to use opaque projector in a darkened room for satisfactory projection. Thus, reflected projection systems require all materials to be placed in a horizontal position, face up, with the bottom edge of the material closer the screen.

3.4.6.5 Slides and Slide Projector

Slides are small individually framed photographic positives which are projected onto a screen as visual aids. They may be used alone, or in combination with a spoken script or documentary tape. They are usually made from 35mm film framed in a 5cmX 5cm mount.

3.4.6.6 Overhead Transparencies (OHT) and Overhead Projector (OHP)

Teachers/trainers can make their own transparencies for display on an overhead projector. Colorful, well through-out transparencies can greatly improve a lesson. The teacher can keep facing the audience, and time is not wasted in writing on the blackboard. Another great advantage is that overhead transparencies can be stored for future lessons.

Setting up the OHP

Setting up the OHP is quiet easy, but needs to be done before the training starts. It requires electricity and a stand. It needs to be set up in a room with a white wall or screen to project on. Try projecting any transparency on the OHP to focus on the wall or screen. The distance form the screen to the OHP makes the image on the screen larger or smaller. The image should be the right size for the number of viewers to clearly see/ read the information- even from the back of the room. It is important to set up the machine in such a way, that when you sit down, you do not block the view for those behind. The screen can be mounted at an angle high-up on the wall, so

that it is parallel to the lens on the OHP. In this way everyone can see the screen above the speaker. If it is at angle, the image will be square rather than key-hole shaped.

The screen needs to be placed out of direct sunlight so that everyone can read all the projected images clearly. Try to also reduce the light coming into the room as much as possible when making a presentation.

3.4.6.7 Transparencies

Transparencies are larger transparent sheets of film on which information can be written and projected onto screens using overhead projectors. Common transparency materials include cellophane, acetate, glass and infrared film. The most common of these is the acetate film, which may be clear or tinted.

3.4.6.8 Film Strips

A filmstrip is a roll of 35mm transparent film containing a series of related still pictures intended for showing one at a time. The film-strip projector is a dual purpose machine which will also project 2 by inch mounted slides. Various filmstrip formats have evolved since the advent of the filmstrip more than half a century ago.

A filmstrip is arranged in frames and each frame is a separate picture meaning ¾ by 1 inch. Filmstrips come in 2 picture sizes. The standard format today is the single frame filmstrips, in which the images are printed perpendicular to the length of the film (move downwards though the projector). In the slide format (double filmstrip 11/2 by 1 inch), the images are parallel to the length of the film (move horizontally through the projector).

Commercially produced filmstrips typically contain about 20-60 images, or frames, and are stored rolled up in small plastic containers.

Until the 1960's most film strips were silent; that is, there was no audio accompaniment. Narrative information was printed at the bottom of each frame. After that time, recorded sound

tracks were made to accompany the filmstrips. Currently, audio cassette tapes are the standard means for giving sound filmstrips their 'voice'. The sound filmstrips carries a double input. It appeals to both eye and ear.

3.4.6.9 Opaque Projector

Opaques projection is a method of enlarging and displaying non-transparent material on a screen. A very bright light is reflected from the material to be displayed, rather than passed through it. The opaque projector can be used to magnify small three-dimensional objects also (e.g. coins, plant leaves and insect specimens).

3.4.7 Audio material

Hearing and listening are not the same, although they are of course interrelated. At the risk of some over simplification, we might say that **hearing is a physiological process**, where as **listening is a psychological process**.

Physiologically, hearing is a process in which sound waves entering the outer ear are transmitted to the eardrum, converted into mechanical vibrations in the middle ear, and changed in the inner ear into nerve impulses that travel to the brain.

The psychological process of listening begins with someone's awareness of and attention to sounds or speech patterns, proceeds through identification and recognition of specific auditory signals, and ends in comprehension.

Audio materials are widely available and are relatively cheap. They are widely used in transmitting information. Audio materials provide a sense of immediacy. Radio shows, dramatizations, and concerts capture the attention of people.

Radio and recordings (cassette tape, phonograph records and compact disks) depend on stimulating a single sense to convey meanings. They use the sense of hearing, and listening is the

key to communication through radio and recordings. Radio and recordings are therefore more abstract than television and films, which use the sense of sight and hearing at the same time.

Auditory communication is not confined to words of language. Music and various sounds are used to express feelings and concepts for which we have no verbal symbols. Radio and recordings require critical listening. Radio, like television, can apply live and recorded broadcasts.

3.4.8 Audio-Visual Material

3.4.8.1. Motion Picture Projections

Film refers to the celluloid material on which a series of transparent images, when projected at 24 frames (or images) per second, is perceived by human as a moving image. As with **video**, the illusion of motion is caused by persistence of vision.

Motion picture film comes in various widths and image sizes. For movies shown in theaters, 35mm film is most commonly used. For films shown in schools, 16mm film is the most common format.

Television and **motion pictures** have much in common: they both make use of sight and sound. They often supplement each other. Although motion pictures were put into wide use earlier, most television programs are made on films and motion pictures make up many of television's most exciting presentations. Hence, many ideas and principles of television are the same for motion picture application.

3.4.8.2 Television and video recorder

The importance of television as a teaching and motivating medium was underestimated at first. People now realize however, that it is a very powerful medium, not only for teaching and imparting information, but also in changing attitudes.

In some countries families watch as much as 6 hours of television per day. For many younger people it is their main source of information and ideas. Thus, where television is available, it is sensible to use it to communicate good ideas about development to the rural community.

A television programme can form an excellent base for a lesson or discussion, as can showing a film or running a video- tape. The advantage of video- tape and film over television is that they can be stopped at intervals to discuss what has happened so far and that they can be replayed

Making and using video in training is different from making TV programmes. A training video will need to be more like other visual training aids. It will need to assist the trainer, the training session discussions and the trainees activities. As with other media, trainers and subject specialists should sort out their training objectives clearly. They should come up with ideas on how the video is to work in the training.

3.5. Roles and Characteristics/Ethics of Extension Communicator/Worker

3.5.1 Role and Ethics of Extension Worker

3.5.1.1 Fundamental purposes of agricultural extension

From the philosophy of agricultural extension we learn that activities are undertaken with the clients to achieve the following purposes.

- To improve people's thinking and decision making capacity to live a better way of life
- To improve learning and management skill
- To improve the linkage and interaction among people for exchanging relevant information and materials
- To enable people to conserve natural and manmade resources and utilize them widely
- To enable people to be responsible and accountable in their activities.

3.5.1.2 Tasks of development agents in relation to the fundamental purposes of agricultural extension

To achieve the philosophical essence discussed above development agents should know in general

- The uses of development activities and their environment
- The learning difference between children and adults
- The ethical qualities of development workers

A. Uses of development activities and their environment

Extension is a social process. Extension programs are people oriented activities. The focus of attention is put on people on how to bring into reality the various purposes mentioned above. It is therefore very indispensable to keep in mind the various multidimensional social variables that affect our programs in line with the technical and biological dimension of innovation. These can be seen briefly as the following

- The farmer as individual: Individuals differ in their interest, value, potential to learn, etc.

- The farmer as a member of the family: decisions made by a given household are very complex since they reflect the multiple objectives of the people involved in the process; the husband, wife, the elder children etc.
- The farmer as a member of the community: the community may set opportunities or constraints in the development of a given individuals farm.
- The farmer in connection with the farm: the farmer as producer and manager undertakes various activities including risk aversion and potential analysis in his/her farm decision.
- The farmer in relation o the wider society: sometimes the socio-cultural background of the society may determine the type of the farm activities. A given farmer therefore tries to see the acceptance of the activities by the society.
- The farmer in relation to the market: most of the Ethiopian farmers are subsistent producers, so whenever we intend to develop the agricultural sector beyond that level we have to think also the availability of markets for both the farm inputs and outputs.

B. Development agents should know the learning difference between children and adults

Extension education has a great role in extension activities. A change in behaviour among the clients of extension program is brought through a teaching and learning process. The difference between children and adults as learner can be summarized as follows.

Children	Adults
Rely on others to decide what is Important to be learned	Decide for themselves what is important to be learned
Accept the information at face value	Need to validate the information based on their beliefs and experience
Expect what they are learning to be useful in their long-term future	Expect what they are learning to be immediately useful
Have little or no experience upon which to draw (are relatively clean sheets)	Have much past experience upon which to draw (may have fixed view points)
Little ability to serve as a knowledge resource to teachers or fellow classmates	Significant ability to serve as a knowledgeable resource to the trainer and fellow learner

3.5.2 Ethical qualities of development workers

3.5.2.1 Respect for the farmer

Anyone who does not sincerely respect farmers and believe in their abilities to develop cannot be an effective development agent. Cultural trappings such as the status of farmers are lower than the development agent, farmers are poor because of their own particular characteristic or habits such as being lazy and etc. should be discarded. Development workers should realize that farmer's refusal of some of the advice or recommendations that do little for them is their wisdom and pragmatism. Farmers will solve their problems provided, they are fully aware of their own situation, and of all factors, which obstruct or support their plans, including economic, cultural and social trappings that bind them. It is wrong for a development agent to think that he/she knows everything better than the farmers. Certainly, the farmers know their area, physically and biologically, better than the development agent. In most cases, they have better knowledge of the crops they grow with hands than the outsiders.

They know their fellow farmers and their community better than the social worker. In general farmer (adults) never starts from zero. What they don't know, but the development agent should know, are the factors outside the local community, which may obstruct or support their plans, and probably the economic, social and cultural trappings that bind them. It is the task of the development agent therefore agent, therefore, to encourage farmers to consider their own situation and to make constructive plans by combining the knowledge and skill of the development agent of factors outside the local community with the farmer's excellent knowledge of his/her area. All these can be done only with the development agent's respect for the farmers and beliefs that farmers can develop themselves and their farmers.

3.5.2.2 Understanding the farmer

Often the elite development worker thinks that he/she knows and understands the farmer well when in fact he/she knows almost nothing. Such lack of knowledge and understanding hinder any development action that the agent may initiate. A true development begins, thus when the

development agent on-going thirst for more knowledge and understanding of farmers. To achieve this development worker has to look at things from farmers' point of view.

3.5.2.3 Credit for farmers

Some development workers tend to boast above certain achievements. In case there is any success in development, it is the farmers who should deserve the credit because they are the one who put their hand on and made the effort to obtain it; so never take away credits from them. If the development agent takes away this credit and claims that he success occurred because of his/her own work, farmers can never gain the confidence to improve their own situation through cooperation.

3.5.2.4 A sense of humour

A sense of humour is needed to remain sane and avoid giving up in frustration rural development work is not easy; there are many obstacles. The development agent should keep a sense of proportion about every thing- the farmers, the problems, natural obstructions, and the people who obstruct. He/she should not think that development is all his/her burden. He/she must do his/her burden. He/she must do his/her best but his/her work is only a part of the whole process. To be too serious may create difficulties in getting closer with farmers and in learning from them.

3.5.2.5 Creativity

One must be creative while working with farmers in solving their problems. It is true that everything cannot be learned from a manual or be taught. A certain situation or a specific aspect may suddenly appear in the process of development; it thus requires a creative imagination to see the possibilities.

Creativity, however, does not develop in a vacuum. It has a better chance of developing when the development agent accumulates a wealth of experience, observation and tactics. Moreover no two situations are exactly alike. Conditions usually change within a short time. The development

agent, therefore, be sensitive to changes in the situation so that he/she can adjust the plans accordingly.

3.5.2.6 Tenacity

Development work is a tedious one and, since the development agent caries out his/her tasks day in and day out. Tenacious behaviour is very much required. Tenacity is needed because the objectives of extension activities cannot be accomplished within a day, a month or even a year. The development of farmers is a process of the people growing up and assuming responsibilities for them.

3.5.2.7 Love for the farmers

A development worker has to have a genuine love for the farmers. Love here refers to the concern given to farmers in the process of development self-help schemes to support themselves and enjoy a good standard of living in the future.

3.6. The Basic Concept of Facilitation

3.6.1 Introduction

While most programme managers recognise the benefits of participation, many lack the practical skills to effectively involve diverse stakeholders in planning and managing development programs. Most excellent facilitators are not naturals at what they do — rather, they work hard to develop the knowledge, attitudes, and skills needed to harness the power of groups. These people help diverse groups and local people to learn from their collective experience, take joint action, and develop their own facilitation skills.

This information sheet offers a brief overview of facilitation including its benefits, core values, basic concepts, guidance on when and where it is needed and practical tips for using facilitation to increase participation and to strengthen each stage of the Activity Cycle.

3.6.2 What is facilitation?

In broad terms, facilitation is the process of making something easier or less difficult. In development activity, facilitation is used in the context of group meetings or workshops in which a basically neutral person with no decision-making authority helps the group to be more efficient and effective when planning, implementing, and monitoring and evaluating meetings and workshops.

Facilitation is a way of providing leadership without taking the reins. It's the facilitator's job to get others to assume responsibility and take the lead. Here's an example: Your employees bring you a problem, but instead of offering them solutions, you offer them a method with which they can develop their own answers. You attend the meetings to guide the members through their discussions, step-by step encouraging them to reach their own conclusions. Rather than being a player a facilitator acts more like a referee. That means you watch the actions more than participate in it. You control which activities happen. You keep your finger on the pulse and know when to move on or wrap things up. Most important, you help members define and reach their goals.

3.6.3The benefits of strong facilitation skills

- Increased ability to manage diverse groups at each stage of the Activity Cycle;
- Improved skills for managing conflict;
- Better utilization of local knowledge, resources, and capacities;
- Enhanced collaboration, co-ordination and understanding amongst project stakeholders;
- More committed and timely group action;
- Increased management capacity of partners;
- More effective meetings and workshops.

3.6.4 The purpose of facilitation

The Brazilian educator, Paolo Freire, believed that education should be liberating, rather than giving learners answers. Education should aim to increase the learner's awareness, so that they are able to identify problems and their causes, and find solutions to them. A facilitator's role is to help a group through this process by asking questions that encourage new ways of thinking about and analyzing their situation. The facilitator does not know all the answers. Their role is to help the group think critically about their own needs and interests, and to make decisions for themselves.

There should be a balance between offering ideas to guide the group and patiently listening and questioning. The facilitator's role is also to encourage each member of the group to contribute to the best of their ability. Everyone has valuable knowledge and a valuable contribution to make. But people can be reluctant to share their knowledge. They may lack the confidence or may not consider what they know to be important. Sometimes people do not want to share their knowledge because it gives them a certain amount of power and advantage over others. However, when we do share our knowledge, everyone benefits. The person sharing it does not lose it after giving it away, and the person receiving it has received something new which they in turn can pass on to others. The facilitator's role is to build trust and respect between the members of the group and to encourage dialogue and learning, from which the whole group will benefit.

3.6.5 Useful Guidance

Rogers (1969: see Annex 3), a pioneer in learner-centred approaches to education, offers many sound ideas for effective facilitation. Although much has been researched and written since Carl Rogers developed his ideas, his guidelines (with slight modifications) are still relevant and timely:

- A main role of the facilitator is setting the initial mood or climate of the group.
- The facilitator helps to elicit and clarify the purposes of the individuals in the group as well as the more general purposes of the group.
- She or he relies upon the desire of each participant to implement those purposes that have meaning for her or him, as the motivational force behind significant learning.
- He or she organises and make accessible a wide range or resources for learning.
- The facilitator is a flexible resource to be utilised by the group.
- He or she accepts both the intellectual content and the emotionalised attitudes and tries to balance his/her emphasis or these aspects with the group's corresponding emphasis.
- The facilitator may share opinions with the group, once the acceptable climate has been established, but he or she must do so in ways which do not demand nor impose but represent simply a personal sharing which group members may take or leave.
- Throughout the group experience, the facilitator remains alert to expressions that indicate deep or strong feelings.
- In his or her functioning as a facilitator of learning, the facilitator recognises and accepts his or her own limitations.

3.6.6 Practical Tips

A facilitator is neither a content expert nor a lecturer. A facilitator helps participants to interact with each other, gain new information, and build upon their experience. The facilitator guides a process which will help participants to reach their stated goals and objectives within the time

allotted. The facilitator s key role is to help the group experience and learn together. If you are working with participants who may not understand the role of a facilitator, explain this to them.

YOU will become a good facilitator if you follow the above hints and also:

- Be alert to signs of confusion (puzzled or frustrated looks, people asking neighbours questions, resistance, etc.);
- Don t do the group s work. Learning is more effective and lasting if the individuals and small groups discover on their own (learning by doing);
- Circulate, but don t become a permanent part of any one group because you may too easily influence the group;
- Spend sufficient time with each group during small group work to be certain they have grasped the tasks and concepts supporting it;
- Review portions of the small group tasks which are causing confusion if several individuals or groups are having difficulty;
- Ask frequently if there are questions. Sometimes the training activity specifically suggests asking if there are questions, but you should ask even if the activity does not specify doing so;
- When you DO ask a question, allow group members time to think before answering. Slowly count to 10. This may seem like a long time and silence may feel uncomfortable, but allowing participants' time to think is essential if you want thoughtful answers;
- Don t feel that you must be an expert. Remind the group and yourself that you are a facilitator. Remind them (and perhaps yourself) of THEIR expertise and experience. Ask other participants for their ideas on a question. Don t feel you should answer everything — you shouldn t!
- Be flexible. Keep the times of your sessions and depth and breadth of content somewhat flexible. Changing something doesn t mean you planned poorly, but probably means you are listening, watching, and adjusting your plans to fit the situation;
- Take at least two 15-20 minute breaks — one in the afternoon and one in the morning. Suggest short stretch breaks as needed;
- Finally, RELAX!

3.6.7 When and why is facilitation needed?

Rich, effective, growthful dialogue within groups cannot be forced but it can be encouraged and nurtured. This is a main part of a facilitator s role.

Through careful planning, designing effective and proven processes, observing and making skilled interventions, a

good facilitator can make the difference between slow, boring, or hostile meetings and workshops and more effective ones in which group members actively contribute, feel ownership, and ultimately apply their understanding and learning in their work.

3.6 .8 What makes a good facilitator?

A good facilitator has certain personal characteristics and skills that encourage group members to participate in a discussion or activity. Facilitation is about getting a balance between these different characteristics – for example, between being a good listener and a good communicator, between being patient and dynamic. Although certain skills and techniques can be learnt and applied, the most important thing is the facilitator's ability to relate to individual group members in a way that makes them feel valued and encouraged. This will affect the way the whole group works together and what it will achieve. Good facilitation is not easy. It is like conducting a music band. Though the music is written down already, it is the conductor's job to build the right atmosphere, to help each individual to be their most creative and to blend everyone together to form an exciting and productive team. A facilitator is like a conductor. Great music emerges when everyone is communicating together. Good communication, just like good music, is more about listening than talking. If everyone plays all the time, there is nothing but an unpleasant noise. It is the conductor's job to help each player to listen to others, to keep quiet until it is the right time for them to play.

Facilitation is the art, not of putting ideas into peoples' heads, but of drawing ideas out. A facilitator is best when people barely know that he or she exists. … A good facilitator is one who talks little. When the work is done, the aim fulfilled, they will all say, "We did these ourselves."

A good facilitator is interested not only in whether an objective is achieved, but how. The process is just as important as the product. The process of building local knowledge and skills is vital if the group is to gain the confidence and ability to initiate and sustain positive change. Ask participants to think of situations where people were not consulted about an issue that directly affected them. This could be a development project where the organization involved did not consult the community about what changes it wanted to make. As a result, the project did not lead to lasting change because the community didn't want to remain involved. What difference does it make if people's ideas and experience are taken into account in future planning and activities? Emphasis that even if this process takes time, it leads to better relationships and more sustainable change. A well-facilitated discussion process is essential.

3.6.9 Challenges for Facilitators

Is it harder to be a facilitator or a teacher? Hopefully you will say it is much harder to be a facilitator! Why can facilitation be difficult? Answers might include

- Taking control of discussion
- Dealing with difficult questions
- Managing conflict
- Handling dominant people
- Working with shy people

3.7. Roles and Responsibilities of a Facilitator

3.7.1 What Dose a Facilitator Do?

Facilitators make their contribution by:

- Helping the group define its overall goal, as well as its specific objectives.
- Helping members assess their needs and create plans to meet them
- Providing processes that help members use their time efficiently to make high-quality decisions.
- Guiding group discussion to keep it on track
- Making accurate notes that reflect the ideas of members
- Helping the group understand its own processes in order to work more effectively
- Making sure that assumptions are surfaced and tested
- Supporting members in assessing their current skills, as building new skills
- Using consensus to help a group make decisions that take all members opinions into account
- Supporting members in managing their own interpersonal dynamics
- Providing feedback to the group, so that they can assess their progress and make adjustments
- Managing conflict using a collaborative approach
- Helping the group communicate effectively
- Helping the group access resources from inside and outside the group
- Creating a positive environment in which members can work productively to attain group goals
- Fostering leadership in others by sharing the responsibility for leading the group
- Teaching and empowering others to facilitate

A good facilitator follows the following responsibilities:

- Keeps the group focused on task **and** process;
- Remains as objective as possible;
- Is an informed guide helping the group to chart its course and accomplish its goals;

- Listens more than talks;
- Adopts to various learning styles;
- Encourages everyone to participate while remembering that individuals participate in different ways. Some may talk only in small groups, but they are still participating. Others may wish to talk constantly and may be contributing little;
- Protects members of the group from attack by others;
- Is gender and culturally sensitive;
- Energises a group or slows it down, as needed;

Recaps, occasionally, what has happened in the workshop and helps group to make connections between the sessions.

3.8. Conflict Resolution Skills

3.8.1 Facilitating Conflict

Dealing with conflict is a fact of every facilitator's life. Consider the following scenario: Imagine Yourself facilitating an important meeting. Everything is going along great until you hit agenda item #3. Suddenly two members start arguing. Listening goes out of the window, as each person pushes his or her ideas. The rest of the group got uncomfortable, as the two combatants become more and more emotional. The discussion spin in circles and people get upset! What do you do now? For starters remember that conflict is often the symptom of a problem with the task or the process.

3.8.2 Comparing Arguments and Debates

All facilitators need to be attuned to the differences between a debate and an argument. Healthy debate is essential. If a group doesn't express differences of opinion, then it's basically incapable of making effective decisions. Dysfunctional arguments, on the other hand, lead to disaster. Facilitators don't want to limit debate; they just want to make sure it doesn't become dysfunctional.

3.8.3 Steps in Managing Conflict

When facilitating conflict, divide your strategies into two categories that mirror the steps in conflict management.

Step 1: **Venting**: this involves listening to people so that they feel heard and so that any built-up emotions are diffused. People are rarely ready to move on to solutions until emotional blocks have been removed.

Step 2: **Resolving the issue**: choosing the right structured approach to get to solutions. This can be a collaborative problem-solving activity, **compromising**, **accommodating** or **consciously avoiding**.

Let's examine each step in more detail

Step 1: Venting People's emotions

Facilitators need to vent emotions when the following are in evidence:

- People pushing their points of view without being at all receptive to the ideas of others
- People becoming angry, defensive and personal with each other
- Negative body language, like glaring and finger pointing
- Sarcastic or dismissive remarks
- People "yeah, butting" and criticizing each other's ideas
- Quiet people "shutting down" to stay out of it
- Extreme ager to the point where relationships are damaged

When negative emotions are in evidence, facilitators need to act quickly so that these emotions don't poison the dynamics of the group. To vent conflict:

Slow things down: get the attention of the group by stopping the action and asking people to slow down. You can use the excuse that you can't take notes as quickly as people are talking. Ask them to start over and repeat key ideas.

Stay totally neutral: never take sides or allow your body language to hint that you favour one idea or one person over another.

Stay calm: maintain your composure and do not raise your own voice. Speak slowly with an even tone. Avoid using emotional body language.

Revisit the norms: point out the existing norms and remind people of their prior agreements. Engage the group in writing new norms.

Be assertive: move into the referee mode. Insist that people speak one at a time. Make them put their hands up and stop people who interrupt others. Don't stand by passively while people fight.

Raise awareness: on a clean sheet of flip chart paper record member ideas about the difference between debates versus an argument. Ask them which one they want to have.

Make interventions: don't ignore ineffective or dysfunctional behaviours.

Emphasize listening: paraphrase key points and ask others to do the same thing.

Do a process check: stop the action any time emotions get out of hand or if the discussion is spinning in circles. Intervene by saying: "I'm noticing that points are being made with considerable emotion. What can we do to change the tone to create a healthy debate?"

Use a structured approach: use technique such as force-field analysis, multi-voting, systematic problem solving, cause and effect analysis, etc., to interject needed objectivity. Don't let any discussion rage on without imposing structure and systematically capturing key ideas.

Use the flip chart: make note of key points so they aren't lost and to prevent group members from repeating points. Read back flip chart notes whenever you want to regain control.

Create closure: make sure that the debating is really going somewhere. Ask group members to help summarize what has been agreed. Test these items for agreement, help the group create action plans to insure implementation of key suggestion.

3.8.4 Listen- Empathize- Clarify-Seek Permission-resolve

Listen Instead of arguing when you hear a point you disagree with, listen attentively to the other person's main points. Let people share their views without interruption. Look interested and say things like: "Tell m more. That is interesting. Uh-huh, I am not sure I understand. could you go over that again?"

Empathize: Accept the views of the other person even if you don't agree with them. Let people know you understand their feelings. Say: "I don't blame you for feeling that way. I see what you mean." "I understand how you fell. I'm sure I'd feel the same way if …"

Clarify: Delve deeper to insure that you have a clear understanding of what the other person is saying to you. Say: "Let me see if I've got it straight, what you are saying is …" "Is it possible that … The idea you are proposing is …"

Seek permission: Tell your side after the other person has expressed all of his or her concerns and feels clearly understood. Say: "Now that I understood your views, can I explain mine?" "It seems that this would be a good time to bring up a few points you haven't mentioned."

Resolve the Issue: Once you have both heard each other, this is the time to start dealing with the problem together.

Step 2: resolving Issues

Here five basic approaches you can choose from, once emotions have been vented, in order to resolve the underlying issue:

Avoid: ignore the conflict in the hope that it will go away. Maintain silence or try to change the subject

Accommodate: ask people to be more tolerant and accept each other's views. Ask them to try getting along. This sometimes involves asking one person to give in to another person.

Compromise: look for the middle ground between highly polarized views. Ask each person to give up some of what he or she wants, in order to get other items he or she thinks are more important.

Compete: use force to make points and quell any conflicts. Go for a personal **win** even if the other person feels like he or she has lost the argument.

Collaborate: face the conflict, draw people's attention to it, surface the issues and resolve them in a **Win/win** way by using a systematic problem solving approach.

The five Conflict Options: Pros and Cons

Each of the aforementioned approaches can work in specific situations. Facilitators need to understand each one and choose the one that suits the situation.

Avoiding---when conflict is avoided, nothing gets resolved. Yet this is the right approach to use if the issue at stake is very trivial, can't be solved or will result in a total **lose/lose** situation for the group. Avoiding is sometimes a wise interim strategy to give people a chance to calm down before addressing issues. The main consequence of avoiding is that issues aren't resolved and there's no creativity applied towards finding a solution. The problem remains to fester and can crop up later. While avoiding has its place, groups become ineffective if they avoid too many issues.

Accommodating--This is a social response aimed more at keeping the peace than solving the problem. This approach can involve asking everyone to just get along or asking one party in a conflict to give in to the other party. Accommodating is the appropriate approach in situations in which one person is only slightly interested in the issue, while the other party cares deeply. It's also the right approach to take when exploitation of the issue reveals that one party is wrong. This style is most applicable to family and other social gatherings in which tolerance and civility may be of greater importance than finding the right answer. The consequence of accommodating is that the underlying issues are often left unexplored in the interest of keeping the peace.

Compromising--This is a mediated approach to managing conflict that is used when two people or two groups have formulated strong positions. Neither party feels he or she can accept the position of the other, so a neutral middle option needs to be developed. The good thing about compromising is that it does yield a solution. The problem is that both parties must give up points to get others. The process of compromise also tends to be adversarial. People push their views in the hope that their poison prevails. At the end of a compromise, people feel that they've both won and lost. They may also harbor negative feelings towards the other party because of the adversarial nature of the process. Compromise leaves people feeling, "I'm going to have to live with it!"

Competing---This is a strategy of defending oneself and arguing one's point of view in order to score a win over another person. Competing is a contest of wills in which the person who wins does so at the expense of the other person. Competing has its place in those situations that are clearly defined as competitive, such as sports and war. In these situations, the winner doesn't worry about the feelings of the loser. Since competing is combative and adversarial, facilitators never use this approach to settle issues.

Collaborating -This approach strives to build consensus. It involves naming the issue and then engaging group members in analyzing the facts of the current situation, generating creative ideas, objectively sorting through potential solutions and agreeing on a course of action. Collaboration relies on objective information. Everyone inputs ideas. People are encouraged to listen and build on each other's points. Solutions are generated through the use of non-competitive processes such as brainstorming. The best course of action is determined by applying a set of criteria to the

choices available. At the end of collaboration, everyone feels that he or she was heard and that the final strategy reflects his or her thinking. While the final outcome may not be exactly what they would have decided on their own, all members feel that they have had a say. Because collaboration emphasizes working together for a win/win, it creates a consensus. At the end of a conflict resolved through collaboration, people's feelings about the solution are: "I can live with it!"

The main drawback to collaboration is that it requires a great deal of time and thus may result in a waste of energy if used on an insignificant issue.

Avoiding doesn't deal with the Issue	Use it in those 10% of situations, when issues can't be resolved
Accommodating just smoothes things over	Use it only in those 5% of situations, when keeping the peace is of more importance than finding a solution
Competing divides groups and creates win/lose	Facilitators should never let people compete! 0% applicability
Compromise seeks to find the middle ground	Use it in those 20% of situations, when faced with polarized choices
Collaboration gets people working together to find the best solution for everyone	This is the # I preferred approach for all facilitator. Use it in 65% of all conflict situations

Collaboration encourages people to work together to objectively seek solutions that they can all live with, because it's consensual, it unites and generates solutions that everyone feels committed to implementing. It is the superior conflict option.

Assumptions underlying collaboration: Collaboration is a superior way of solving a problem during a meeting. However, a number of conditions need to be in place to insure a successful outcome. Members must:

- have sufficient trust among themselves to open up and be supportive of each other when necessary
- have a positive intent to work towards a win/win solution

- have relevant information on hand to make a sound decision
- have the time to make this decision
- believe the topic is important enough to warrant spending the time it will take

3.8.5 Conflict Management Norms

Anytime you anticipate that a session has potential to become contentious or if the group has had stormy meetings in the past, it's important to create new norms specially targeted for conflict situations. As with all other norms, these are created by the members, preferably at the start of the session. Use the following questions to trigger the discussion:

- "What behaviours and rules should we adhere to if we find ourselves getting into serious disagreements?"
- "What can we do to insure that we have a healthy debate instead of a heated argument?

Some sample norms targeted at conflict situations include:

- We'll speak one at a time
- We'll look at each other when we speak and acknowledge any valid points made by the other person
- We'll accept all ideas as valid when presented
- We'll build on each other's ideas
- We won't dismiss any idea without really exploring it
- We'll make sure everyone is heard --- not just a few people
- We won't get emotional, argumentative or personal
- No one will attack anyone else
- If the discussion gets heated or we start going in circles, we'll call a time- out and look at how we are doing things
- No one will deliberately block the group from reaching a final solution by taking a position
- We'll take a systematic approach to resolving issues rather than just pushing personal points of view

Once conflict norms have been established, refer to them at strategic moments to encourage effective behaviours. You can also use the conflict norms in the middle of a session as a mid-point check.

3. 9. The Skills of a Facilitator

3.9.1 Introduction

As mentioned above many programme managers lack the practical skills to effectively involve diverse stakeholders in planning and managing development programmes. Most excellent facilitators are not naturals at what they do—rather, they work hard to develop the knowledge, attitudes, and skills needed to harness the power of groups. These people help diverse groups and local people to learn from their collective experience, take joint actions, and develop their own facilitation skills.

In Chapter 6 above, different facilitation skills and characteristics are explained in detail. Here under we will see some additional skills of a facilitator including Active listening, summarizing, synthesis, and conflict resolution.

3.9.2 Active Listening

Resolving a complaint or conflict requires that you can listen to and understand what the other person is telling you. In order to be a good listener, you should practice active listening skills. There are five key aspects of becoming an active listener including paying close attention, Demonstrating physically that you are listening, checking for understanding, not interrupting, and responding appropriately. A facilitator, to be successful in his/her facilitation work, should practice and develop this skill.

3.9.3 Summarizing

Summarizing is giving a shortened version of something that has been said stating its main points. A facilitator deals with many people at a time. Different individuals may raise different ideas concerning a point of discussion. In this situation if a facilitator doesn't have a summarizing skill he couldn't help participants reach at an agreement. So a good facilitator needs to develop a good summarizing skill.

3.9.4 Synthesis

Synthesizing is developing a new unified whole which results from the combination of different ideas, influences or objects. While a facilitator is dealing with managing different ideas or facts

coming from different individuals, he/she is expected to develop a new unified whole to reach at a solution. So synthesis is an important skill that a facilitator should develop.

3.9.5 Conflict resolution

Conflict is often the symptom of a problem with the task or the process. When to individuals or groups got in to conflict, it is due to a conflicting interest on a task or a process that they disagree. Under this kind of a situation, to help the conflicting individuals or groups get along there should be a good facilitator having good facilitating skill with respect to conflict resolution.

Self-Check 3	Written Test

Directions: Answer all the questions listed below. Use the Answer sheet provided below.

I. Choose the best answer from the given alternatives and put the letter of your choice on the space provided

___ 1. Which one of the following is correct about communication?

A. It is a process B. It has a universally agreed upon single definition

C. Originated from the word 'Communis' D. It takes place accidentally

___ 2. Which one of the following differs from the rest with respect to the functions of communication?

A. Information function B. Command function

C. Demotivating function D. Integrative function

___ 3. Intrapersonal communication:

A. occurs between two or more individuals B. Takes place in a group situation

C. It is not important D. Occurs within us

___ 4. Which one of the following elements of communication comes first in the process?

A. The message B. The communicator C. The message D The channel

II. Essay:

5. Communication occurs even without uttering words. Discuss.

_____

Note: Satisfactory rating - 10 points Unsatisfactory - below 10 points

You can ask you teacher for the copy of the correct answers.

Name: _____ Date: _____

LG #4	LO #4-Conduct Training

Instruction sheet

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:

- Conducting needs assessment
- Carrying-out preparation
- Conducting the implementation training
- Carrying out Evaluation

This guide will also assist you to attain the learning outcomes stated in the cover page. Specifically, upon completion of this learning guide, you will be able to:

- Conduct need assessment to provide appropriate training
- Carry-out preparation to facilitate the training process
- conduct implementation to capacitate trainees based on organizational training guide line
- Carry-out evaluation to understand the outcome

Learning Instructions:

13. Read the specific objectives of this Learning Guide.
14. Follow the instructions described below.
15. Read the information written in the information Sheets
16. Accomplish the Self-checks

Information Sheet-4

4.1. Conducting Training Needs Assessment

4.1.1 Basic Concepts of Training

Training is about extending and developing individuals' capabilities for better performance in their jobs. It involves the transfer of new knowledge, skills and attitudes to develop and maintain trainees' competencies to perform specific roles at their work place.

There are many definitions in the literature. Here are some that may be helpful in summarizing many of the ideas on training:

Training is the process of acquiring specific skills to perform a job better (Jucious, 1963). It helps people to become qualified and proficient in doing some jobs (Dahama, 1979). Usually an organization facilitates the employees' learning through training so that their modified behaviour contributes to the attainment of the organization's goals and objectives.

Van Dersal (1962) defined training as the process of teaching, informing, or educating people so that (1) they may become as well qualified as possible to do their job, and (2) they become qualified to perform in positions of greater difficulty and responsibility.

Education also provides knowledge, skills and attitudes and brings about changes in behaviour of individuals. However, training differs from education.

Training	Education
- Usually short term	- Long term
- Narrowly focused & specific	- Broadly focused
- Designed to meet a specific need	- Aimed at preparing people and has immediate application for the future.

Training may be necessary for many reasons:

- When there is a discrepancy between an employee's current performance and the required standard of performance in his/her present position.
- When there are changes in a job description or the addition of new responsibility in the present position.
- When an employee moves to a new position and acquires a new set of responsibilities.
- When some new way of doing something is developed.

Note that:

1. Training has a very clear purpose- it relates to improvements in performance for job / career, specific tasks, productivity, etc. The term "training" is also used of less focused needs such as " awareness creation" and "consciousness raising"
2. Training may be delivered through formal "teaching " or by experiential means (learning by doing through apprenticeship, work attachment, etc)
3. Training is provided in response to identified needs- hence it is generally given for specific "target groups", over a relatively short time span.

4.1.2 Benefits of Training

Well planned and effective training can have numerous potential benefits both for individuals receiving training and the organizations and institutions in which they work.

From the individual trainees' point of view, training increases job satisfaction through improved performance, better pay, and higher prestige associated with higher productivity work. It also increases their potential for promotion within the organisations in which they work, or in the labor market in general.

There are also numerous organizational benefits associated with training.

- It leads to higher productivity and output through improved skills and job performances.
- It can increase the quality of output and customer satisfaction.
- It fosters the image of the organization as dynamic and forward looking, in turn attracting both customers and potential recruits.

- It can also help enhance and define better the roles and functions of employees within the organization.

This can result in long term cost servings through better industrial relation, improved employee morale, reduced absenteeism, etc.

Phases of training

Training is a circular process that begins with needs identification and after a number of steps ends with evaluation of the training activity. A change or deficiency in any step of the training process affects the whole system, and therefore it is important for a trainer to have a clear understanding about all phases and steps of the training process. In the broadest view, there are three phases of a training process: planning, implementation, and evaluation.

Planning Phase

The planning phase encompasses several activities, two of which - training needs assessment and curriculum development - are very important.

Implementation phase

Once the planning phase of a training program is complete, then it is time to implement the course. Implementation is the point where a trainer activates the training plan, or it is the process of putting a training program into operation.

Evaluation phase

Evaluation is a process to determine the relevance, effectiveness, and impact of activities in light of their objectives. Raab et al. (1987) define training evaluation as "a systematic process of collecting information for and about a training activity, which can then be used for guiding decision making and for assessing the relevance and effectiveness of various training components."

4.1.3. Training Needs Assessment

4.1.3.1 What is Training Needs Assessment?

A training need is said to exist when a gap between the work performance of an individual or organization and a desired level of competency is perceived. This suggests that a training need can be described as a set of specific skills, knowledge, and attitudes, which are needed by individuals in a given organization or occupational category in order to perform a particular job or task more efficiently.

Training Needs Assessment refers to the process whereby such training needs are identified, prioritized, and selected for specific action as part of a training program. The first step of the training cycle is the identification of training needs. Training should never be provided unless needs have been clearly analyzed and identified. Once a problem has been identified, a number of solutions may exist. It is very important, however, to realize that training is not always the answer.

Whenever a deficiency of knowledge, skill or attitude exists, it is all too easy to fall into the trap of thinking that some form of formal training program is necessary. It is often better to decide what we must not teach or need not teach, in order to determine what we must teach.

Gane (1972) also notes that before deciding to provide training, one should consider whether changing the organization, the equipment or the job itself, or changing the people concerned by the selection, would ease the problem, before the expensive, uncertain process of training is embarked on to change people's performance directly.

It might be asked why training is not a cure for all performance ills. The fact is that training has high costs. Men and women are taken away from productive work and time and money are spent on achieving objectives which might have been managed more cost- effectively.

Before Considering training, therefore, the situation should first be analyzed carefully in order to decide whether a deficiency in performance can be rectified using non-training measures, such as

making changes in human, technological, financial, organizational, social and information systems. specific examples could include making changes to the working environment, improving housing, transport or the general infrastructure or, in an organization, altering the criteria used in selecting staff.

Training should only be carried out when it is believed that the same results, in terms of... job performance, cannot be obtained so efficiently, effectively and economically by any other strategy.

In the case of a new training program, TNA is deemed necessary at an early stage in the process of planning. In the case of an existing program, it is used mainly for improving, modifying and adapting it to the needs of a particular clientele. In either form, TNA is an integral part of the training cycle, and an indispensable element in the overall planning process

Thus while the overall objective of identifying and bridging the " gap" between "what is " and "what should be" may be the common denominator of most TNA programs, there is considerable variation in the systematicity with which individual TNA undertakings are conceived and implemented.

A systematic needs assessment is a comprehensive process involving:

- deciding the target population (beneficiaries)
- defining and identifying needs
- Measuring competency short comings
- Prioritizing between them
- Setting training objectives in the light of assessment findings.

4.1.3.2 Benefits of Needs Assessment

At the most general revel TNA helps planners decide which problems to address through training and how to address them. But TNA also performs other specific functions within the training cycle:

- It provides the baseline data upon which all planning decisions are made.
- It assists the setting up of a results-oriented training program: the identification of needs form the basis for analyzing the results of training.
- Needs assessment improves training effectiveness through better targeting: it sorts out problems into those which require a training solution & those which need other types of attention; it also identifies individuals who need training, and the type of training they require.
- It helps to avoid some of the most common mistakes in training, eg. Spending unnecessary time on teaching difficult, but relatively unimportant, material; or forgetting to include highly essential, but easy to teach, material; teaching what trainees already know, etc.
- TNA provides valuable insights and leads in respect of the design, development and delivery of training programs:
  (a) type of training to be undertaken
  (b) the location of training
  (c) the time- tabling of training activities
  (d) their resource requirements (funds & staffing)
  (e) Selection, preparation and adaptation of training materials and methods.

For instance, needs assessment results can shed valuable light on the appropriateness or desirability of the use of computers in training.

4.1.3.3 Effective Needs Assessment

Several difficulties may hamper the successful formulation and implementation of needs assessment in practice. While many problems arise out of the resource constraints faced by training programs (time and cost dimensions), many difficulties are of conceptual or organizational character. An awareness of these issues at an early stage will generally help the design of needs assessment exercises.

4.1.3.4 Conceptual Considerations (6)

As indicated earlier, needs may be conceived of as a gap between an existing situation ("What is") and another, under 'ideal' or 'desirable' conditions ("What should be").

This relationship is illustrated below.

The Need Gap

What ought to be =	Desirable Situation	
Need =		Difference, shortfall, Deficiency
What is =	Actual situation	

Applied to the needs of an individual trainee, for instance, this translates itself into identifying an 'ability gap' i.e. the deficiency in knowledge, skills and attitudes which present the attainment of job performance at 'required standards'.

Training Needs as Ability Gap

What K, Ss and As does S/he have?	What K, Ss & As are required?

The Ability Gap (TN)

The advantage of this model is that it distinguishes between two possible courses of action when the identification of ability gaps is completed.

- Fitting the employee to the job : by better selection or provision of training
- Fitting the job to the employee: by job redesign or providing job aids.

The distinction is also a useful reminder of the fact that not all perceived problems and performance gaps are due to lack of training, eg. they may be caused by factors such as internal

conflicts, low morale, etc. Attributing the right gap to appropriate training needs thus forms an important part of the challenge in TNA.

Understanding Need Levels

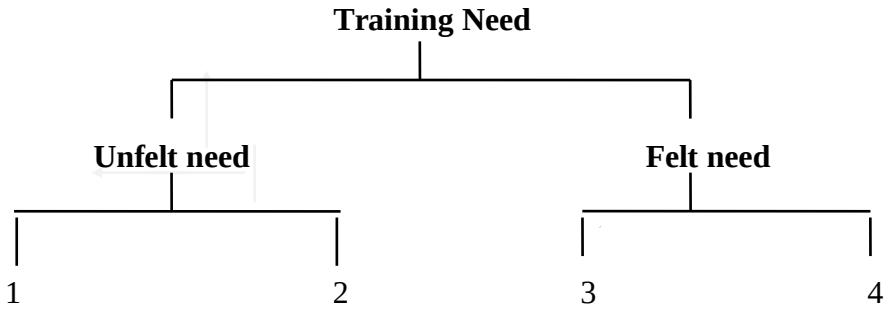
Some serious problems arise at the level of measuring 'ability gaps'. These arise partly out of difficulties in establishing the base-line or existing levels of knowledge/attitude/skills for individuals concerned, and partly in defining 'desirable' standards for trainers to achieve. To illustrate these difficulties, the following schematic outline may be used to describe five levels of individuals' attainment:

a. Nil	Knowledge level practically absent or negligible regarding some subjects
b. Deficiency	Some general awareness, but insufficient knowledge
c. Sufficiency	Fairly adequate knowledge or skill to perform, but short of efficient performance.
d. Precision	The required level to achieve precision & consistency in performance
e. Perfection	Combining precision with speed in performance: the 'ideal' level of attainment.

Problems of needs 'perception' are another common source of difficulty for undertaking TNA.

Some authors have distinguished between felt and unfelt needs. The former are those needs which people do recognize, and the latter those which they do not. With recognized needs, there is a stronger spur or urge to take action to bridge "gaps". However, needs assessment is more challenging when the knowledge of such need among trainees is missing or unreliable.

Possible perceptions of Training Needs



1. Performance problem not perceived at all
2. Performance problem perceived, not aware that problem is due to lack of training
3. Performance problem perceived, aware of type of training needed, but unable to determine its amount
4. Performance problem perceived, able to identify type and amount of training.

Category 4- 'The fully aware' participant

4.1.3.5 Approaches to Needs Assessment

Needs assessment is concerned with identifying the type of training needed, as well as those in needs, down to the level of the individual organization and its constituent elements (departments, units and individuals)

Three levels may be identified specifically

a. **Organizational level needs**: Concerns identifying the type of training needed by organizations and /or units and departments within them.

b. **Occupational level needs**: involves identifying the attitudes and knowledge refinements for carrying out a particular type of job or function

c. **Individual level needs**: deciding the organizational and occupational needs leads at the question of who or which individuals are in need of what type of training.

The difference between these should, however, not be exaggerated. Since training is ultimately about upgrading the performance capabilities of people and individuals, it may be argued even at

the former two levels, needs are examined in abstraction from the individuals who may require training. Thus there are clear intersections between these; nevertheless each represents a particular angle or perspective from which identification of needs takes place.

4.2. Carrying-out Preparation

4.2.1 How to Prepare for Training

There are several major steps in training session preparation. These areas include **the importance of promoting the program to top management**, **preparing training materials**, **the training space**, **trainers**, and **trainees**. The most successful training sessions are well-planned and well-prepared.

4.2.2 Promote Training to Management

Lack of upper-management support and commitment is one of the top five reasons why training is not as effective as it's expected to be. Without top-level support, employees have less incentive to retain information and apply it to their work. When top management shows interest in the learning process, participants are more likely to apply new skills and knowledge to their work. Upper management's influence on how employees react to training cannot be overestimated.

4.2.3 Prepare Training Materials

Preparing training materials in-house is more laborious than using prepackaged materials, but if done right, it only has to be done once. With a logically organized filing and storage system, you will have training sessions that are reusable and easy to update as equipment or procedures change. You will have complete control over what is trained in your company.

According to the ASTD, preparation time varies for different training methods:

- Traditional classroom training requires about 40 hours of research and development for 1 hour of instruction.
- Computer-based training requires about 200 hours of research and development for 1 hour of instruction.

- Video-based training requires anywhere from 40 to 120 hours of research and development for 1 hour of instruction.

Web-based training requires anywhere from 40 to 200 hours of research and development for 1 hour of instruction.

4.2.4 Prepare the Training Space

Prepare classroom and hands-on training areas by checking for:

- Adequate seating arrangements
- Comfortable environmental conditions
- Sufficient lighting
- Required equipment, such as video player/monitor, slide projectors, flip charts and other media, are available

Classroom preparation is extremely important. Even if your training space is a cordoned off part of the plant, cafeteria, or other work area, you need to get it ready for training. For example, make sure the area will accommodate the number of trainees for the session. If trainees have to stand or if they are packed uncomfortably tight, they will not be as receptive as possible to the material you present.

Make sure you have enough handouts or other materials for trainees. Ensure tools, equipment, machines, or other props for demonstration or practice are working properly. The need for proper preparation cannot be overstated. Trainees will gather first impressions in the first few minutes of the session, and they will judge the material and the trainer on how prepared the training environment is. Everything should run smoothly at the start of the session.

As the person in charge of training, it’s up to you to develop standard preparation procedures to ensure a high standard of training. Every detail counts.

4.2.5 Prepare Yourself

Each trainer has different qualifications, experience, expertise, and methodology of training. Even trainers who are intimately familiar with a subject must properly prepare for the training session. The following guidelines are designed to review the basics of preparing trainers for learning sessions.

4.2.5.1 Practice Makes Perfect

Practice your presentation. The best instructors always do at least one dry run before the training session. Practicing improves presentation skills and confidence levels. It allows trainers to foresee any technical or logistical difficulties and prepare back-up plans for any contingencies.

4.2.5.2 Overcome Presentation Phobia

Many times, especially with lectures, trainers conduct sessions in front of large groups. Many people are uncomfortable with public speaking even when they have a well-prepared presentation.

Here's a two-step process for overcoming stage fright:

(a) **Prepare the mind by putting everything in perspective**. Trainees are here to learn from you, they want you to be a good trainer, because they'll learn more that way. Focus on them and making sure they understand the material. Don't worry about your performance, you're just the messenger. Deliver the message. Accept the fact that you will be nervous and, in fact, put that nervous energy into an energetic delivery.

(b) **Prepare the body**. Trainers need to familiarize themselves with the training environment, including the lighting, temperature, and layout of the classroom. You can do this during your practice session and also by arriving early on the day of training to check that everything is in order. Drink nondairy fluids to soothe your vocal cords and prevent a dry or sore

throat from extensive talking during the session. You may also want to learn relaxation techniques and develop a standard ritual before training sessions to relax and prepare yourself.

4.2.6 Prepare Trainees

You've taken the time to prepare the training materials, the training space, and yourself. To ensure the most productive training session, you also need to prepare trainees.

You want trainees to be highly motivated before they walk through the training doors. Consider using some of these pretraining techniques to put trainees in a receptive frame of mind, get them geared up for the topic, and prepare them to learn.

- Distribute a session outline or agenda before the meeting. Trainees who might be anxious about training will be put at ease when they know ahead of time what will be covered. And since knowledge is power, all trainees benefit from knowing what's on the agenda. You benefit when trainees enter the room already thinking about the topic.
- Distribute presession activities. Along with the outline, include fun and simple open-ended questions or situations, such as these:
    - ✓ **General questions:**
    - What do you already know on the training topic?
    - Why do you think this training is needed?
    - How will this training benefit you and the company?

    - ✓ **Case studies involving the upcoming training followed by debriefing questions:**
    - In this case, what would you do?
    - What would you have done differently than the characters? Ask trainees to be prepared for a brief class discussion on the case study. Take a few minutes at the beginning of the session to ask trainees for their answers.
- Distribute an expectation questionnaire. Via survey, e-mail, group meeting, etc., ask what trainees expect from the session. Use the results to customize the session as much as possible to the audience while still meeting all training objectives.

4.3. Conducting Training

4.3.1Training Techniques

In principle, there are a wide variety of techniques that trainers can employ to conduct their courses. In practice, however, choice is constrained by such factors as trainer's confidence and competence, and resources available for training.

This section outlines the pedagogic features of a number of common techniques. These are classified into three groups, reflecting their broad common areas of functionality. Some methods are most suited for presenting information, others for encouraging participant involvement, and yet others are best as activities outside the training room.

4.3.2 Presentational Techniques

Most training programmes will involve, albeit to varying degrees, the transmission of new information and knowledge to trainees. **Introducing** the course programme and its broad objectives is one such general example, **teaching** specific knowledge (such as principles of macroeconomics, cost benefit analysis, sampling techniques, etc) is another.

Presentational techniques are didactic for most part, i.e, they are one way communications from the trainer/tutor to learners. They economize both on space and time given their ability to put across a large amount of material to sizeable audiences in limited periods of time. Their drawbacks relate to the passive nature of their approach to instruction, their limited success in arousing participants' interests, sustaining their concentration, and achieving satisfactory memory retention rates.

4.3.2.1 Lecture

Lecture is one of the most common forms of presenting information to an audience, particularly of a large size. Communication is mostly one way: while the lecture goes on the audience listen

and (normally) take notes. It is customary to defer questions (Other than those with a clarifying nature) to the end of the session.

Lecture allows a large volume of material to be covered in a relatively short-period of time. This explains its proven appeal to situations when time considerations are over-riding (as in intensive training courses). The effectiveness of lecture can be boosted if it is accompanied by appropriate visual support and written material. For instance, the provision of summary notes and handouts (see Chapter 4, Section 4.3) can assist learners create a mental structure of the material presented to them, usefully direct their concentration, and moderate the pressure on them to take notes.

The main difficulty arises from the didactic nature of teaching. Lecture does not address the needs of the individual learner; nor does it provide opportunities for the audience to participate - thus keeping them as passive listeners. Besides, most people are unable to concentrate for more than a relatively short period. Thus assimilation tends to be haphazard and selective: parts of the material may even be missed altogether or inaccurately recorded. Moreover, in the absence of feedback it is difficult to judge whether or how much of the material covered is actually taken in. Retention rates too tend to be alarmingly low: unless possibilities are provided for discussion, practice, simulation or activities of the like, most of what is 'heard' in the lecture room typically tends to be rapidly forgotten.

4.3.2.2 Demonstration

A demonstration is a classroom technique in which the trainer illustrates a certain technique or skill under actual or simulated conditions.

As with lecture, demonstration is a presentation technique, intended to impart new knowledge (skills in this case) to learners. In a demonstration, however, participants have the added advantage of actually seeing the results of more abstract theories and concepts.

A demonstration may be conducted 'live' with the trainer performing the task in the presence of the trainees (sometimes followed by trial sessions). Or, it may be assisted by visuals (slides, film, video, etc), to illustrate how the task may be carried out under specified circumstances.

The main advantage of demonstration is that it shows learners how a task may be actually conducted. In this sense, it can be both 'convincing' (raising learners' confidence in the trainer's ability), and alerting (making them aware of the practical dimensions of their training). The visual aspect of demonstration also represents an improvement over lecture in that it enables better assimilation and retention rates to be achieved

The advantage of demonstration in teaching a range of 'mechanical' jobs and skills should be evident (eg packaging, gardening, crop protection, fence-building, driving, painting and decorating, etc). However, it can also be used to impart practical skills (of not always very high intellectual level) in a number of other different contexts:

(Calculation techniques: the trainer can take time to demonstrate, through appropriate examples and exercises, calculation techniques such as shadow prices, farm budgets, policy analysis matrix, etc)

(Computer sessions: demonstrations are also very common for introducing new software (data base, spreadsheet, survey analysis) or illustrating their usage for particular purposes (eg electronic mail) - see Section 5 below.

Much of the steps which raise the effectiveness of lecture (see above) also apply to a demonstration session (pace of presentation, its structure and overview, the quality of speech and mannerism, etc).

However, for demonstration to be particularly effective, a few more points should be observed:
(Given its practical angle, it may be helpful to actually start a demonstration session with common and popular mistakes: showing how not to do things may be as, if not more, instructive as showing how to do them.

(Demonstration sessions must provide ample opportunities for questions from participants- to clarify ambiguities, to relate points raised to their own experiences, and to consolidate their comprehension in general.

(Ideally they must be followed by trial sessions to give trainees an opportunity to practice their observed instructions.

4.3.2.2 Participatory Techniques

As implied by their collective name, participatory techniques involve learners in the process of learning, enable them to air their viewpoints, and encourage them to draw from their own backgrounds and experiences in the course of training.

Moreover, whereas presentational methods involve participants mostly in 'hearing' about, and at best 'seeing' the results of, new knowledge and information, many participatory techniques involve them in active or experiential learning and 'learning and 'learning by doing' (see Chapter 2, Section 4).

As we shall see, their possible drawbacks are mostly to do with their relatively time consuming nature, preparation requirements and costs, and less direct trainer control over their execution.

Brainstorming: brainstorming is a spontaneous and none-evaluative technique of generating innovative and creative ideas by the facilitator and the group.

Symposium: A Symposium is a meeting where speakers deliver short addresses without regard for feedback from the group

Case Study: (A description of a real or imaginary yet realistic situation. a case study is not simulation)

Case study involves detailed examination of a specific situation. The situation or experience placed under scrutiny may be real or hypothetical, yet must be carefully chosen to reflect on, and closely relate to, the core of the training program.

In studying a case trainees develop skills to analyse to situation and to think through the consequences by applying (or failing to apply) relevant principles or practices. Thus the methodological strength of case study is that it combines practical/problem solving approaches to learning with detailed, in-depth analysis of particular situations.

By 'bringing in a chunk of reality' into the classroom, case studies are best used as complementary activities to other training methods. For instance, whereas lecture is most effective in communicating basic information on a subject (not much of which is subsequently retained!), case study is best used as a supplementary activity for the application of that knowledge.

Careful selection of case studies can thus make an important contribution to:

- the development of understanding
- synthesis of ideas; and
- critical ability

Historically, the use of case study has reflected its overall appeal in dealing with real situations, practical problems and policy decisions rather than with overarching development of theoretical abstraction. No wonder that its use has been widely associated with such professions as business studies, medicine, social work and law. Today, of course, case study is a powerful and versatile teaching tool used in training contexts in a large number of disciplines including agriculture

Buzz Group: (Buzz group is a small discussion group which may be asked to produce ideas on a narrow or an open-ended topic within a specified time limit)

This technique is a modified form of brainstorming, which aims to generate discussion and to lead to new ideas and solutions on the basis of small group discussions.

A buzz group normally consists of about 5-6 members. The group may be asked to produce ideas on a narrow or an open-ended topic within a specified time limit. It is customary for the group to appoint a reporter to convey their findings at the end of their deliberations.

The range of topics assigned for buzz group discussion may vary widely. Some examples are given below:

- thinking about applications of a theory
- raising questions
- drawing a list of issues
- identifying the causes of a particular problem.

This approach can also be used occasionally in the lecture room, where the lecturer stops for a few minutes and asks small groups of people sitting next to each other to deliberate on a particular issue. One advantage of this approach - apart from breaking the monotony of the lecture and injecting a sense of participation - is to check learners' understanding of particular issues before proceeding to other, more complicated, ones.

Buzz group, however, differs from brainstorming in two respects:

- **Smaller, more informal nature:** as stated above, a buzz group consists of a small group of participants 'buzzing' together for a relatively short period of time (sometimes a few minutes).
- **Discussions**: contrary to brainstorming, where criticism is deferred until after ideas have been pulled together, in the buzz group, discussion features an important part of the process of in-group exchange of ideas.

Group Discussion: (verbal interaction between two or more participants in a learning situation. Discussions may form part of forum, panel, question-and -answer session, syndicate, etc.)

Discussion allows trainees to exchange ideas among themselves and/or with the trainer. It stimulates interest and, if conducted skillfully, can encourage participants to draw on their own experiences to contribute to the topic under discussion. Used at an early stage in the course,

discussion can also help break the ice and to provide participants an opportunity to practice self-expression.

Discussions may be held either in a structured or in an informal manner.

Role Play: (Role Play is a training technique in which participants play certain roles in an informal and non-theatrical but realistic manner. It may be structured or spontaneous)

Role play is a training technique in which participants "act out" hypothetical or real life situations in front of an audience. The trainees are given necessary background information and some ideas about how to organise their roles. There is no set dialogue or script: the parts are made up as the activity proceeds. The group or audience (or both) then discuss the role play and its implications for the problem under consideration.

Most people are familiar with the idea of role play from a passive position (watching plays and TV, observing or recalling children's games, and so on). Yet, involving them in active role plays in training can positively induce their interest, arouse emotional involvement, and develop their spontaneity and problem solving skills.

Specifically, role plays can be used to:

- Change or develop attitudes (eg putting an aid recipient in the shoes of the donor, or vice versa - the so-called reverse role play
- Develop negotiation skills (as in project funding submissions)
- Explore delicate human relations (eg in project management and monitoring)
- Bring out the social and political environments of projects, the questions of human constraints to implementation, multiple and often conflicting objectives, the identification of externalities, hidden costs and benefits and the wider effects of a project.
- Foster 'learning by doing', by making mistakes (in the face of inadequate data and time pressure) and benefiting from subsequent feedback. There is also scope for capturing the role play scene on video for feedback

The drama aspect in role plays enables the purely intellectual experience gained in most other discussion techniques to be extended into an emotional experience as well. This can make role plays a valuable support activity in many training contexts.

Role plays can take two forms:

a. Spontaneous role plays: group members discussing a situation may highlight a problem area (such as those encountered in interviewing beneficiary farmers for collection of monitoring data in a project area). Two members of the group may than act out the interview, attempting to demonstrate how the problem arises, and how it may be resolved.

a. Structured role plays: a more common and possibly more useful type of role play. This is based on prepared material (written, video, audio or a combination of these) with structured goals. The necessary information must be provided for the participants (unless one role player has knowledge of a hidden agenda). In this case, participants need sufficient time for studying the material and for preparing their role plays.

Workshop (is a meeting organized with the principal objective of promoting experiential learning and producing identifiable results/solutions to problems)

Seminar: (A Seminar is a meeting arranged to share research outcome of a particular project through lectures, papers, reports and discussions. It is conventional to have some discussion leaders)

4.3.2.3 Exploratory Techniques

Other than the classroom techniques discussed in previous pages, trainers may also use a number of other outside activities to enhance and enrich the process of training.

In practice these can take a variety of forms. However, three of the most common methods are discussed below:

- Assignment

- Project
- Field trip/visit

The attractions they can offer as supplementary training activities are not difficult to see:

- The reinforcement of classroom learning
- Assessment and evaluation both by the learner and trainer
- Feedback to the trainer
- Increased attention to the needs of separate individuals and groups within the class

Field Trip/Visits: (It enables participants in a program to travel to the field to see projects, operations, systems and structures and relate them to the classroom learning experiences)

Field trips or visits enable learners to see at first hand, or try for themselves, some of the things they have learnt in a training course.

To be effective and successful, field trips or visits need to be incorporated into the training programme with a clear sense of purpose. This in turn requires some effort on the part of the trainer:

- to communicate clearly the objectives of the activity from the start (or in advance),
- to plan and administer it effectively; and
- to provide ample opportunities for discussion and debate afterwards.

Not so infrequently, however, visits and field trips turn out to be mere 'social' events. The possibility of this inherent drawback, which faces even the more serious and well though-out outside activities, cannot be taken lightly even by the more competent trainers.

Assignments

Assignments are probably the most familiar form of out-or-class activities. Most trainees will have a good idea of what assignments are and what purposes they may serve from their school days. In the professional, adult, learning context, too, the use of assignments can be usefully explored to

- reinforce individual learning

- to provide continuity between different sessions
- to enrich and extend learning beyond the confines of classroom

Assignments can take a variety of forms, among which some of the most important are: **Reading**, **Writing**, **and Exercise.**

4.4. Carrying out Evaluation

4.4.1. What is Evaluation?

It is possible to find almost as many definitions of evaluation as there are writers in the field. One broad definition, proposed by the United Nations Joint Inspection unit is as follows:

Evaluation is a process which attempts to determine as systematically and objectively as possible the relevance, effectiveness and impact of activities in the light of their objectives, i.e. their aims and purposes.

Evaluation, however, can also be defined in more limited contexts. Evaluation goes on at different levels and, depending on the level at which it takes place, may have very different uses, audiences, information sources, and focal points.

Definition of Training Evaluation

Most training activities exist in a larger context of projects, programmes and plans.

Training Evaluation is a systematic process of collecting and analysing information for and about a training activity which can be used for planning and guiding decision making as well as for assessing the relevance and effectiveness of various training components. It is also used to determine the immediate results of the activity.

Process implies that it must be undertaken before, during and after training

It is concerned with value judgment. It should not be confused with assessment, which measures the performance of individual learners.

Tyler, who developed the objectives approach to curriculum design, sees evaluation as a mechanism for the analysis of the effectiveness of the objectives. He states that evaluation is essentially the process of determining to what extent the training objectives are actually being realised by the program of curriculum and instruction.

4.4.2. Benefits of Evaluation

Feedback from evaluation work brings substantial benefits in terms of improved training and curriculum planning decisions.

It may be used to feed into policy decision, to act as a springboard for further research, as grounds for continued or discontinued founding for public information

4.4.3. Types of Training Evaluation

4.4.3.1. Evaluation for Planning

Training needs assessment is a tool for evaluation for planning. It provides the baseline date upon which all planning decisions are made. This information will enable to make critical decisions regarding formulation of training objectives and course content, etc.

4.4.3.2. Evaluation of Methods and Materials

There are many instructional methodologies and types of materials from which to choose. However, not all are equally effective for reaching all types of trainees or for teaching specific content.

Each instructional method/material has specific characteristics and advantages and depending on such factors as types of trainees, subject matter being taught. It is therefore suggested that all instructional methods intended to be used should be evaluated for their effectiveness with the target audience.

4.4.3.3. Process Evaluation

Process evaluation is conducted to detect or predict defects in the procedural design of a training activity during the implementation phase. Key elements of a training activity are monitored in a systematic manner with the goal of identifying potential problems before they become serious.

It is also used to measure trainee progress toward the objectives set during the planning phase.

Process evaluation is a tool to help improve the efficiency and effectiveness of a training program. The overall process evaluation strategy identifies and monitors on a continuous basis the potential sources of failure and also tells about trainee progress towards achieving training objectives.

Process evaluation is conducted periodically throughout the duration of the training. It focus on anything that occurs during implementation that has an important effect on success of the training activity. It examines such contributing factors as:

- change in trainee knowledge, attitude or skill
- effectiveness of training methods and materials
- interpersonal relationship among staff
- the performance of trainers
- communication channels
- logistics
- the extent to which people involved in, and affected by, the training activity are in agreement with its intent.
- adequacy of the resources, the physical facilities, staff and the time schedule

Both formal and informal methods are commonly used in process evaluation. formal method include KSA tests (exam) and instruments that may require trainees, instructors, administrative staff, and service personnel, to give their opinions on various aspects of the training activity. Informal methods such as round table discussions, and individual interviews can also used. There are hard and fast rules on selection of methods. Remember that process evaluation is conducted so as to have some idea of the progress and to identify potential problems before the end of the training activity. If done early, there will be time to make adjustments and collection.

4.4.3.4 Terminal Evaluation

The primary objective of terminal evaluation is to determine the degree to which the intended training objectives and goals have been met and to relate these findings to evaluation information collected earlier in the training process. It is conducted at the end of the training activity.

The major focus of a terminal evaluation is learner performance. Learner performance can be assessed in various ways. One way is by comparing pre-training measurements with post-training measurements. In this method, the trainer will present results as learning gains. Another way is by comparing the objectives of the training activity with what has actually been learnt. Trainers who resort to the latter procedure tend to concentrate on full competency. The first method is closely related to norm-referenced evaluation while the second is known as criterion-referenced evaluation.

Terminal evaluation focuses on many of the same areas as process evaluation, including organisation, facilities and resources. Terminal evaluation, however, tends to concentrated more on trainees overall impression of the training activity.

By far the most common method used in terminal evaluation is to test knowledge, attitudes and skills. Test results are then compared either with pre-determined standards (as specified in objectives) or with entry level knowledge (as measured by a pretest).

As in process evaluation, training activity evaluation forms completed by trainees can also provide valuable information on such organizational factors as length, focus, facilities and resources.

This means that two general methods are used in terminal evaluation:

- Actual measurement of change in trainee KSA or competence, and
- Measurement of trainee perceptions about the training activity.

Many training activities use trainee perceptions as the base for this evaluation. This kind of evaluation information can reveal a great deal about a training activity. Trainee perceptions can be very valuable in pinpointing reasons for training activity success or failure.

Potential problem areas about which trainees should be asked include:

- training activity organisation and management
- physical resources and facilities
- structure and pattern of the course
- appropriateness of objectives
- content
- instructors
- training methods and materials

4.4.3.5 Follow-up Evaluation

Follow-up evaluation is a method of assessing changes in on-the-job behaviour (i.e. improved performance) as a result of training efforts. It attempts to measure the adequacy of a training activity in preparing individuals for job tasks in real life and trying to discovery areas where it can be improved. It is a valuable tool for gathering information on the strengths and weaknesses of a training activity from those who are in the best position to judge former trainees and their employers. It provides feedback from there two groups on how well the training has prepared students or trainees for actual job, and tells the trainee which aspect of the training activity might benefit from improvement.

A follow-up evaluation focuses on measuring change. Development projects, programmes, and training activities are all efforts designed to produce changes, and the change desired is outlined in the stated goals and objectives.

In measuring change (impact), a follow-up evaluation of a training activity would concentrate on answering such questions as:

- Are trainees actually using their newly acquired KSA?

- Do employers notice any differences in trainee behaviour?
- How do employers feel about the changes in trainee KSA?
- Do trainees feel more confident and better equipped?

The methods most commonly used in a follow-up education are:

- Trainee follow-up survey
- Employer survey

Questionnaires, telephone interviews, and personnel visits are all valuable tools which can be used in surveys.

Collecting information from trainees who have participated in a training activity can provide valuable insights into the strengths and weaknesses of a training program. Such information is extremely helpful in preparations for future training activities.

The most commonly used information collection technique involves sending out mail questionnaires. Many trainers who have adopted the technique of mailed follow-up questionnaires have learned that the biggest problem they encounter in carrying out a trainee follow-up involves the low response rate of trainees. It is very difficult to draw valid conclusions when only a small fraction of former trainees filled out and returned the questionnaires. Some suggestions on how to develop an effective follow-up instrument and increase the rate of return questionnaires sent out are the following:

- Prepare trainees before graduation concerning the purpose of follow-up studies and the kinds of information they will be expected to provide.
- Use short and uncomplicated questionnaires and ask only necessary and relevant questions.
- Provide prepaid return mail
- Avoid personnel information as much as possible
- Place difficult questions cost
- Use colored or unusual types of questionnaires to attract their attention.
- Include a personalized cover letter

Employers will usually cooperate and provide accurate evaluation of the trainee or employee and the changes they can see as a result of participation in the training program. They are also in a position to know what changes are coming in the work place.

Again, a mailed questionnaire is the most common instrument used to collect information and the typical low response rate is a problem with this method. One additional factor to keep in mind is that such forms should go through proper channels. Even if you know the supervisor or employer of a graduate trainee, it is a good idea to send the form to a higher authority with a request to pass it on to the trainee's immediate supervisor.

4.4.4. Using Evaluation Results

You have reached the end of your training activity. What is next? well, if you have decided to stay in the training field, you are back to where you started planning. But planning now is a bit different. You have gained valuable experience and previously collected evaluation information in an attempt to find problems and weaknesses in the earlier plan. Once this is done you are ready to develop a new plan which incorporates changes based on rational, objective interpretation, of what you have learned during the course of the training activity recently completed. Information gained through evaluation activities provides a sound basis upon which to base decisions regarding possible changes and, modifications in training activity design. In fact, it is often said that the sole purpose of evaluation is to facilitate the planning and execution of change. Regardless of how well an evaluation is conducted, it has little use unless the results are used.

Therefore, all the evaluation information collected previously should be used for making planning decisions about the next training activity.

Self-Check 4	Written Test

Directions: Answer all the questions listed below. Use the Answer sheet provided below.

I. Write 'True' for the correct statement and 'False' otherwise

_____ 1. Training is about extending and developing individuals' capabilities for better performance in their job

_____ 2. Education is a short term activity compared to training

II. Match the terms in column A with the appropriate ones in column B

A	B
___ 1. Phases of training	A. Desirable situation
___ 2. TNA suggests	B. Fairly adequate
___ 3. What ought to be	C. Implementation
___4. Sufficiency	D. Performance problem not perceived at all
___ 5. Unfelt need	E. A set of specific skills
	F. Approach to Needs Assessment

Note: Satisfactory rating - 10 points **Unsatisfactory - below 10 points**

You can ask you teacher for the copy of the correct answers.

Name: _____ Date: _____

LG #5 LO #5-Record and Document Data

Instruction sheet

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:

- Developing data collecting formats
- Collecting and organizing appropriate data
- Documenting and reporting collected and organized data

This guide will also assist you to attain the learning outcomes stated in the cover page. Specifically, upon completion of this learning guide, you will be able to:

- Data collecting formats are developed
- Appropriate data are collected and organized
- Collected and organized data are documented and reported

Learning Instructions:

17. Read the specific objectives of this Learning Guide.
18. Follow the instructions described below.
19. Read the information written in the information Sheets
20. Accomplish the Self-checks

Information Sheet-5

5.1. Developing data collecting formats

5.1.1 Introduction

In Agricultural Extension different activities are performed and various interactions are undertaken with different stakeholders. This activities and interactions are ultimately reported to relevant stakeholders to facilitate future activities. For the reports to be prepared data on different activities are first collected organized and analyzed. This section deals with issues related to data which would be implemented in agricultural extension.

5.1.2 Definition of Data

Data is any information that has been collected, observed, generated or created to validate findings.

In social development, when somebody collects data for their own purposes, directly from the respondent, it is called **primary data**. Sometimes, however, information can be used for planning, monitoring or evaluation that has been collected by other people or organisations for their own purposes. This is known as **secondary data**. Secondary data might include government statistics, NGO reports, newspaper or website articles, hospital records, research studies, evaluations conducted by other agencies, and community records – to name just a few. Secondary data is often a valuable source of information that can supplement other forms of data collection. (INTRAC, 2017)

5.1.3 Data collection

Data collection is the process of gathering and measuring information on variables of interest, in an established systematic fashion that enables one to answer stated research questions, test hypotheses, and evaluate outcomes. The data collection component of research is common to all

fields of study including physical and social sciences, humanities, business, etc. While methods vary by discipline, the emphasis on ensuring accurate and honest collection remains the same. The goal for all data collection is to capture quality evidence that then translates to rich data analysis and allows the building of a convincing and credible answer to questions that have been posed. Regardless of the field of study or preference for defining data (quantitative, qualitative), accurate data collection is essential to maintaining the integrity of research. Both the selection of appropriate data collection instruments (existing, modified, or newly developed) and clearly delineated instructions for their correct use reduce the likelihood of errors occurring.

Data collection is one of the most important stages in conducting a research. You can have the best research design in the world but if you cannot collect the required data you will be not be able to complete your project. Data collection is a very demanding job which needs thorough planning, hard work, patience, perseverance and more to be able to complete the task successfully. Data collection starts with determining what kind of data required followed by the selection of a sample from a certain population. After that, you need to use a certain instrument to collect the data from the selected sample. ttps://www.researchgate.net/publication/325846997 (Access date 31 Aug 2022)

5.1.4 Data Collecting Formats/Tools

Many different methodologies can be used for data collection and analysis. The list can appear quite daunting. However, most methodologies are based around the same set of basic tools.

A list of basic data collection tools includes the following.

5.1.4.1 Interviews:

Interviews are probably the most common tool used in planning, monitoring and evaluation. They can be carried out with one person at a time (individual interviews) or groups of people. They can be administered formally or informally. They can be carried out face-to-face or through remote media such as telephone. Interviews can also be conducted through written questions via letters or email. Interviews may be structured, semi-structured or open-ended. Structured

interviews are based around a core set of questions that are always asked in the same order. Semi-structured interviews also contain a core set of questions, but allow the interviewer to ask supplementary questions, or change the order in which questions are asked.

5.1.4.2 Focus group discussions

Focus group discussions (FGDs) are facilitated discussions, held with a small group of people who have specialist knowledge or interest in a particular topic. They are used to find out the perceptions and attitudes of a defined group of people. FGDs are typically carried out with around 6-12 people, and are based around a short list of guiding questions, designed to probe for in-depth information. FGDs are often used to solicit the views of those who would not be willing or able to speak up at larger group meetings. They may also be used to access the views of minority or disadvantaged groups, such as women, children or people with disabilities.

5.1.4.3 Observation

At its most simple, observation involves 'seeing' things – such as objects, processes, relationships, events – and formally recording the information. There are different types of observation. **Structured or direct observation** is a process in which observations are recorded against an agreed checklist. **Expert observation** is usually carried out by someone with specific expertise in an area of work, and involves the expert observing and recording information on a subject. Observation may also be carried out as a participatory exercise. Where this is the case the intended beneficiaries of a project or programme are involved in planning an observation exercise, observing, and discussing findings.

5.1.4.4 Photography and video:

Photographs and videos show still or moving images. Photographs can be used on their own, but are more often accompanied by written captions, providing additional information. Videos are often accompanied by a commentary. The use of photography and video has become increasingly common within M&E over recent years. This is partly because of improvements in

mobile phone technology, which has increasingly enabled people to produce cheap, high quality audio-visual products.

5.1.4.5 Case studies and stories of change

A case study is not a data collection tool in itself. It is a descriptive piece of work that can provide in-depth information on a topic. It is often based on information acquired through one or more of the other tools described in this paper, such as interviews or observation. Case studies are usually written, but can also be presented as photographs, films or videos. Case studies often focus on people (individuals, households, communities). But they can also focus on any other unit of analysis such as locations, organisations, policies or the environment. **Stories of change** are similar to case studies. However, they have a specific focus on change, and are only usually developed after a project or programme has started.

5.1.4.6 Surveys and questionnaires

These are designed to collect and record information from many people, groups or organisations in a consistent way. A questionnaire is a form containing questions. It may be a printed form or one designed to be filled in online. Questionnaires may be administered in many different ways. A survey, by contrast, is normally a large, formal exercise. It typically consists of three different aspects: an approved sampling method designed to ensure the survey is representative of a wider population; a standard questionnaire that ensures information is collected and recorded consistently; and a set of analysis methods that allow results and findings to be generated.

An additional set of tools comes under the heading of community participatory tools. This includes exercises such as mapping, ranking, timelines, calendars and diagrams. These can be used as tools for collecting data from community level, and are often included as basic tools in M&E exercises. However, they are more properly used as participatory methods of data collection and analysis that also allow communities to analyze their own situation and make their own decisions.

5.2. Collecting and Organizing Appropriate Data

5.2.1 Data Collection

Once the method(s) and tools have been developed, the data collection can start. It is also recommended to organize training with the data collection team(s) on the methodology. The training should cover in detail each data collection tool that will be used and include practical exercises of how to implement them.

Developing a data collection guide with clear instructions for the enumerators is a useful reference tool, both during the training and after, for the actual data collection Taking these steps will ensure that the collected data will be accurate with a minimum amount of error. In certain cases, however, conducting a full training is not feasible due to time and resource constraints, and having a data collection guide can be an important reference.

5.2.2 Data entry

The data collected needs then to be transferred onto a computer application, such as Microsoft Word or Excel. Having the data in an electronic format will facilitate the data clean-up and data analysis.

For **qualitative data**, the first step in the data entry process is transferring all the interview, focus group and observation notes to a Word document for conducting content analysis.

5.2.3 Analyzing data

Once the data has been collected and cleaned, these are ready to be analyzed. Data analysis makes it possible to assess whether, how and why the intervention being monitored and/or evaluated is on track towards achieving, or has achieved, the established objectives.

5.3. Documenting and Reporting Collected and Organized Data

5.3.1 Presenting Findings

Data collection and analysis efforts aim to generate, and make available, relevant information for decision-making and the management of the intervention being monitored or evaluated. All data visualizations should summarize the collected data and communicate the findings obtained in a simple and intuitive way for the reader.

5.3.1.1 How to visualize findings

Step 1: Identify the data visualization goal

Before practitioners start designing any data visualization, the following questions should be asked:

- What is the data trying to communicate?
- How will it engage or persuade the audience to act upon the information being presented?
- What is the takeaway message the audience should be left with?

It is important to be clear about the goal(s) of presenting data visually in order to design it correctly. Defining the message is a crucial step in the process, and the graphic should reinforce who the organization or intervention is and what it does.

Step 2: Know the audience

Knowing the audience means asking what the audience already knows, what additional information they wish to have to learn and how much detail they require to understand the message being conveyed.

Step 3: Think about how to visualize the story

Once the data collected is cleaned and has been analyzed, a more precise idea about what findings to present should emerge.

Self-Check 5	Written Test

Directions: Answer all the questions listed below. Use the Answer sheet provided below.

I. Choose the best answer and put the letter of your choice on the space provided

___ 1. Which of the following is correct about data?

A. When data is collected directly from the respondent it is called secondary data

B. Primary data is collected from secondary source

C. Secondary data includes reports

D. Primary data supplements other forms of data

___ 2. Which of the following differs from the rest?

A. Interview B. Observation C. Questionnaire D. Data

II. Match the items in column A with the appropriate ones in column B

A	B
___ 1. Focus group discussion	A. Transferring to computer
___ 2. Seeing things	B. Qualitative data
___ 3. Data entry	C. Data collection tool
	D. Observation

Define the following terms

1. Data
2. Data collection

Note: Satisfactory rating - 10 points Unsatisfactory - below 10 points

You can ask you teacher for the copy of the correct answers.

Name: _____ Date: _____

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Web addresses

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The experts who developed the learning guide

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