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1. EDUCATION AND EXTENSION

EXTENSION – MEANING

The word 'extension' is derived from the Latin roots, 'ex' – meaning 'out' and 'tensio' meaning 'stretching'. Stretching out is the meaning of extension. The word 'extension' came to be used originally in USA during 1914 which means "a branch of a university for students who cannot attend the university proper. In other words, the word "extension" signifies an out-of-school system of education.

Education is an integral part of extension. The basic concept of extension is that it is education. Extension means that type of education, which is stretched out, to the people in rural areas, beyond the limits of the educational institutions to which the formal type of education is normally confined.

Education: It is the production of desirable changes in knowledge (things known), attitude (things felt) and skills (things done), either in all (or) one or more of human behaviour.

TYPES OF EDUCATION

- a) **Informal Education** – Is the life long process by which every person acquires knowledge, skills, attitudes and insights from daily experiences and exposure to the environment at home, at work, at play etc.
- b) **Non-formal Education** – Is an organised, systematic educational activity carried on outside the frame work of the formal system to provide selected types of learning to particular subgroups in the population, including adults and children. E.g.: adult education, vocational education, functional literacy, continuing education, extension education etc.
- c) **Formal Education** – Is highly institutionalized, chronologically graded and hierarchically structured, education starting from primary school and reaching upto university education.

BASIC DEFINITIONS RELATED TO EXTENSION

Extension education is an applied social science consisting of relevant content derived from physical, biological and social sciences and in its own process synthesised into a body of knowledge, concepts, principles and procedures oriented to provide non-credit out of school education largely for adults. - Paul Leagans (1971).

Extension service refers to a program for agricultural development and rural welfare which (usually) employees the extension process as a means of program implementation.

Extension process is that of working with rural people through out of school education along those lines of their current interest and need which are closely related to gaining a livelihood improving the physical level of living of rural families and fostering rural community welfare.

Differences between Formal Education and Extension Education

Sl.No	Formal Education	Extension Education
1.	Teaching is largely confined to the premises of the institution	It is largely outside the four walls of the institution.
2.	Learners are homogeneous with common goals	Learners are heterogeneous and have diverse goals.
3.	There is a fixed curriculum, students are examined and degrees are awarded.	No fixed curriculum, it is flexible depending on the needs of the learners. No examinations are conducted and no degrees are awarded.
4.	Knowledge flows from teacher to the learners (Vertical)	The extension worker also learns from those who he teaches (Horizontal). He teaches through local leaders.
5.	Approach is from principles to problems	Approach is from problem to principles.

SCOPE OF EXTENSION EDUCATION

Extension appears to have unlimited scope in situations where there is need for creating awareness amongst the people and changing their behaviour by informing and educating them.

Kelsey and Hearne (1967) identified nine areas of programme emphasis, which indicate the scope of agricultural extension.

1. Efficiency in agricultural production.
2. Efficiency in marketing, distribution and utilisation.
3. Conservation, development and use of natural resources.
4. Management on the farm and in the home.
5. Family living.
6. Youth development.
7. Leadership development.
8. Community development and rural area development.

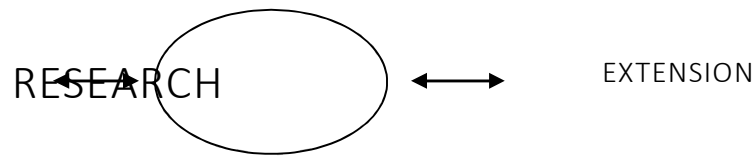
9. Public affairs

Extension is an integral part of agricultural and rural development programmes in India. The progress in production which has been achieved in agriculture, horticulture, animal husbandry, veterinary, fishery, social forestry, sericulture etc., may be thought of as proportional to the strength of extension service of the relevant government departments.

The following statements will further amplify the scope of extension.

1. Extension is fundamentally a system of out-of-school education for adults and youths alike. It is a system where people are *motivated* through a proper approach to help themselves by *applying science* in their daily lives, in farming, home making and community living.
2. Extension is education for *all* village people.
3. Extension is bringing about *desirable changes* in the knowledge, attitudes and skills of people.
4. Extension is helping people to help themselves.
5. Extension is working *with* men and women, boys and girls, to answer their *felt needs* and wants.
6. Extension is teaching through learning by doing and seeing is believing.
7. Extension is working in harmony with the *culture* of the people.
8. Extension is a *two-way channel*; it brings scientific information to village people and it also takes the problems of the village people to the scientific institutes for solution.
9. Extension is *working together* (in groups) to expand the welfare and happiness of the people with their own families, their own villages, their own country and the world.
10. Extension is development of *individuals* in their day-to-day living, development of their *leaders*, their *society* and their *world* as a whole.

FARMER
worker



The need for extension arises out of the fact that the condition of the rural people in general, and the farm people in particular, has got to be improved. There is a gap between what is the actual situation and what ought to be the desirable situation. This gap has to be narrowed down mainly by the application of science and technology in their enterprises and bringing appropriate changes in their behaviour.

According to Supe (1987), the researchers neither have the time nor are they equipped for the job of persuading the villagers to adopt scientific methods and to ascertain from them the rural problems. Similarly, it is difficult for all the farmers to visit the research stations and obtain first hand information. Thus there is need for an agency to interpret the findings of the research to the farmers and to carry the problems of the farmers to research of solution. This gap is filled by the extension agency.

2. PRINCIPLES, PHILOSOPHY PROCESSES AND OBJECTIVES OF EXTENSION

According to Mildred Horton (1952), the four great principles underlying extension services are:

1. The individual is supreme in democracy.
2. The home is a fundamental unit in a civilization.
3. The family is the first training group of the human race.
4. The foundation of any permanent civilization must rest on the partnership of man and the land.

Our objective in extension work is to help people reach higher levels of living-physically, mentally and spiritually. To reach these higher levels of living, people must be educated and trained to meet their responsibilities in relation to God, to their neighbours and to themselves. They must also know how to meet the responsibilities imposed by their environment. So we work with them as individuals, as families in the home, and with their environment.

Principles underlying the Philosophy of Extension

1. Extension is an organisation to plan, execute and evaluate programmes with the people, and not for the people.
2. Extension is an organisation set up to teach people and motivate them to action, not to dictate what people should do.
3. Extension should help people to help themselves.
4. Extension should be based on felt needs and enlightened desires of the people.
5. Extension should reach the people where they are.
6. Extension aims and objectives should not be rigid but it should be flexible
(Time, date etc.)
7. Extension should change the people and not the subject matter.
8. Extension should work in harmony with the culture of the people.
9. Democratic procedures must be adopted in the formulation and execution of the programmes (group ideas only)
10. The designated programmes should give greatest benefit to greatest number of people in a society.

Philosophy of Extension

Philosophy is the pursuit of wisdom, a body of general principles or laws of a field of knowledge. Philosophy of a particular discipline would furnish the principles or guidelines with which to shape or mould the programmes or activities relating to that discipline.

The philosophy of extension work is based on the importance of an individual in the promotion of progress for rural people and for the nation. Extension Educators should work with people to help them, develop themselves and achieve superior well-being.

The basic philosophy of extension work that is directed at conversion of the whole man determines the approach that must be adopted for its implementation. Compulsion or even a beneficent act does not necessarily improve the man. The only way to secure cooperation of a person for betterment is to educate him. Therefore the primary aim is to transform the people by bringing about desired changes in their knowledge, attitude and skills.

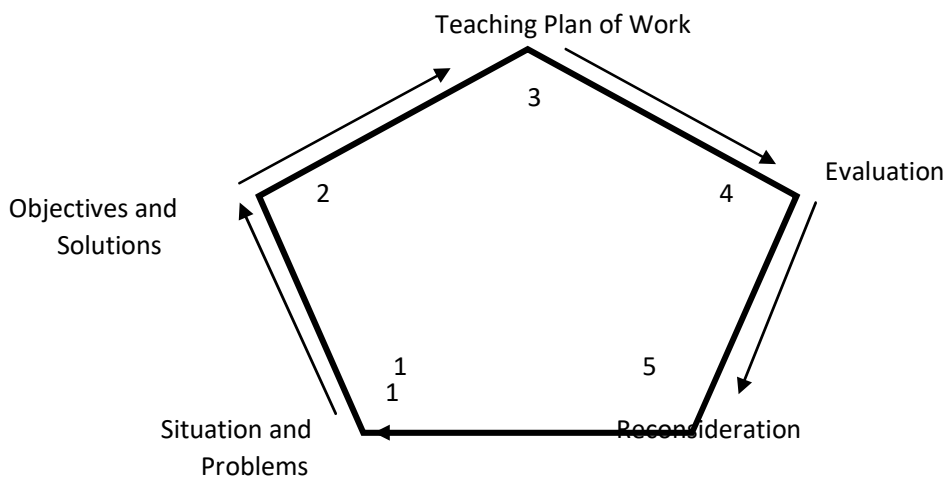
According to Kelsey and Hearne (1967) the basic philosophy of extension education is to teach people how to think, not what to think. Extension's specific job is furnishing the inspiration, supplying specific advice

the technical help, and counseling to see that the people as individuals, families, groups and communities work together as a unit in "blueprinting" their own problems, charting their own courses, and that they launch forth to achieve their objectives. Sound extension philosophy is always looking ahead.

Extension Educational Process

An effective extension educational programme involves five essential and interrelated steps. This concept of the extension educational process is intended only to clarify the steps necessary in carrying out a planned educational effort. It does not imply that these steps are definitely separate from each other. Experience shows that planning, teaching and evaluation take place continuously, in varying degrees, throughout all phases of extension activities.

Concept of Extension Educational process



First step: The first step consists of collection of facts and analysis of the situation. Facts about the people and their enterprises; the economic, social, cultural, physical and technological environment in which they live and work. These may be obtained by appropriate survey and establishing rapport with the people.

The responses obtained are to be analyzed with the local people to identify the problems and resources available in the community. For example, after a survey in a community and analysis of the data, the problem was identified as low income of the farm family from their crop production enterprise.

Second step: The next step is deciding on realistic objectives which may be accomplished by the community. A limited number of objectives should be selected by involving the local people. The objectives should be specific and clearly stated, and on completion should bring satisfaction to the community. Objectives should state the behavioural changes in people as well as economic and social outcomes desired.

In the example, the problem was identified as low income from the crop production enterprise. A deeper probe into the date revealed that low income was due to low yield of crops, which was attributed to the use of local seeds with low yield potential, application of little fertilizer and lack of protection measures. By taking into consideration the capacity and competency of the people in the community and the availability of resources, the objective was set up to increase the crop yield by 20 per cent within a certain period of time. It was estimated that the increased yield shall bring increased income, which shall enhance the family welfare.

Third step: The third step is teaching, which involves choosing what should be taught (the content) and how the people should be taught the methods and aids to be used.

It requires selecting research findings of economic and practical importance relevant to the community, and selection and combination of appropriate teaching methods and aids.

Based on the problems identified in the particular example, technologies like use of HYV seeds, application of fertilizer and plant protection chemicals were selected as teaching content. Result demonstration, method demonstration, farmers' training and farm publications were chosen as teaching methods, and tape recorder and slides were selected as teaching aids.

Fourth step: The fourth step is evaluating the teaching i.e, determining the extent to which the objectives have been reached. To evaluate the results of an educational programme objectively, it is desirable to conduct a re-survey. The evidence of changed behavior should be collected, which shall not only provide a measure of success, but shall also indicate the deficiencies, if any.

In the example, the re-survey after the fixed period of time, indicated that the crop yield had increased by 10 percent. It, therefore, indicated that there was a gap of 10 per cent in crop yield in comparison to the target (objective) of 20 per cent fixed earlier. The re-survey also indicated that there had been two important deficiencies in carrying out the extension educational program, such as, there was lack of proper water management and the farmers could not apply the fertilizer and plant protection chemicals as per recommendation due to lack of funds.

Fifth step: The fifth step is re-consideration of the entire extension educational programme on the light of the results of evaluation. The problems identified in the process of evaluation may become the starting point for the next phase of the extension educational programme, unless new problems have developed or new situations have arisen.

After re-consideration of the results of evaluation with the people, the following teaching objectives were again set up. For example, they were, training the farmers on proper water management practices and

putting up demonstrations on water management. The people were also advised to contact the banks for obtaining production credit in time to purchase critical inputs.

Thus, the continuous process of extension education shall go on, resulting in progress of the people from a less desirable to a more desirable situation.

Objectives of Extension: Objectives are expression of the ends towards which our efforts are directed.

Fundamental objective: The fundamental objective of extension is the development of the people or the "Destination man". In other words, it is to develop the rural people economically, socially and culturally by means of education.

Eg.: To increase socio-economic status and standard of living of Indian farming Community.

General objectives (Function): The general objectives of the extension are-

1. To assist people to discover and analyse their problems, their felt and unfelt needs.
2. To develop leadership among people and help them in organising groups to solve their problems.
3. To disseminate information based on research and /or practical experience, in such a manner that the people would accept it and put it into actual practice.
4. To keep the research workers informed of the peoples' problems from time to time, so that they may offer solutions based on necessary research.
5. To assist people in mobilising and utilizing the resources which they have and which they need from outside.

Eg.: To increase the a production and productivity of Paddy in India.

Working objectives: Is one which focuses on specific activity of a specific group in a selected geographic area.

Eg.: To increase the yield of PKM-1 of the tomato among the tomato growers of Madhukkarai block in Coimbatore District.

The major objectives of Extension may also be categorized as follows:

- i) Material - increase production, income.

- ii) Educational - change the outlook of people or develop the individuals. iii) Social and cultural - development of the community.

3. EXTENSION PROGRAMME PLANNING AND EVALAUTION

To understand the extension programme planning process, certain basic concepts of an extension programme, planning and extension planning need to be understood.

Extension programme

The word 'programme' has several distinct meanings in the dictionary. It mans a proclamation, a prospectus, a list of events, a plan of procedure, a course of action prepared or announced before hand, a logical sequence of operations to be performed in solving a problem. When used by an organization, it means a prospectus or a statement issued to promote understanding and interest in an enterprise.

According to Kelsey and Hearne (1949), an "extension programme" is a statement of situation, objectives, problems and solutions'.

According to the USDA (1956), an "extension programme" is arrived at co-operatively by the local people and the extension staff and includes a statement of:

- The situation in which the people are located;
- The problems that are a part of the local situation;
- The objectives and goals of the local people in relation to these problems; and
- The recommendations or solutions to reach these objectives on a long-time basis (may be several years) or on a short-time basis (may be one year or less).

Leagans (1961) says that an "extension programme" is a set of clearly defined, consciously conceived objectives or ends, derived from an adequate analysis of the situation, which are to be achieved through extension teaching activity'.

Lawrence (1962) says that an "extension programme" is the sum total of all the activities and undertakings of a county extension services. It includes: (i) programme planning process; (ii) written programme statement; (iii) plan of work; (iv) programme execution; (v) results; and (vi) evaluation.

- From the above definitions, it is clear that an extension programme:

- Is a written statement;
- Is the end product of extension programme planning;
- Includes a statement of situation, objectives, problems and solutions;
- Is relatively permanent but requires constant revision;
- May include long-term as well as short-term programme objectives;
- Forms the basis of extension teaching plans;
- Has been drawn up in advance; and
- Has been built on the basis of content.

So, we can define an **extension programme** as a written statement of situation, objectives, problems and solutions which has been prepared on the basis of an adequate and systematic planning effort and which forms the basis of extension teaching activities in a specific area, for a given period.

Definitions for a set of important terminologies in this regard would provide the needed clarity :

Programme is a written statement containing a more pertinent factual data used in decision-making, the problems agreed upon with priority assignment and the possible solutions to the problems'.

Plan or Plan of work is an outline of activities so arranged as to enable efficient execution of the entire programme. It answers the questions of what, why, how, when, where and by whom the work is to be done.

Project is a single item of the annual plant containing the method of solution of a single selected problem

Calendar of work is a plan of work arranged chronologically, according to the time when step of work is to be done. It is a time schedule of work.

Aim is a broad objective. It is a generalised statement of direction and may have several objectives. It is also said to be an end in view to give direction to the creative process.

Objective is a direction of movement. A well stated objective is always measurable. It is also said to be a goal of growth.

Goal is a distance in any given direction, proposed to be covered in a given time.

Planning

The basic concept of planing appears to be well accepted in our culture. It is regarded as an integral and important dimension of our culture's rational value orientation. Rational value orientation assumes a conscious systematic approach to problem solving, i.e., problem definition, data gathering and choosing between alternative ends and means on the basis of predetermined criteria. Almost everyone accepts the premise that planning is important and necessary for individuals, for families and for business organizations. The most effective planning effort would be that 'which achieves the greatest degree of performance of the actions, motions or operations implied by a set of planning concepts which depict the ideal process (Boyle, 1965).

Assumptions on Extension Planning

The concept of extension planning is based on a number of assumptions. Boyle (1965) has listed the following assumptions in this regard:

- Planning change is a necessary prerequisite to effective social progress for people and communities.

- The most desirable change is predetermined and democratically achieved.
- Extension education programmes, if properly planned and implemented, can make a significant contribution to planned change.
- It is possible to select, organize and administer a programme that will contribute to the social and economic progress of people.
- People and communities need the guidance, leadership and help of extension educators to solve their problems in a planned and systematic way.

Extension Programme Planning

Having described the concepts of planning and extension programme, now the stage is set to examine the concept of extension programme planning. A few points need to be explicated before attempting a definition.

1. Extension programme planning is a process:

The dictionary meaning of 'process' is 'any phenomenon which shows a continuous change in time' or 'any continuous operation or treatment'. If we accept this concept of process, we view events and relationships as dynamic, ongoing, ever-changing and continuous. When we label something as a process, we also mean that it does not have a beginning, an end, a fixed sequence of events. It is not static, at rest. The basis for the concept of process is the belief that man cannot discover the structure of physical reality; man must create it.

This definition of process suggests that 'a process is involved in which a series of actions culminates in the accomplishment of a goal' (Boyle, 1965). Viewed in this way, the concept of process involves a method, i.e., a process should be viewed as a sequential set of steps or several systematically ordered steps of planning, the performance of which leads to the accomplishment of a goal. In extension programme planning, the immediate goal would be the development of a programme document.

The concept a person has of the extension programme planning process will affect actions and mode of researching the process. Many programme-planning processes take place at any particular time at different levels of the extension organization. For example, programme planning occurs at the national level (five-year plans), at the state level (state plans, annual plans of work) and at the block level. In fact, planning at the block level is taking place when:

- The long-time plan or projected plan is being developed;
- The schematic budget is being planned;
- The annual plan of work is being developed;
- Detailed plans for individual learning experiences are developed with a major project.

2.Extension programme planning is a decision-making process.

Planning is basically a decision-making process- and so is extension programme planning. In extension programme planning, scientific facts are put to value judgements of the people through the implementation of a rational planning model in order to decide a programme which will be carried out through the extension teaching activities.

3.Extension programme planning requires advance thinking:

If we could know 'where we are' and 'where we are to go' we could better judge 'what to do' and 'how to do'. This statement lies at the heart of the nature of planning. Planning does not take place in a vacuum or automatically. It has to be made to happen. The most basic fact giving rise to planning is that effective rural development result from choice, not from chance; it results from design, not from drift. Good extension programme planning is an intellectual activity since it usually involves a study and use of facts and principles. It requires knowledge, imagination and reasoning ability. It is a complex exercise as it involves people their needs, their interests, useful technology, educational process, analyzing a situation and making decision about what should be done, determining useful actions, projecting the desired shape of things in future and several other components, which are rarely simple.

4.Extension programme planning requires skill and ability on the part of planners:

Planning effective extension education programmes requires a number of high-level professional skills. Needed abilities include understanding and skill in the following broad areas:

- Understanding the nature and role of extension education organization.
- Knowledge and understanding of the technology related to the subject with which the programme is concerned.
- Ability to clarify the objectives of a programme and to so state them that they are useful in guiding its execution.
- Skill at seeing the relationship between principles and practice.
- Skill at inquiry and human relationships.

5.Extension programme planning is built round content:

A programme regarding any extension activity can only be built on the basis of content. Without some express purpose, there can be no planning. Extension programme planning is built around available improved technology, the people, their resources, problems, needs and interests.

6.Extension programme planning is a social action process:

Extension programme planning involves interaction and the decisions so taken in the form of a programme affect others. Interaction assumes some type of communication between two or more people in the planning process. So when the extension staff involving specialists and people's representatives decides on the programme content for extension teaching for the coming year, it is involved in social planning. In this process, the scientific data is put to value judgements so as to decide the intended direction of change and also the appropriate methods to be used to reach these goals. Further, the resultant programme has many social consequences in terms of interaction with other people, e.g., to inform them, educate them, persuade

them, in order to introduce improved technology into their minds and actions.

7.Extension programme planning is a collaborative effort:

Extension programme planning is a collaborative effort involving identification, assessment, evaluation of needs, problems, resources, priorities and solutions.

8.Extension programme planning is a system:

Extension programme planning is a system as its procedures and processes are interrelated, ordered and linked progressively to form a collective whole. It includes several subprocesses, such as planning, designing, implementing, evaluation etc.

9.The end-product of extension programme planning is an extension programme:

The first consideration for anyone who is to concern himself with a process or set of procedures for planning is to clearly identify the primary purpose of the planning process to be developed. Many have suggested that the purpose of planning is for educating those who participate. According to Vanderberg (1965), 'the primary purpose of any planning, first and foremost is that of developing a sound, defensible and progressive course of action or plan. In the process followed, many other benefits might accrue, such as the education of participants, but we want a plan which can and will be used'.

Extension programme planning defined

Having said that extension programme planning is a social action, decision- making, inter actional process in which advance thinking is needed for identifying the needs, interests and resources of the people through educational means to prepare a blueprint for action we are now ready to formally define this concept. However, it appears appropriate here to first list some of the definitions of **extension programme planning** as given in the literature.

1.Programme planing is viewed as a process through which representatives of the people are intensively involved with extension personnel and other professional people in four activities (Boyle, 1965):

- Studying facts and trends;
- Identifying problems and opportunities based on these facts and trends;
- Making decisions about problems and opportunities that should be given priority; and
- Establishing objectives or recommendations for future economic and social development of a community through educational programmes.

2.This are the process whereby the people in the country, through their leaders, plan their extension programme. Country and state professional extension staff members assist in this process. The end-result of this process is a written programme statement (Lawrence, 1962).

3.Extension programme planning is the process of determining, developing and executing programmes. It is a continuous process, whereby farm people, with the guidance and leadership of extension personnel, attempt to determine, analyse and solve local problems. In this, there are three characteristics:

- What needs to be done;
- When it should be done; and
- How it should be done (Musgraw, 1962).

4. An organized and purposeful process, initiated and guided by the agent, to involve a particular group of people in the process of studying their interests, needs and problems, deciding upon and planning education and other actions to change their situation in desired ways and making commitments regarding the role and responsibilities of the participants (Olson, 1962).

An analysis of these and other definitions of extension programme planning implies that it:

- Is a decision-making, social process;
- Involves advance thinking;
- Is a progressive step-by-step process;
- Uses educational means in defining the goals and situations;
- Is built around improved technology, people, their needs, interests, resources, values, attitudes and skills; and
- The end-product is a written statement of situation, problems, objectives and solutions.
- Thus extension programme planning may be defined as:
- A decision-making, social-action process in which extension educationists involve people's representatives,
- To determine their needs, problems, resources and priorities,
- In order to decide on an extension programme consisting of situation analysis, problems, objectives and solutions,
- Which will form the basis of extension teaching plans for a given period.

Rationale of programme planning

1. Progress requires a design: Effective education is a result of design not drift; it results from a plan-not from trial and error. The experience of workers in education and in other educational agencies has been that progress is made most effectively when a plan of action is set forth and followed. The pay-off for educational effort comes when people change their behaviour to improve their situation. These results come most rapidly when careful planning is done and when effective teaching methods are used.

2. Planning gives direction: There are no tests for directing the people's learning in extension. This argument underscores the difficulty of designing a plan and underscores the fact that planning is one of the most important jobs of extension workers.

In planning or constructing a course of study, the teacher should be guided by five major factors: (1) the purpose for which the course is offered, its aims; (2) the characteristics and needs of those who are to take the course; (3) the educational environment of these persons; (4) the sources of information available; and (5) the requirements or demands of the vocation or other uses to which the learning is to be put. These

factors apply to the development of extension programmes as well as to the curriculum of the public schools. The factors that apply to the study of a situation will be considered more closely a little later.

3. Effective learning requires a plan: There must be consciously directed effort on the part of the teacher to give guidance to the learning process. The direction of this teaching effort can best be stated in terms of objectives. They must be developed with the people to be taught and must be capable of attainment by and with the people concerned.

4. Planning precedes action: The results of an action are dependent on the following: adequacy of analysis of the problems, situation of objectives and involvement of the people. Through the planning process, questions such as these are posed:

- i. What information do farm men and women need most?
- ii. Which kind of information shall be extended?
- iii. What information shall be extended first?
- iv. How much time shall be devoted to this line of work?
- v. How much effort shall be devoted to this line of work?

The answers to these questions lie in the programme planning process.

Kelsey and Hearne (1949) have given the following rationale for a planned extension programme. According to them, sound extension programme planning:

- Is based on analysis of the facts in the situation;
- 2. selects problems based on needs;
- 3. determines objectives and solutions which offer satisfaction;
- 4. reflects performance with flexibility;
- 5. incorporate balance with emphasis;
- 6. envisages a definite plan of work;
- 7. is a continuous process;
- 8. is a teaching process;
- 9. is a coordinating process;
- 10. involves local people and their institutions; and
- 11. provides for evaluation of results.

Thus it could be said that planning programmes is an integral part of the development process and ensures better and efficient utilization of resources, accountability and human development.

Principles of programme planning

After a critical analysis of the programme planning principles available in extension literature, Sandhu (1965) identified a set of principles that may be applicable in developing countries.

I. Programme

1. Extension programme planning is based on analysis of the facts in a situation

It is important to take into account the conditions that exist at a particular time. This implies that factors such

as land, crops, economic trends, social structure, economic status of the people, their habits, traditions and culture, in fact, everything about the area in which the job is to be done and its people, may be considered while planning an extension programme for an area. These factors may be viewed in terms of established long-term objectives and rural policy. The outcome of previous plans should also be reviewed and results utilized.

Brunner and Yang (1949) argue that there is no greater mistake than to assume that technical know-how alone will solve the problems of the farmers. They say that no programme or even technique can achieve the desired results when not in harmony with the culture of the people. 'Extension knows, if need be, the surer way is to effect cultural change by the slow but certain process of education'.

2.Extension programme planning selects problems based on people's interests and needs

Sound programme building selects problems based on people's needs. It is necessary to select these problems which are most urgent and of widest concern. Choice of problems must be from among those highlighted by an analysis of the facts regarding what are felt as unfelt needs. To be effective, extension work must begin with the interests of the families. It must meet interest and use them as a spring-board for developing further interests. It is common knowledge that people join together because of mutual interests and needs.

Brunner (1945) said that an extension programme must meet the felt needs of the people. Leagans (1961) has recommended that the extension workers adopt the subject matter and teaching procedure to the educational level of the people, to their needs and interests, and to their resources.

3.Extension programme planning determines definite objectives and solutions which offer satisfaction

In order to hold interest, we must set working objectives and offer solutions which are within reach and which will give satisfaction on achievement. This is related to motivation for action. People must see how they or their communities are going to benefit from the proposed solutions. Very often the simplicity or dramatic effect of the practice recommended is the most potent factor in its wide adoption. Further, if there is to be progress and not mere evolution in the development of man, the objectives must be periodically revised in view of the progress made. In other words, as changes occur, objectives need to be re determined to allow for even further progress to be realized.

4.Extension programme planning has permanence with flexibility

Any good programme must be forward looking and permanent. Permanence means anticipating years of related and well organized effort. Along with this longer process, which both follow and makes a long-term trend, experience has shown that particular items will need to be changed to meet unforeseen contingencies or emergencies. Without flexibility, the programme may not, in fact, meet the needs of the people. A programme should be prepared well in advance of its execution but not too far ahead of time. Ordinary events may subject it to change in part though not in total. It is obvious that an extension programme must be kept flexible to meet the changing needs and interests of the people.

5.Extension programme planning has balance with emphasis

A good programme should cover the majority of people's important interests. It must be comprehensive

enough to embrace all groups, creeds and races at all levels and community, block, state, national and international problems. It is futile to deal with only one phase of life in a community as an end in itself. At the same time, a few of the most important or timely problems should be chosen for emphasis. To avoid scattered effort, something must stand out. Decisions must be made as to which of the needs are most urgent. The next consideration in choosing items for emphasis is to promote efficiency by permitting a good distribution of time and effort throughout the year. Too many things carried out simultaneously will divide either the worker's or the people's attention.

II. Planning process

6.Extension programme planning has a definite plan of work

No matter how well a programme is thought through, it is of no use unless carried out. This implies good organization and careful planning for action. A plan of work is an outline of procedure so arranged as to enable efficient execution of the entire programme. It is the answer to what, where, when and how the job will be done. In carrying out programme plans, different leaders and groups may work on various phases, i.e., the women in the community may work on one segment, the men on a second segment and youth-club members on a third. Organization should be used as a tool to accomplish these purposes, never as an end in itself.

7.Extension programme planning is an educational process

The people who do the planning may participate in local surveys and neighbourhood observations. This provides an opportunity for them to learn more about their own community and area and increases their interest. The extension worker has the responsibilities of providing local leaders with the knowledge, skills and attitudes they must have if they are to help in educationally serving the people. Essentially, learning takes place through the experiences the learner has and the responses he makes to the stimuli of his environment. The experience gained in finding facts, analyzing situations, recognizing problems, stating objectives and thinking of possible solutions and alternatives should make for a better and more effective learning environment. The extension personnel should remember this fact and provide opportunities for the effective participation of local people in programme planning.

8. Extension programme planning is a continuous process

Since programme planning is viewed as an educational process and since education is seen as a continuous process, therefore it logically holds that extension programme planning is a continuous process. There is no question of exhausting new knowledge, either in the subject matter with which we deal or in the methods of teaching. With the constant flux of agricultural technology, extension education is faced with an increasingly more difficult job as it tries to serve the needs and interests of the people. Sutton (1961) said that extension in a changing society must adjust and plan for the future to serve the needs of people. He set forth five steps within might be useful in making necessary adjustments:

- i. Keep choice to the people
- ii. Be flexible and ready to grasp with firmness new problems as they arise.
- iii. Work with people in seeking practical solutions to their problems.
- iv. Keep abreast of technological and social change.

- Close the gap between research discovery and practical application.

It is obvious that tomorrow's problem will not be the same as today's. So extension must make periodic adjustments in its plans to meet the changing problems. Extension must also be alert to the change that is going on in Science and Technology. With new technology, solutions to problems change. It is therefore necessary to view extension programme planning as a continuous process though its recurrence is cyclic.

9.Extension programme planning is a co-ordinating process

Extension programme planning finds the most important problems and seeks agreement on definite objectives. It coordinates the efforts of all interested leaders, groups and agencies and considers the use of resources. It obtains the interest and co-operation of many people by showing them why things need to be done. This is important in working with people. Within the extension organization, the block staff may work together on an integrated programme, each member devoting part of his energy to appropriate phases.

10.Extension programme planning involves local people and their institutions

Involvement of local people and their institutions is very essential for the success of any programme for their development. People become interested and give better support to the programme when they are involved in the planning process. So, extension programmes should be planned with the people and not for them.

11.Extension programme planning provides for evaluation of results

Since extension programme planning involves decision-making procedures, so evaluation is important in order to make intelligent decisions aimed at achieving the stated objectives. Matthews (1962) pointed out that extension programme planning and evaluation go together. Kelsey and Hearne (1949) have said that all other principles of programme building are related to evaluation.

Effective evaluation will, of course, depend on clear objectives, knowing which people we are trying to teach and having records of the results in terms that reflect changes in their action. Starting a programme with the intention of engaging in a careful evaluation at the close of a specific period has a salutary effect on all the intermediate processes. However, provision has to be made both for concurrent and ex-post facto types of evaluation.

EXTENSION PROGRAMME PLANNING MODEL

Sandhu (1965) developed a model for planning extension and rural development programmes. This model has six phases with a number of steps to be followed under each phase.

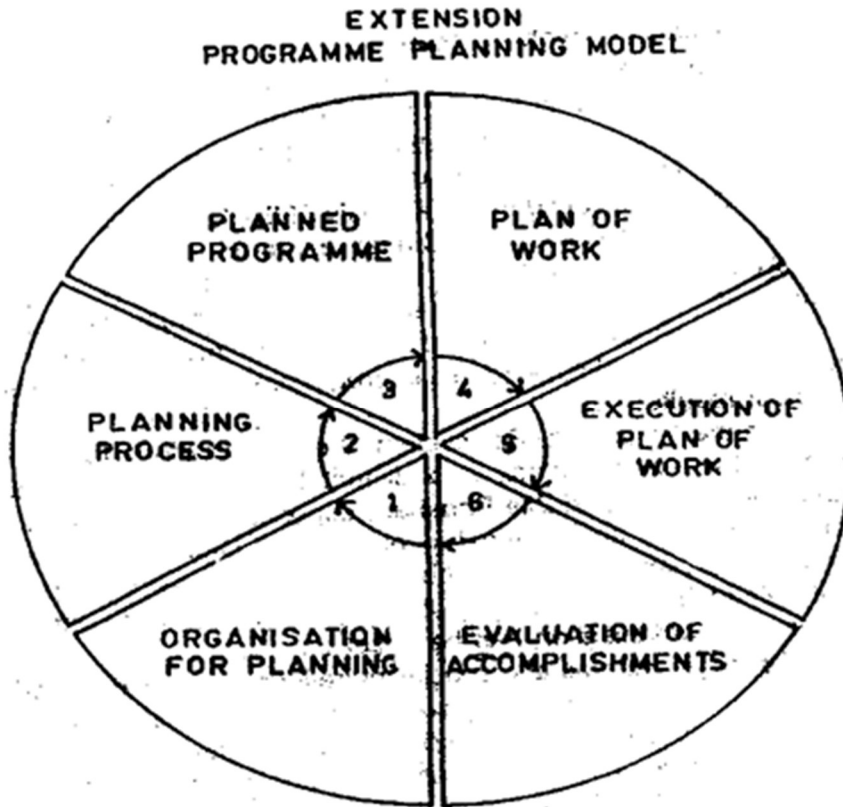


Fig.30. Extension Programme Planning Model

Planning Process Involves

1. Reaching, Understanding regarding principles, procedures, roles and time schedules
2. Analysis situation
3. Determining programme objective
4. Selection problems
5. Finding solution

The various phases and steps involved in this model are:

Organisation for Planning

I. Planning Process

1. Reach understanding regarding principles, procedures, roles and time schedule.
2. Analyse situation.
3. Determine objectives.
4. Select problems with due regard to priorities.
5. Find solutions.

II. Planned Programme

Prepare a written statement of:

- i) situation

- ii) objectives;
- iii) problems; and
- iv) solutions.

III. Plan of work

Prepare a plan of work containing information regarding:

- i) people to be reached;
- ii) goals, dates and places;
- iii) teaching procedures to be followed;
- iv) duties, training and recognition of leaders;
- v) roles to be played by extension personnel; and
- vi) roles to be played by other agencies.

IV. Execution of plan of work

- i) Make advance arrangement for inputs and teaching aids.
- ii) Interpret the approved programme to the staff and people's representatives.
- iii) Carry out the planned programme, phase by phase, in a co-ordinated manner.

V. Evaluation of accomplishments

- i) Do concurrent evaluation.
- ii) Do *ex-post facto* evaluation.

Organisation for Planning

The concept of involving potential clientele in the planning of extension programmes has received widespread acceptance. Involvement of people in making decisions about educational objectives not only results in better decisions about educational objectives, but also speeds up the process of educational change. By participating in the analysis of the local situation, the people's representatives are better informed and are better prepared for positive action.

The following conditions should be met in order to ensure that a good organisation has been set up

1. All social systems and special interest groups are identified.
2. Members of the planning committee represent all major interest groups, various economic and social levels of people, major vocations of the locality and other important elements in the area.
3. Each member of the planning committee clearly understands
 - a) the purpose of the group;
 - b) how the group should function in attaining its purpose; and
 - c) his individual role as a member.
4. Members of the planning committee have been elected, nominated or co-opted by appropriate democratic procedures.

I. Planning process

1. Reaching understanding regarding principles, procedures, roles and time schedule

It is necessary that all staff and the people's representatives are familiar with the principles and procedures of programme planning for the purposes of clarity and uniformity of action.

The following conditions should be met in order to fulfil the spirit of this step:

- i). A clearly defined statement of purpose and roles of each member is given by the planning committee.
- ii). The block, district and state level extension workers and programme planning committee members have understood :
 - a) the roles of extension workers in programme planning;
 - b) the role of programme planning committee members;
 - c) the purpose of programme planning;
 - d) the scope of extension's educational responsibilities;
 - e) the procedures to be followed;
 - f) the principles to be kept in view; and
 - g) the time schedule to be followed.

2. Analyse situation

Situation analysis involves collection, analysis and interpretation of the existing facts. Good planning depends on the availability of adequate and reliable data and scientific elaboration and interpretation of the same.

The following criteria should be met in order to ensure that this step has been adequately followed.

- Facts needed to evaluate the accomplishment of the previous year's programme are collected.
- Local facts needed to define correct and projected needs and interests and problems of the area are assembled
- The basic facts assembled and collected about background information are analysed and interpreted.
- The major needs and problems of the area, which are within the scope of extension's educational responsibility, are identified.

3. Determine objectives

It is essential in the programme planning process that before deciding on the projects to be undertaken, basic objectives of the programme are determined by the villagers in consultation with the extension staff.

The following conditions or qualities will exist when objectives have been determined adequately and properly

- Objectives have been determined relating to major problems, need and/or interests as determined by the programme planning committee.
- Both immediate and long-term objectives have been determined.

4. Select problems with due regard to priorities

Selection of problems to be tackled will involve identification, classification and selection with due regard to priorities. Identification of problems will be done on the basis of situation analysis. Once the problems have been identified, it is desirable that they be properly classified into the following categories:

- Problems which can be solved by the people themselves with no outside financial aid.
- Problems which can be solved by the people with the aid of the Panchayat Samiti
- Problems which can only be solved with the help of Government funds

The following conditions will exist when the requirements of this step have been adequately met:

- Of the identified problems, the most felt and of widest concern are selected by the extension agents and people's representatives.
- Selected problems are related to the family, community block and situation.
- For tackling the selected problems, the time is scheduled on greatest priority basis

5. Find solutions to problems

The Village Level Workers at the village level and the concerned Extension Officer at the block level are two most important functionaries who advise the village families and the village institutions regarding solutions to their problems. The other Extension officials at various levels may join with the team in finding solutions to problems. Experiences of the farmers and suggestions of the specialists will help in arriving at a joint decision.

The following conditions will exist when this step has been properly carried out

- All the available research findings in the State are collected and projected.
- Block level and district level specialists make suitable solution to the problems according to the research findings.

II. Planned Programme

As Leagans (1961) pointed out, it is of utmost importance that the staff and the people in each area not only develop an extension programme, but also prepare the programme in a written form that is readily understood and is suitable for obtaining approval and use as a guide for officials and non-officials. The problems should be stated from the viewpoint of the farm, the home and the community. They should not be stated in terms of solutions. The objectives should also be stated at a lower level in specific and measurable terms. They should include details about the learners to be reached subject matter to be taught and the behavioral changes to be effected. The objectives may also be stated from the point of view of the extension organisations and the extension public.

The following conditions will be met in order to have a good programme statement :

- The written programme should be suitable for use by the staff, planning groups and other individuals or groups concerned with the programme.
- It should clearly state the important problems or needs identified by the staff and the people in the programming process.
- It should specify the subject matter related to each objective that is highly significant to the people, socially or economically or both.

- It should be used as the basis for developing annual plans of work.

III. Plan of Work

Preparing a plan of activities directed towards solving selected problems is an important step. A plan of work is the listing of activities by which the objectives already decided upon are to be achieved.

The following conditions should exist in a good plan

- The plan of work is in written form.
- It has been developed co-operatively by the extension workers and people's representatives.
- It identifies the specific educational job to be done.
- The plan indicates for each educational job.
 - How it will be done
 - When it will be done
 - Where it will be done
 - Who will do it
 - What people are to be reached
- The subject matter is appropriate considering the people's level of interests, knowledge, attitude and available time and technology.
- The plan provides for the needed training of extension workers and leaders.
- Specific changes to be achieved or evidence of accomplishment are indicated clearly.

IV. Implementation Phase

1. Make advance arrangement for inputs and teaching aids

The conditions to meet the requirements of this step are

- Realistic needs of inputs such as fertiliser, seeds, credit facilities etc. have been worked out jointly by the areas extension staff and the Panchayat Raj institutions.
- Needed inputs have been procured well in time and stocked at proper places.
- Teaching aids to be used by the extension workers have been prepared and/or procured in sufficient quantity, well in time.

2. Interpret the approved programme to the staff and the people's representatives.

The following criteria will be met to ensure that this step has been adequately undertaken

- The approved programme has been explained adequately.
- The plan of work has also been explained adequately.
- They have been explained to all the block staff, all the people's representatives and other important leaders.

3. Carry out the plan of work

The approved programme should be carried out, step by step, according to the plan of work and in a co-ordinated manner. The success of a programme depends on the methods used to implement it.

It should be ensured that -

- the plans for coordination including calendar of activities within and outside extension agency system
- the techniques, methods and materials vary appropriate to the situation and clientele
- the subject matter used was appropriate considering the people and their objectives
- the plans for shared responsibilities were followed.

V. Evaluation of Accomplishments

Concurrent and *ex-post facto* review of progress towards the objectives is an essential phase of extension programme planning. This keeps the extension agency on the right track and helps in differentiating means from ends. Evaluation of the activities should be undertaken jointly by the extension staff and the people's representative organisations at different levels.

Conditions that will exist when this guideline is met are as under

- Evaluation plans were developed for each of the phases of the programme to be evaluated as indicated in the annual plan of work.
- A report of accomplishments and implications was made to the extension governing group. The governing group in projecting their plans for extension activities gave the findings from the report of accomplishments and implications.

Extension Evaluation

Extension programmes are mostly funded with public money and are planned and implemented by an organization, which in most cases is a department of a government. In order to justify the appropriation of public funds and continuing support from the people, it is necessary that their management as well as impact be properly and adequately evaluated from time to time. How, to evaluate management, achievements and failures of these programmes has been a challenge to extension workers right from the time when planned extension programmes were introduced. However, 'it was when Tyler's (1950) philosophy of educational evaluation became a part of extension education that educational evaluation became a part of extension education that the pattern of extension educational evaluation took a more usable, understandable form' (Sabrosky, 1966).

The word 'evaluation' has its origin in the Latin word "valere" meaning to be strong or valiant. Its dictionary meanings are the determination of the value, the strength or worth of something, an appraisal, an estimates of the force of or making a judgement of something.

Evaluation as applied to the field of extension education, may be defined as "a process of systematic appraisal by which we determine the value, worth or meaning of an activity or an enterprise". It is a method for determining how far an activity has progressed and how much further it should be carried to accomplish

objectives'. Thus to an extension worker evaluation means determining the results of his extension programmes in order to know the extent to which objectives have been achieved and why and what changes would be needed in case the programme is planned again, or in its implementation.

Tyler (1950) developed two basic notions regarding educational evaluation, which equally apply to extension evaluation. These notions are that the process of evaluation (i) is essentially a process of determining behaviour of the people covered under the programme and (ii) the process of determining the degree to which these behavioural changes are actually taking place. Thus extension evaluation may be said to be a process for determining behavioural changes of people resulting from extension programmes. Once evaluation became an integral part of the extension education process, extension managers started applying this process to evaluate programme planning, management and implementation aspects of extension programme.

Definitions of evaluation

More specific definitions of evaluation are given by persons involved in rural development programmes. While most of these definitions refer specifically to the assessment of the results of programmes of extension education, they can also be applied to the training aspect of such programmes. Some definitions of evaluation are:

- It is a process, which enables the administrator to describe the effects of his programme and thereby make progressive adjustments in order to reach his goal more effectively (Jahoda and Barnit, 1955).
- Programme evaluation is the determination of the extent to which the desired objectives have been attained or the amount of movement that has been made in the desired direction (Boyle and Johns, 1970).
- Programme evaluation is the process of judging the worth or value of a programme. The judgement is formed by comparing the programme should be (Steele, 1970).
- Evaluation is the process of delineating, obtaining and providing useful information for judging decision alternative (Stufflebeam, 1971).
- Evaluation is a co-ordinated process carried on by the total system and its individual subsystem. It consists of making judgements about a planned programme based on established criteria and known, observable evidence (Boone, 1985).

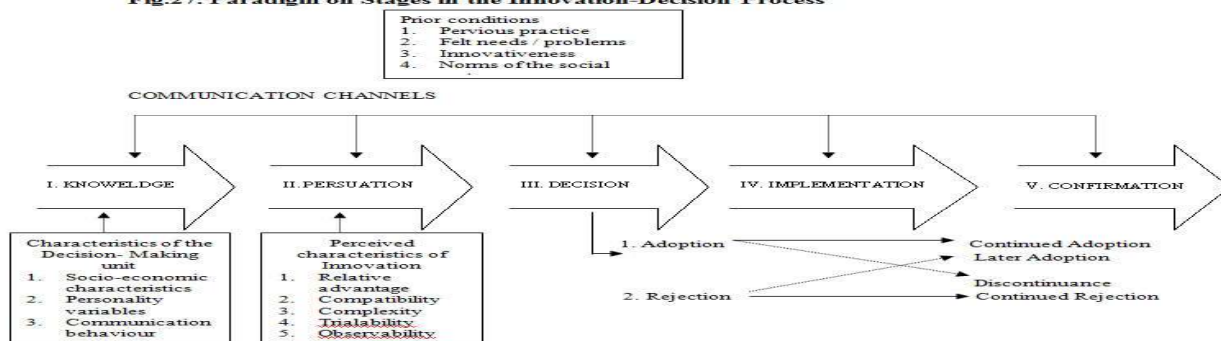
Nature of evaluation

1.Evaluation is not measurement: Evaluation is an integral part of extension education. All aspects of extension work need evaluation. Evaluation does not mean mere measuring of achievements, which is usually done after the programme is executed. Extension being an educational process, it is necessary to evaluate management of the programme and methods used, achievements accomplished in line with the objectives and also to determine the reasons for success or failure.

2.Evaluation is not exactly scientific research: When we think of evaluation as a process of collecting

information as a basis for making decisions, forming judgements and drawing conclusions, we realise it has much in common with scientific research. But there is a great difference between our casual everyday evaluation and scientific research. However, the difference is a matter of degree rather than kind. Casual everyday evaluation can be placed at one end of the scale and scientific research at the other end. There are five locations on the scale with no sharp lines of distinction, i.e., casual everyday evaluation, self-checking evaluation, do-it yourself evaluation, extension evaluation studies and scientific research.

Fig.27. Paradigm on Stages in the Innovation-Decision Process



Types of evaluation

- Self-evaluation: This is to be carried out by every worker as a matter of routine. This requires the self-critical attitude which is so essential for extension work. By this self-critical attitude, the chances of an extension worker growing and continuously improving his professional competency become greater.
- Internal evaluation: Evaluation carried to by the agency responsible for the planning and implementation of the programme. Some of the other methods for internal evaluation are: systematic use of diaries and reports of workers, planned visits of staff members to work spot, use of special questionnaires and proforma for observation and inquiry etc.
- External evaluation: Evaluation conducted by a person or a committee outside the area of operation. One of the strong features of the Indian Community Development Programme is that simultaneous with its start an independent agency, namely the Programme Evaluation Organization, was established.

Evaluation can also be classified into (i) concurrent and (ii) ex-post facto evaluation.

Evaluate programme planning

As a result of experience, theory, research and experimentation, much information has been accumulated about how an extension programme should be planned. Progress in science and technology and the broadening of extension's clientele with the accompanying great variation in needs and interests have made the scientific planning of extension education programmes more important than ever before. There is considerable agreement on certain criteria which, if followed, make for successful extension programme

planning at different levels. These criteria represent the ideal with which to compare our practices and procedures or programme planning. Some of the steps needed to evaluate or programme function in view of these criteria include:

- i. Identify the evidence needed to form a judgement about each criterion.
- ii. Specify the methods that will be used to obtain the evidence, such as personal observation, personal interview or through a systematic survey.
- iii. On the basis of the evidence gathered, judge whether or not each criterion is being adequately satisfied in the programme planning activities.

Extension evaluation process

There are several models of evaluation available in the literature. However, a very simplified version of most of these models may be quite workable for evaluating extension programmes since, as Bhatnagar (1987) has pointed out, any extension evaluation process has to be based on certain assumptions. For example, if some inputs are provided in the form of a programme, specific outputs can be expected and if these outputs happen, then the purpose of the programme can be achieved; if the purpose is achieved, then the development goal is realised. This means that evaluation has to be so designed that the quality types and adequacy of the input measures, outputs and their impact in achieving the programme objectives have to be evaluated systematically.

Steps involved in an extension programme evaluative process may be as follows:

i) Formulate evaluation objectives

Specific objectives to be achieved through the evaluative process must be clearly and adequately identified and started. All further efforts should be knit around these objectives.

ii) Classify programme objectives

It is assumed that each extension programme, when formulated and implemented, will have specific well-defined objectives. Since evaluation is basically a process of determining the extent to which various extension teaching activities were organized and managed and the extent to which they contributed to achieving the goals, programme objectives must be clearly understood and if necessary, further broke down into measurable terms. This is a crucial step as all further efforts will be directed towards collecting evidence related to these objectives.

iii) Identify indicators

To identify indicators or the kind of evidence necessary to evaluate achievement in relation to specified programme objectives, it is necessary that specific beneficiaries of the programme be identified, the kind of behavioural changes expected in them be clearly stated, and the kind of learning experiences expected to be provided to them spelled out, together with the level of management to be achieved for provided those learning experiences are specified. Once this is done, identification of specific indicators to measures the achievements will not be difficult.

iv) Decide the kind of information needed

Once the indicators for evaluating the management and performance of a programme have been indicated, specific information to be collected may be worked out. Since there is usually more information than an

extension worker can collect, he has to be very discriminating about the kind and amount of information that should be collected. Timing for collection of information may also need to be specified.

v) Sampling

The purpose of sampling is to take a relatively small number of units from a population in such a way that the evidence collected from them becomes representative evidence of the entire population. Although there are several sampling methods, perhaps stratified sampling procedures may be most suitable for extension evaluation studies as they allow inclusion of all interested groups and ensure enough heterogeneity in the sample.

vi) Decide the design of evaluation

An ideal design of evaluation may be an experimental one. This would allow separating the effect of the programme from other factors, by setting control and treatment groups. Several experimental designs, such as one-group pre-test-post-test design, static groups comparison, pre-test, post-test control group design, Solomon four-group design, longitudinal study design, etc. are available in literature and can be used. However, in actual practice, extension programmes are seldom run in a way that allows an experimental design of evaluation. In Pilot Projects, it might be possible to use an experimental design of evaluation. By and large, a survey method is used. This method can be used for evaluating ongoing progress or as an ex-post facto evaluation of the programme after it has completed its tenure.

vii) Collection and analysis of evaluation evidence

There are many methods for collecting information for evaluative purposes, such as the mail questionnaire, personal interview, distributed questionnaires, group interviews, case studies, systematic field observations, systematic study of secondary data etc. Selection of the right kind of data collection method will depend on the objectives of the evaluation, kind of information needed, time and resources available and the type of respondents from whom information is to be collected.

However, whatever the method used, a specific questionnaire or interview schedule or data recording sheet must be developed with care. Once the data is collected, it must be tabulated, summarized and analyzed with adequate care. This step should not be rushed. To avoid delay, however, analysis may be done with the help of a computer.

viii) Interpretation of the results in a proper way

It is a very crucial as evaluation results can be missed also. Once tentative generalizations are arrived at, it may be appropriate and they are informally discussed among the interpreters as well as with programme planning and implementation officials, so that the results of evaluation are put in a proper perspective. The evaluation results must clearly state the achievements, failures and future adjustments needed. A written report of the evaluation findings should be prepared and made available to all concerned.

4 AGRICULTURAL DEVELOPMENT PROGRAMMES

INTENSIVE AGRICULTURAL DISTRICT PROGRAMME (IADP-1960)

The major outcome of the above thinking was the formulation of a strategy of intensive approach to agricultural production, specially the foodgrains. A new programme named as

IADP was formulated which was launched gradually from 1960. The third five year plan (1961-1966) incorporated this programme into the planned development process.

This programme was popularly known as a "package programme". This name was given because of the collective and simultaneous application of all practices of improved seeds, irrigation, fertilizer, plant protection, implements, credit, etc.

This programme was started in July 1960 in seven selected districts in various states.

They were (i) West Godavari in AP, (ii) Shahabad in Bihar, (iii) Tanjore in Tamil Nadu, (iv) Raipur in MP, (v) Ludhiana in Punjab; (vi) Pali in Rajasthan; and (vii) Aligarh in UP. The selections of these districts were done on the basis of their high potentiality for increasing the yield in shorter time. These selected districts had assured water supply for irrigation, well developed cooperatives, good physical infrastructure and minimum hazards.

OBJECTIVES

- (i) to achieve rapid increase in the level of agriculture production through a concentration of financial, technical, extension and administrative resources;
- (ii) to achieve a self-generating breakthrough in productivity and to raise the production potential by stimulating the human and physical process of change; and
- (iii) to demonstrate the most effective ways of increasing production and thus, to provide lessons for extending such intensified agricultural production programmes to other areas.

SHORT COMING

1. Educational approach to reach farmers was lacking.
2. VLW were found below standard and were not able to impress farmers.

INTENSIVE AGRICULTURAL AREA PROGRAMME (IAAP-1964)

During the third five year plan 30 per cent increase in food grain production was achieved through IADP. The intensive promotion of agriculture was very popular among policymakers and administrators. As a result of this a revised version of IADP with less intensive and therefore less costly programme was formulated and launched in selected blocks of 150 districts. It was named as IAAP. The selected blocks were to have the same physical conditions as in the case of selection of districts for IADP. Under this programme 20 to 25 per cent of the cultivated area of the country was brought under the intensive agricultural development.

Implementation of IAAP was accepted by Agricultural Production Board and came into operation in March 1964. This programme also followed the package approaches of use of improved methods. The uses of interrelated factors of physical, social and institutional were also followed in a strategic combination mainly to produce an impact on agricultural production. The management of these programmes did not function as envisaged. There were many weaknesses of deficiency in inter-agency and inter-personal coordination, inadequate staff motivation, malpractices, non-formulation of local production plans on proper lines and delay in delivery of inputs to farmers. However, the production and productivity were modest. The highly adverse conditions (droughts) during 1966-68 served as a big blow. The foodgrains output was still insufficient to meet the rising domestic demands. Imports were also continued to supplement the local production.

HIGH YIELDING VARIETY PROGRAMME (HYVP-1966)

HYVP is launched in 1966, which helped the country in attaining self-sufficiency in food. The technological development did not remain confined to the introduction of high yielding crop varieties alone. These were combined with the application of high analysis and balanced fertilizer, irrigation, plant protection, improved implements etc, which made a 'green revolution' possible in the country. The pervasive influence

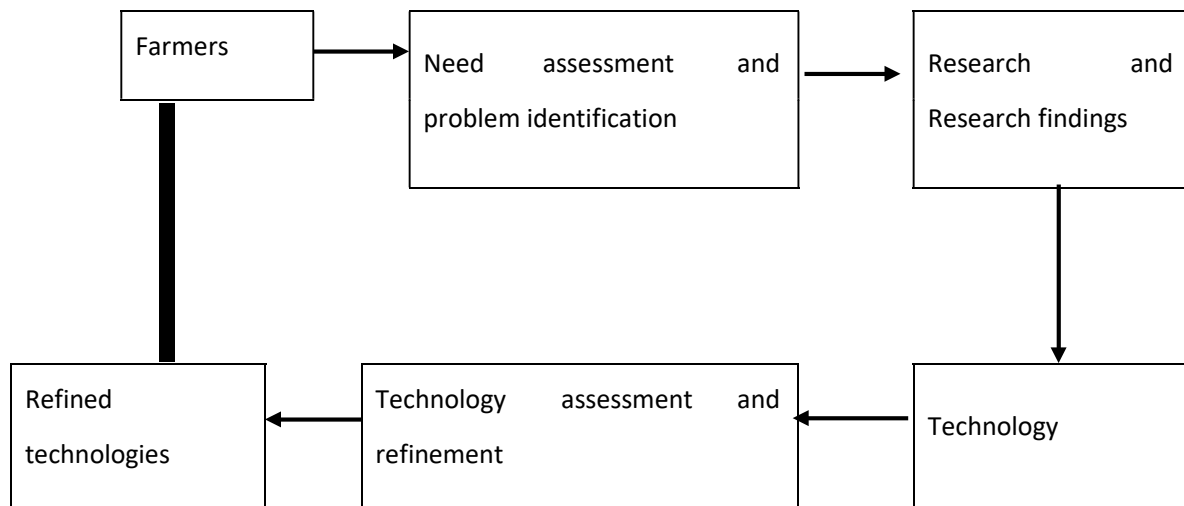
of high yielding technology spread to other areas of farm production such as animal production, such as animal production, fishery, sericulture, social forestry etc.

Punjab, Haryana and Western parts of UP were initially selected for the phased launching of this strategy. The cultivation of HYV since 1966-67 had resulted in a substantial increase in foodgrains production. Wheat production was doubled. Rice production also had a substantial increase, though not as much as in the case of wheat.

The target of coverage of 2.5 crore hectares of area under HYVs of cereals and millets under fourth five year plan was exceeded. The coverage was more than four crore hectares.

INSTITUTIONAL VILLAGE LINKAGE PROGRAMME (IVLP)

IVLP is an innovative program developed by the ICAR to help scientists to have direct interaction with the farming community so that appropriate technologies are developed for farmers. Here research, extension and farmers establish firm links by carrying together the assessment and refinement functions in the technology development and dissemination process. This helps the research system to generate a cafeteria of technologies, which are more productive in small production system, more profitable in commercial production system and gender sensitive for removal of drudgery of farmwomen.



RESEARCH AND EXTENSION AS AN INTEGRAL PART OF TECHNOLOGY DEVELOPMENT OBJECTIVES OF IVLP AS PER ICAR GUIDELINES ARE AS FOLLOWS

1. To introduce technological intervention with emphasis on stability and sustainability along with productivity of small production systems.
2. To introduce and integrate the appropriate technologies to sustain technological interventions and their integration to maintain productivity and profitability taking environmental issues into consideration in a comparatively well defined production system.
3. To introduce and integrate the appropriate technologies to increase the agricultural productivity with marketable surplus in commercial on and off-farm production systems.
4. To facilitate adoption of appropriate post-harvest technologies for conservation and onfarm value addition to agricultural products, by-products and waste for grater economic dividnet and national priorities.
5. To facilitate adoption of appropriate technologies for removal of drudgery, increase efficiency and higher income of farm women.
6. To monitor socio-economic impact of the technological / technology modules based on environmental at meso and mega levels.

METHODOLOGY OF IMPLEMENTATION OF IVLP AS PER ICAR GUIDELINES ARE GIVEN BELOW:

1. Selection of participating Institutions

- a. ICAR and ICAR Institutes
- b. SAUs & their Regional Research Stations / Zonal Research Stations.
- c. Krishi Vigyan Kendras

Based on availability of multi-disciplinary team of scientists, laboratory facilities and transport etc.

2. Selection of village

One village or a cluster of villages to cover about 1000 farm families.

- a. The selected village should not be far away from the research station
- b. Should have access through road
- c. Should be a relatively poorly developed in agriculture

3. Agro-Eco-System analysis

Using Participatory Rural Appraisal Methods to gather information about

- the resource availability with the farmer's present production practices
- the extent of impact of the previous programs in the area

4. Constitution of multi-disciplinary team of scientists

Core team : Those scientists whose disciplines are essentially needed

Optional team : The other disciplines depending upon the needs of the area.

5. Selection of team leader

6. Provide training to the multi-disciplinary team

7. Plan for Technology Assessment and Refinement

- Intervention points based on problem – cause analysis
- Basket approach considering the problems
- Weightage to indigenous knowledge

8. Implementation of action plan

- a. On-farm research
- b. Demonstration
- c. On-farm trials

9. Monitoring and Evaluation

- a. Regular visit of team members
- b. Technical staff posted for the village
- c. IVLP card separately devised for the purpose.

The National Agricultural Technology Project (NATP)

The National Agricultural Technology Project (NATP) is a dynamic instrument of introducing major changes in the Agricultural Research and Extension systems of the country, besides developing their capabilities to meet future challenges. The project was initiated by Ministry of Agriculture, Govt. of India with the financial assistance of World Bank and would be implemented with the assistance of MANAGE in 28 districts covering 7 states, viz. Andhra Pradesh, Bihar, Jharkhand, Himachal Pradesh, Maharashtra, Orissa and Punjab over a period of 5 years (1998-2003).

The World Bank assisted National Agricultural Technology Project (NATP) aims at improving research and extension services.

The Research component of NATP is being implemented by the Indian council of Agricultural Research (ICAR) and the Extension component by the Department of Agriculture and Co-operation. The different Project Implementing Agencies (PIAs) involved in implementation of the ITD component of NATP are:

- (i) Directorate of Extension (DOE)
- (ii) National Institute of Agricultural Extension Management (MANAGE)
- (iii) NATP cell at State Head Quarters
- (iv) State Agricultural Management and Extension Training Institute (SAMETI)
- (v) District Level Agricultural Technology Management Agencies (ATMAs)

The Extension component termed as "Innovations in Technology Dissemination"(ITD) envisages an integrated extension delivery at district level and is being pilot tested in seven participating states, viz. Andhra Pradesh, Bihar, Jharkhand, Himachal Pradesh, Maharashtra, Orissa, Punjab.

The purpose of this component is to test new approaches to technology transfer, new organizational arrangements, and operational procedures. One of the goal is to decentralize decision making to the district level through the creation of Agricultural Technology Management Agency (ATMA) as a registered society.

The second goal is to increase farmer input into programme planning and resource allocation especially at the block level and increase accountability to stakeholders. The third goal is to increase programme coordination and integration. Funds would be provided to 28 pilot districts in seven states to create Agricultural Technology Management Agency which will bring together researchers, extensionists, farmers and other stakeholders (including NGOs and the corporate sector) to make, on the basis of joint diagnostic studies, district Extension Plans and recommendations for expanded adaptive research to introduce innovations in technology dissemination matched to local needs and characteristics.

Four districts in each of the seven participating states are identified for pilot testing as detailed below.

Andhra Pradesh : Kurnool, Prakasam, Adilabad and Chittoor

Bihar : Muzaffarpur, Madhubani, Munger, Patna Rural

Jharkhand : Dumka, Jamtara, Palamau, Chaibara

Himachal Pradesh : Shimla, Hamirpur, Kangra, Bilaspur

Maharashtra : Ahmednagar, Amaravati, Aurangabad, and Ratnagiri

Orissa : Khurda, Koraput, Ganjam, Sambhalpur

Punjab : Gurdaspur, Jalandhar, Sangrur and Faridkot

In each of the pilot districts, an Agricultural Technology Management Agency(ATMA) would be established as a registered society for integrating research and extension activities.

National Watershed Development Programme

The Department of Land Resources in the Ministry of Rural Development is administering three area-based watershed programmes for development of wastelands/degraded lands namely Drought Prone Areas Programmes (DPAP), Desert Development Programme (DDP) and Integrated Wastelands Development Programme (IWDP) to check the diminishing productivity of wasteland and loss of natural resources.

The DPAP was launched in 1973-74 to tackle the special problems faced by those areas that are constantly afflicted by drought conditions. Presently, 972 blocks of 195 districts in 16 States are covered under the Programme. DDP was launched in 1977-78 to mitigate the adverse effects of desertification. Presently, 235 blocks of 40 districts in 7 States are covered under the Programme. IWDP has been under implementation since 1989-90. The projects under the IWDP are generally sanctioned in areas that are not covered under DDP or DPAP.

Since 1 April 1995, these three programmes are being implemented on the basis of Common Guidelines for Watershed Development. Details of projects sanctioned and funds released from 1995-96 to 2007-2008 are as under:

The projects under DPAP and DDP are sanctioned for 500 ha. each while the IWDP projects cover an area of 5000-6000 ha. The cost norms for all the three schemes have been revised to Rs. 6000 per ha. Under DPAP and DDP, it is shared between the Centre and the States in ratio of 75:25. In case of IWDP, the cost sharing between the Centre and State Governments is in the ratio of 11:1.

Details of projects sanctioned and funds released from 1995-96 to 2007-2008

Name of Scheme	No. of project sanctioned	Area covered (in lakh ha.)	Total funds released by Centre (Rs. in crores)
DPAP	27439	130.20	2837.81
DDP	15746	78.73	2103.23
IWDP	1877	107.0	2797.56
Grand Total	45062	322.93	7738.60

Funds are released in seven installments, six installments at the rate of 15 per cent and the last installment at the rate of 10 per cent. The first installment is released along with the initial sanction-order and subsequent installments on receipt of utilization for 50 per cent of the available funds as well as the following documents:

- Quarterly Progress Reports
- Utilisation Certificates
- The Audited Statement of Accounts for the previous years and
- Evidence of satisfactory completion of institutional arrangements
- Projects are implemented by District Rural Development Agencies/Zilla Parishads (DRDAs/ZPs) through Project Implementing Agencies (PIAs). PIAs could be a Line Department (of the State Government), Panchayati Raj Institutions or a reputed NGO.

One PIA normally handles 10-12 watershed projects covering an area of about 5000-6000 hectares. The PIA is required to maintain a technical team of 4 experts called Watershed Development Team (WDT) and individual projects (500 hectares) are planned and executed by the local people living in the watershed area called the Watershed Association (WA) through an elected body called Watershed Committee (WC).

The Department of Land Resources has brought out a new initiative called Hariyali with an objective of empowering PRIs both financially and administratively in implementation of Watershed Development Programmes. Under this initiative, all ongoing area development programmes namely, Integrated Wastelands Development Programme (IWDP), Drought Prone Areas Programme (DPAP) and Desert Development Programme (DDP) are to be implemented through the PRIs. New projects under the aforesaid area development programmes are being implemented in accordance with the guidelines for Hariyali from 1 April 2003. Projects sanctioned prior to this date shall continue to be implemented as per the Watershed Development Guidelines of 2001.

In the new arrangement, Gram Panchayats shall implement projects under overall supervision and guidance of Project Implementation Agencies (PIAs). An intermediate panchayat may be the PIA for all the projects sanctioned to a particular Block/Taluka. In case, these Panchayats are not adequately empowered, then the Zilla Panchayat can either act as PIA itself or may appoint a suitable Line Department like Agriculture, Forestry /Social Forestry, Soil Conservation, etc., or an Agency of the State Government/ University/Institute as PIA. Failing these options, the ZP/DRDA may consider appointing a reputed Non-Government Organization (NGO) in the district with adequate experience and expertise in the implementation of watershed projects or related area development works as the PIA after thoroughly examining their credentials.

The Project Implementing Agency (PIA) will provide necessary technical guidance to the Gram Panchayat for preparation of development plans for the watershed through Participatory Rural Appraisal (PRA) exercise, undertake community organisation and training for the village communities, supervise watershed development activities, inspect and authenticate project accounts.

Small Farmers' Development Agency (SFDA) and Marginal Farmers' and Agricultural Labourers' Agency (MFALA)

Several official committees from the closing years of the decade of the sixties onwards began to draw the attention of the Government to the inadequacy of existing development process to enable very small and small cultivators, owning less than two hectares of land who constitute the majority of farmers, to improve their income and quality of life. The Rural Credit Inquiry Committee in 1969 highlighted the depressed condition of these farmers and recommended the setting up of SFDA in selected districts. The fourth plan endorsed this view point and recommended the formation of this agency. The Government accepted the

recommendation made in the fourth plan and set up two separate agencies of SFDA and MFALA in selected districts. The farmers were those owning less than two hectares each. Marginal farmers were those owning less than two hectare each. The agricultural labourers were those having only a homestead and getting more than 50 per cent of income from wages.

These agencies started functioning from 1971-72 onwards in a number of selected districts. Some years later MFALA was amalgamated with SFDA to form one unified corporate body and continued to be known as SFDA.

Objectives

The basic objective of this agency was to enable selected target groups of marginal and small farmers and agricultural labourers to improve their income through productive activities and improving their existing ones. The concrete steps for the above objectives were:

- (i) identification of target groups in selected districts;
- (ii) formulation of viable agricultural and non-agricultural schemes for the target groups;
- (iii) provision of subsidy at the rate of 25 per cent and 33 per cent of the total cost of an approved scheme to the selected beneficiaries and also helping them to get institutionalised credit from cooperatives and nationalised banks.
- (iv) Coordinate the various public sector agencies located in the area to promote inputs and requisite support to the selected target groups; and
- (v) Promotion of common facilities of providing storage, marketing as well as strengthening co-operative institutions for providing credit.

Each sanctioned agency was expected to identify and help 50,000 small farmers to become economically viable by adopting improved technology and making use of the credit and inputs required. About 15,000 marginal farmers and 5,000 agricultural labourers were to be identified and helped to start or expand self-employment activities.

The total number of beneficiaries identified did not cover all the target group households. Secondly, even among the identified beneficiary households only half of those were given some assistance. Thirdly, the assistance in the form of subsidy and institutional credits was too small in many cases to enable the very poor households to improve their economic conditions.

SOCIAL JUSTICE AND POVERTY ALLEVIATION PROGRAMMES

INTEGRATED TRIBAL DEVELOPMENT AGENCY (ITDA)

A detailed and comprehensive review of the tribal peoples' problem was taken up on the eve of the Fifth Five Year Plan period. The main objective of ITDA is socio-economic development of tribal communities through income generating schemes allied with Infrastructure Development programmes and protection of the tribal communities against exploitation.

The ITDA project areas are generally contiguous areas of the size of a Tehsil or Block or more in which the ST population is 50% or more of the total. Due to the demographic profile of the tribal people in these regions, however, the ITDPs in Assam, Karnataka, Tamil Nadu, and West Bengal may be smaller or not contiguous. Andhra Pradesh and Orissa have opted for an Agency model under the Registration of Societies Act and the ITDPs there are known as ITD Agencies (ITDAs).

So far, 194 ITDPs / ITDAs have been delineated in the country. In Jammu and Kashmir though no ITDP has been delineated yet, the areas having ST Population in the State are treated as covered under the TSP strategy. In eight states having scheduled areas the ITDPs / ITDAs are generally co-terminus with TSP areas. The ITDPs / ITDAs are headed by Project Officers though they may be designated Project Administrators or Project Directors.

INTEGRATED RURAL DEVELOPMENT PROGRAMME (IRDP)

GENESIS

The CDP launched in 1952 could not bring expected change in improving the conditions of rural masses or there was not much achievement in the areas of agricultural development.

The apparent failure of the CDP was the main reason for the evolution of the IRDP. The main drawbacks of the CDP were

- Uneven distribution of the benefits of the programme
- Absence of clearly defined priority in the programmes.
- The inability of the CDP to recognise and solve the inherent conflicts in the inter and intra target groups.
- Lack of mass participation.
- More bureaucratic.

DIFFERENCE BETWEEN CDP AND IRDP

CDP

IRDP

- | | |
|---|---|
| 1. Meant for total development of the Community ex. Road, drinking water, | Meant for the individual development, who are below the poverty line. Etc., |
| 2. Community approach | Family approach |
| 3. Multi-dimensional and multi- | Integrated programme sectorial programme |
| 4. The felt needs of the beneficiaries were not taken into account. | They are given due consideration |
| 5. Financing is less intensive. | Financing is more intensive. |
- So, it was considered necessary to go in firstly for a programme directed mainly at agriculture and secondly to attempt the process of development in selected areas. Thus, in 1960 Intensive Agricultural District Programme (IADP) was formed and implemented. In this programme, efforts to boost agricultural production were concentrated in areas with better prospects of higher yields (package programme).

The success achieved in increasing agricultural production under IADP, led the Government to extend the programme to other districts with slight modifications under the name of Intensive Agricultural area Programme (IADP) in 1964.

The food situation became alarming, particularly due to successive famines during 1964-67 and this happened despite intensive efforts in selected areas. In order to overcome this crisis, the GOI launched a

new agricultural strategy known as High Yielding Varieties Programme (HYVP) in 1966. The achievement was the single goal of increasing agricultural production.

This unusual shift in the rural development strategy in favour of increasing agricultural production led to the accentuation of regional disparities on one hand and economic inequalities among different sections of the population on the other. Various reports revealed that the gains of intensive development efforts, including institutional credit flow more towards large and resourceful farmers to the neglect of small farmers, landless labourers, tenants and artisans.

On realisation of the above, there was a shift in the rural development strategy. The main purpose of such a change in the approach was to make deliberate efforts to flow development benefits to the poorer sections and the backward areas. Accordingly, Small Farmers Development Agency (SFDA); Marginal Farmers and Agricultural Labourers (MFAL); Drought Prone Area Programme (DPAP); Hill Area Development Programme (HADP) etc., were implemented.

The beneficiary-oriented programmes as well as area development programmes, despite some successes could not make much dent into the problem of poverty and unemployment. Considering the magnitude and dimensions of rural poverty, the rural development strategy, therefore, took a major turn in its emphasis, content, coverage and methodology. This resulted in launching of the programme "Integrated Rural Development Programme (IRDP) in 1978-79, covering 2,300 development blocks and extended to all the 5011 blocks in 2nd October, 1980. For implementing the programme, DRDA was set up at district level. IRDP envisages the integration of methodology and approach of both beneficiary oriented programmes as well as area development efforts for the purpose of poverty alleviation as well as increasing productivity.

The goal of poverty alleviation was achieved by having two main instruments.

- (i) a set of self employment schemes for the poor i.e., IRDP and its two sub-programmes of TRYSEM and DWCRA.
- (ii) Wage employment programmes like NREP (1980) and RLEGP (1983). These have now been merged into Jawahar Rozgar Yojana (JRYO).

While the programmes under set (i) aim at giving the poor family an income generating asset, the latter set (ii) provides direct income to the poor through wage employment.

OBJECTIVES OF IRDP

The main objectives are creating assets, employment, increased income, removal of poverty and minimising inequality. The guide lines given to achieve the objectives include:

- (i) to provide gainful employment and increase the purchasing power of rural poor.
- (ii) The job opportunities must be provided through the application of science and technology in making optimum use of existing local resources.
- (iii) The programme must be simple enough to operate and be economically viable to ensure quick self-reliance of its beneficiaries.

For achieving its objective of rural poverty alleviation, IRDP aimed at the provision of assets to the identified poor in the form of Government subsidy and bank credit on reasonable rate of interest.

OPERATION

For managing the programme a corporate governmental agency name as District Rural Development (DRDA) was set up at district level. TH DRDA is guided and directed and supported by a governing council headed by the Project Officer of DRDA. The District Collector, Heads of District Officers, legislators, Panchayat Union Chairmen and some other non-officials from the member.

The existing development block was strengthened to enable it to bear the additional responsibility of implementing DRDA directed and supported programmes. IRDP is a centrally sponsored scheme implemented by DRDA of the states. The scheme is funded on 50:50 basis by the centre and the states.

The integration involves several categories of:

- (i) Spatial integration (integration between areas)
- (ii) Sectoral integration (integration between agriculture, off-farm activities, industries, etc.) (iii)
Integration in economic and social development.
- (iv) Integration of total area and target group approach.
- (v) Integration of human and other resources.

- (vi) Integration of income generating schemes.
- (vii) Integration of credit with technical services.

Thus IRDP involves integration both in its means and ends.

SHORT COMINGS

Since 1985 the Government has promoted concurrent evaluation of the implementation and impact of the programme. These evaluation had indicated that there has been some increase in income but only a minority of them could cross the newly determined poverty line of 6400 rupees. Various evaluation indicated the followings:

- the resources provided were inadequate in majority of the cases;
- there were large number of over dues due to one reason or the other
- poor quality of assets provided to the beneficiaries in many cases;
- the follow up of the beneficiaries was inadequate;
- delay in provision of assets and preliminary high costs incurred by beneficiaries;
- lacking of training facilities to farmers;
- delay in releasing subsidy;
- bribes taken by various functionaries concerned; □ very inadequate supporting facilities or services;
- non-availability of loans for making capital; and □ lack of guidance about insurance cover.

Selection of beneficiaries the 'very poor' are overlooked, by and large.

WOMEN DEVELOPMENT PROGRAMMES

Development of Women and Children in Rural Areas (DWCRA) (1982)

The need for introducing specific programmes for the development of poor women was felt. Many programmes were launched for them. One such programme formulated and launched since September 1982 in DWCRA.

It aims at motivating and assisting women to engage themselves in a productive activity for earning a substantial income as well as to improve the quality of their own and children's life. Thus, though the economic activity is the priority, the social betterment of the women and their children is also aimed at. It is partly supported by UNICEF and is jointly financed by Union and State Governments. It operates in conjunction with IRDP and TRYSEM. The main features of this programme are:

- (i) Women of identified poor families are organised into groups of 15-20 each for taking up income generating activities suited to their skills and aptitude.
- (ii) Group members are given training usually under TRYSEM.
- (iii) One time grant of Rs.15, 000 is provided for each group as revolving fund for purchase of raw materials, marketing, child care etc. This amount is shared equally by Union and State Government and UNICEF.
- (iv) Each group selects one of its members as group organiser who is to help women in the selection of economic activities suited to their skills and aptitude, procurement of raw materials etc.
- (v) Besides engaging in economic activity, each group is expected to be recipient of benefits of other development and welfare programmes.
- (vi) Multi-purpose centre are being set up to serve as the central place for the working of women groups.

The list of income-generating activities undertaken under the scheme are: tailoring, embroidery, ready-made garments, pickle making, papad making, bakery, candle making, soap making, chalk making, envelop making, match box making, knitting, weaving, basket making, agarbathi making, poultry, dairy, piggery, goat rearing, bee keeping, mushroom production, fruit and vegetables processing, etc.

Integrated Child Development Services (ICDS) Scheme

Launched on 2nd October 1975, today, ICDS Scheme represents one of the world's largest and most unique programmes for early childhood development. ICDS is the foremost symbol of India's commitment to her children – India's response to the challenge of providing pre-school education on one hand and breaking the vicious cycle of malnutrition, morbidity, reduced learning capacity and mortality, on the other.

1. Objectives: The Integrated Child Development Services (ICDS) Scheme was launched in 1975 with the following objectives:

- i. to improve the nutritional and health status of children in the age-group 0-6 years;
- ii. to lay the foundation for proper psychological, physical and social development of the child;
- iii. to reduce the incidence of mortality, morbidity, malnutrition and school dropout;
- iv. to achieve effective co-ordination of policy and implementation amongst the various departments to promote child development; and
- v. to enhance the capability of the mother to look after the normal health and nutritional needs of the child through proper nutrition and health education.

2. Services: The above objectives are sought to be achieved through a package of services comprising:

- i. supplementary nutrition,
- ii. immunization,
- iii. health check-up,
- iv. referral services,
- v. pre-school non-formal education and vi. nutrition & health education.

The concept of providing a package of services is based primarily on the consideration that the overall impact will be much larger if the different services develop in an integrated manner as the efficacy of a particular service depends upon the support it receives from related services.

Services	Target Group	Service Provided by
Supplementary Nutrition	Children below 6 years: Pregnant & Lactating Mother (P&LM)	Anganwadi Worker and Anganwadi Helper
Immunization*	Children below 6 years: Pregnant & Lactating Mother (P&LM)	ANM/MO
Health Check-up*	Children below 6 years: Pregnant & Lactating Mother (P&LM)	ANM/MO/AWW

Referral Services	Children below 6 years: Pregnant & Lactating Mother (P&LM)	AWW/ANM/MO
Pre-School Education	Children 3-6 years	AWW
Nutrition & Health Education	Women (15-45 years)	AWW/ANM/MO

Three of the six services namely Immunisation, Health Check-up and Referral Services delivered through Public Health Infrastructure under the Ministry of Health & Family Welfare.

2.1 Nutrition including Supplementary Nutrition: This includes supplementary feeding and growth monitoring; and prophylaxis against vitamin A deficiency and control of nutritional anaemia. All families in the community are surveyed, to identify children below the age of six and pregnant & nursing mothers. They avail of supplementary feeding support for 300 days in a year. By providing supplementary feeding, the Anganwadi attempts to bridge the caloric gap between the national recommended and average intake of children and women in low income and disadvantaged communities.

Growth Monitoring and nutrition surveillance are two important activities that are undertaken. Children below the age of three years of age are weighed once a month and children 3-6 years of age are weighed quarterly. Weight-for-age growth cards are maintained for all children below six years. This helps to detect growth faltering and helps in assessing nutritional status. Besides, severely malnourished children are given special supplementary feeding and referred to medical services.

2.2 Immunization: Immunization of pregnant women and infants protects children from six vaccine preventable diseases-poliomyelitis, diphtheria, pertussis, tetanus, tuberculosis and measles. These are major preventable causes of child mortality, disability, morbidity and related malnutrition. Immunization of pregnant women against tetanus also reduces maternal and neonatal mortality.

2.3 Health Check-ups: This includes health care of children less than six years of age, antenatal care of expectant mothers and postnatal care of nursing mothers. The various health services provided for children by anganwadi workers and Primary Health Centre (PHC) staff, include regular health check-ups, recording of weight, immunization, management of malnutrition, treatment of diarrhoea, de-worming and distribution of simple medicines etc.

2.4 Referral Services: During health check-ups and growth monitoring, sick or malnourished children, in need of prompt medical attention, are referred to the Primary Health Centre or its sub-centre. The anganwadi worker has also been oriented to detect disabilities in young children. She enlists all such cases in a special register and refers them to the medical officer of the Primary Health Centre/ Sub-centre.

2.5 Non-formal Pre-School Education (PSE)

The Non-formal Pre-school Education (PSE) component of the ICDS may well be considered the backbone of the ICDS programme, since all its services essentially converge at the anganwadi – a village courtyard. Anganwadi Centre (AWC) – a village courtyard – is the main platform for delivering of these services. These AWCs have been set up in every village in the country. In pursuance of its commitment to the cause of India's Children, present government has decided to set up an AWC in every human habitation/ settlement. As a result, total number of AWC would go up to almost 1.4 million. This is also the most joyful play-way daily activity, visibly sustained for three hours a day. It brings and keeps young children at the anganwadi centre - an activity that motivates parents and communities. PSE, as envisaged in the ICDS, focuses on total development of the child, in the age up to six years, mainly from the underprivileged groups. **Its programme for the three-to six years old children in the anganwadi is directed towards providing and ensuring a natural, joyful and stimulating environment, with emphasis on necessary inputs for optimal growth and development.** The early learning component of the ICDS is a significant input for providing a sound foundation for cumulative lifelong learning and development. It also contributes to the universalization of primary education, by providing to the child the necessary preparation for primary schooling and offering substitute care to younger siblings, thus freeing the older ones – especially girls – to attend school.

2.6 Nutrition and Health Education: Nutrition, Health and Education (NHED) is a key element of the work of the anganwadi worker. This forms part of BCC (Behaviour Change Communication) strategy. This has the long term goal of capacity-building of women – especially in the age group of 15-45 years – so that they can look after their own health, nutrition and development needs as well as that of their children and families.

1. **Funding Pattern:** ICDS is a Centrally-sponsored Scheme implemented through the State Governments/UT Administrations. Prior to 2005-06, 100% financial assistance for inputs other than supplementary nutrition, which the States were to provide out of their own resources, was being provided by the Government of India. Since many States were not providing adequately for supplementary nutrition in view of resource constraints, it was decided in 2005-06 to support to States up to 50% of the financial norms or to support 50% of expenditure incurred by them on supplementary nutrition, whichever is less.

2. From the financial year 2009-10, Government of India has modified the funding pattern of ICDS between Centre and States. The sharing pattern of supplementary nutrition in respect of North-eastern States between Centre and States has been changed from 50:50 to 90:10 ratio. So far as other States and UTs, the existing sharing pattern of 50:50 continues. However, for all other components of ICDS, the ratio has been modified to 90:10(100% Central Assistance earlier).

3. Population Norms

The revised Population norms for setting up a Project, Anganwadi Centre and Mini-AWC are as under:

Projects:

- (i) Community Development Block in a State should be the unit for sanction of an ICDS Project in rural/tribal areas, irrespective of number of villages/population in it.
- (ii) The existing norm of 1 lakh population for sanction of urban project may continue.

Further to this, for blocks with more than two lac population, States could opt for more than one Project (@ one per one lac population) or could opt for one project only. In the latter case, staff could be suitably strengthened based on population or number of AWCs in the block. Similarly, for blocks with population of less than 1 lac or so, staffing pattern of CDPO office could be less than that of a normal block.

Type of Supplementary Nutrition

Children in the age group 0 – 6 months: For Children in this age group, States/ UTs may ensure continuation of current guidelines of early initiation (within one hour of birth) and exclusive breast-feeding for children for the first 6 months of life.

Children in the age group 6 months to 3 years: For children in this age group, the existing pattern of Take Home Ration (THR) under the ICDS Scheme will continue. However, in addition to the current mixed practice of giving either dry or raw ration (wheat and rice) which is often consumed by the entire family and not the child alone, THR should be given in the form that is palatable to the child instead of the entire family.

Children in the age group 3 to 6 years : For the children in this age group, State/ UTs have been requested to make arrangements to serve Hot Cooked Meal in AWCs and mini-AWCs under the ICDS Scheme. Since the child of this age group is not capable of consuming a meal of 500 calories in one sitting, the States/ UTs are advised to consider serving more than one meal to the children who come to AWCs. Since the process of cooking and serving hot cooked meal takes time, and in most of the cases, the food is served around noon, States/ UTs may provide 500 calories over more than one meal. States/ UTs may arrange to provide a morning snack in the form of milk/ banana/ egg/ seasonal fruits/ micronutrient fortified food etc.

4. Registration of beneficiaries: Since BPL is no longer a criteria under ICDS, States have to ensure registration of all eligible beneficiaries.

The ICDS Team

The ICDS team comprises the Anganwadi Workers, Anganwadi Helpers, Supervisors, Child Development Project Officers (CDPOs) and District Programme Officers (DPOs). Anganwadi Worker, a lady selected from the local community, is a community based frontline honorary worker of the ICDS Programme. She is also an agent of social change, mobilizing community support for better care of young children, girls and women. Besides, the medical officers, Auxiliary Nurse Midwife (ANM) and Accredited Social Health Activist (ASHA) form a team with the ICDS functionaries to achieve convergence of different services.

Role & responsibilities of AWW, ANM and ASHA

Role and responsibilities of AWW, ANM & ASHA have been clearly delineated and circulated to States/UTs under the joint signature of Secretary, MWCD and Secretary, MHFW, vide D.O. No. R. 14011/9/2005-NRHM – I (pt) dated 20 January 2006.

Status of Anganwadi Workers and Helpers

Anganwadi Workers (AWWs) & Anganwadi Helpers (AWHs), being honorary workers, are paid a monthly honoraria as decided by the Government from time to time. **Government of India has enhanced the honoraria of these Workers, w.e.f. 1.4.2008 by Rs.500 above the last honorarium drawn by Anganwadi Workers (AWWs) and by Rs.250 of the last honorarium drawn by Helpers of AWCs and Workers of Mini-AWCs.** Prior to enhancement, AWWs were being paid a monthly honoraria ranging from Rs. 938/ to Rs. 1063/- per month depending on their educational qualifications and experience. Similarly, AWHs were being paid monthly honoraria of Rs. 500/-

In addition to the honoraria paid by the Government of India, many States/UTs are also giving monetary incentives to these workers out of their own resources for additional functions assigned under other Schemes.

ICDS Training Programme:

Training and capacity building is the most crucial element in the ICDS Scheme, as the achievement of the programme goals largely depends upon the effectiveness of frontline workers in improving service delivery under the programme. Since inception of the ICDS scheme, the Government of India has formulated a comprehensive training strategy for the ICDS functionaries. Training under ICDS scheme is a continuous programme and is implemented through 35 States/UTs and National Institute of Public Cooperation and Child Development (NIPCCD) and its four regional centres.

During the 11th Five Year Plan, the Government of India has laid much emphasis on strengthening the training component of ICDS in order to improve the service delivery mechanism and accelerate better

programme outcomes. An allocation of Rs. 500 crore has been kept for the ICDS Training Programme during the 11th Five Year Plan.

Financial norms relating to training of various ICDS functionaries and trainers have been revised upwardly with effect from 1 April 2009.

Types of Training Courses: Three types of regular training are imparted to AWWs, AWHs, Supervisors, CDPOs/ACDPOs and Instructors of AWTCs and MLTCs, viz.:

- Induction Training (*on initial engagement/appointment*) mainly to AWWs ○ Job/Orientation Training (*once during service period*) ○ Refresher Training (*in-service, once in every two years*)

Also, specific need based training programmes are organized under the 'Other Training' component, whereby the States/UTs are given flexibility to identify state specific problems that need specialized issue based training and take up such training activities.

Training Infrastructure: There is a countrywide infrastructure for the training of ICDS functionaries, viz.

- **Anganwadi Workers Training Centres (AWTCs)** for the training of Anganwadi Workers and Helpers.
- **Middle Level Training Centres (MLTCs)** for the training of Supervisors and Trainers of AWTCs; ○ **National Institute of Public Cooperation and Child Development (NIPCCD)** and its Regional Centres for training of CDPOs/ACDPOs and Trainers of MLTCs. NIPCCD also conducts several skill development training programmes.

[Govt. of Tamil Nadu has established a State Training Institute (STI) at the State level for the training of Trainers of MLTCs and CDPOs/ACDPOs]

Based on the needs, State Governments identify and open up AWTCs and MLTCs after due approval by the Government of India. As on 31.3.2009, 490 AWTCs and 31 MLTCs were operational across the country. About 80% of the AWTCs and 70% MLTCs are run by State/District based NGOs.

Monitoring & Supervision of Training Programme: A separate ICDS Training Unit within the Ministry of Women and Child Development headed by a Director/Dy. Secretary level officer is responsible for overall monitoring, supervision and evaluation of the training programme. The following measures are undertaken for monitoring and supervision: ○ *Physical and financial progress are captured through Quarterly Progress Reports (QPRs) in a standardized format, that are submitted by the States/UTs to GoI at the end of every quarter;*

- *A detailed analysis of the QPRs is carried out by the ICDS Training Unit and based on the same, quarterly review meetings are organized with the States at the central level;*
- *Monthly/quarterly review meeting with the Training Centres at the state level;* ○ *Necessary feedback and guidelines are issued to the States after each of the review meetings;*

- *Field visits to AWTCs/MLTCs by Nodal Officer or the District Programme Officers (DPOs)/CDPOs; and also by the officials from the Ministry of WCD and NIPCCD.*
- *Annual meeting of State Training Task Force (STTF) for the approval of STRAP and review of past performance and chalking out future actions.*

Recent Initiatives: The Ministry has recently initiated a process of consultations with the States and other stakeholders to review and identify gaps in the existing training system and make suggestions to strengthen the ICDS Training programme including its contents/syllabi, training methodology and the existing monitoring mechanism under ICDS training programme. Three regional workshops have since been organized in collaboration with NIPCCD and with technical support from USAID/CARE INDIA during July-August 2009 at three Regional centres of NIPCCD at Bangalore, Lucknow and Guwahati.

Existing Monitoring System under ICDS Scheme:

Central Level

Ministry of Women and Child Development (MWCD) has the overall responsibility of monitoring the ICDS scheme. There exists a Central Level ICDS Monitoring Unit in the Ministry which is responsible for collection and analysis of the periodic work reports received from the States in the prescribed formats. States have been asked to send the State level consolidated reports by 17th day of the following month.

The existing status of monitoring of these six services is as under :

- (i) Supplementary Nutrition :** No. of Beneficiaries (Children 6 months to 6 years and pregnant & lactating mothers) for supplementary nutrition;
- (ii) Pre-School Education :** No. of Beneficiaries (Children 3-6 years) attending pre-school education;
- (iii) Immunization, Health Check-up and Referral services :** Ministry of Health and Family Welfare is responsible for monitoring on health indicators relating to immunization, health check-up and referrals services under the Scheme.

International Partners

Government of India partners with the following international agencies to supplement interventions under the ICDS:

- i. United Nations International Children' Emergency Fund (UNICEF)
- ii. Cooperative for Assistance and Relief Everywhere (CARE)
- iii. World Food Programme (WFP)

Rashtriya Mahila Kosh (RMK)

Concept and Features of Micro-Finance

Micro-finance, as is being practiced by the **National Credit Fund for Women** or the **Rashtriya Mahila Kosh (RMK)**, could be defined as a set of services comprising the following activities:

a)	Micro-credit	Small loans; primarily for income generation activities, but also for consumption and contingency needs.
b)	Micro-savings	thrift or small savings from borrowers' own resources.

The main features of the micro-finance services being provided by **RMK** are :

1. It is a tool for empowerment of the poorest; the higher the income and better the asset position of the borrower, the lower the incremental benefit from further equal doses of micro-credit is likely to be.
2. Delivery is normally through Self Help Groups (SHGs).
3. It is essentially for promoting self-employment; the opportunities of wage employment are limited in developing countries - micro finance increases the productivity of selfemployment in the informal sector of the economy - generally used for (a) direct income generation (b) rearrangement of assets and liabilities for the household to participate in future opportunities and (c) consumption smoothing.
4. It is not just a financing system, but a tool for social change, specially for women - it does not spring from market forces alone - it is potentially welfare enhancing - there is a public interest in promoting the growth of micro finance - this is what makes it acceptable as a valid goal for public policy.
5. Because micro credit is aimed at the poorest, micro-finance lending technology needs to mimic the informal lenders rather than the formal sector lending. It has to : a) provide for seasonality (b) allow repayment flexibility (c) eschew bureaucratic and legal formalities (d) fix a ceiling on loan sizes.

Microfinance approach is based on certain proven truths which are not always recognised. These are :

- That the poor are bankable; successful initiatives in micro finance demonstrate that there need not be a tradeoff between reaching the poor and profitability - micro finance constitutes a statement that the borrowers are not 'weaker sections' in need of charity, but can be treated as responsible people on business terms for mutual profit -

- That almost all poor households **need** to save, have the inherent **capacity** to save small amounts regularly and are **willing** to save provided they are motivated and facilitated to do so -
- That easy access to credit is more important than cheap subsidised credit which involves lengthy bureaucratic procedures - (some institutions in India are already lending to groups or SHGs at higher rates - this may prevent the groups from enjoying a sufficient margin and rapidly accumulating their own funds, but members continue to borrow at these high rates, even those who can borrow individually from banks) - □ 'Peer pressure' in groups helps in improving recoveries.

Reasons for Focus on Poor Women

The National Credit Fund for Women or the **Rashtriya Mahila Kosh (RMK)** is working exclusively for poor women. Its loans are available solely and entirely to this target group. The reasons for this are several :

- Among the poor, the poor *women* are the most disadvantaged - they are characterized by lack of education and access to resources, both of which are required to help them work their way out of poverty and for upward economic and social mobility -
- The problem is more acute for women in countries like India, despite the fact that women's labour makes a critical contribution to the economy - this is due to low social status and lack of access to key resources -
- Evidence shows that groups of women are better customers than men - they are better managers of resources - benefits of loans are spread wider among the household if loans are routed through women - mixed groups are often inappropriate in Indian society - record of all-male groups is worse than that of all-women groups, everywhere -

RMK - its profile, aims & objectives, roles

It has been felt for some time in India that the credit needs of poor women, particularly in the unorganised sector, have not been adequately addressed by the formal financial institutions in the country. The vast gap between demand for and supply of credit to this sector established the need for a National Credit Fund for Women.

The National Credit Fund for Women or the **Rashtriya Mahila Kosh (RMK)** was set up in March 1993 as an independent registered society by the Department of Women & Child Development in Government of India's Ministry of Human Resource Development with an initial corpus of Rs. 310,000,000 - not to replace the banking sector but to fill the gap between what the banking sector offers and what the poor need.

Its main objectives are:

- To provide or promote the provision of micro-credit to poor women for income generation activities or for asset creation.
- To adopt a quasi-informal delivery system, which is client friendly, uses simple and minimal procedures, disburses quickly and repeatedly, has flexibility of approach, links thrift and savings with credit and has low transaction costs both for the borrower and for the lender.
- To demonstrate and replicate participatory approaches in the organisation of women's groups for thrift and savings and effective utilisation of credit.
- To use the group concept and the provision of credit as an instrument of women's empowerment, socio-economic change and development.
- To cooperate with and secure the cooperation of the Government of India, State Governments, Union Territory administrations, credit institutions, industrial and commercial organisations, NGOs and others in promoting the objectives of the Kosh.
- To disseminate information and experience among all these above agencies in the Government and non-government sectors in the area of microfinance for poor women.
- To receive grants, donations, loans, etc., for the furtherance of the aims and objectives of the Kosh.

The office of the Kosh is situated in New Delhi. The Kosh does not have any branch offices.

The Executive Director is the chief executive officer of the Kosh. The Executive Director functions under the overall supervision, direction and control of the Governing Board.

The Governing Board comprises 16 members consisting of senior officers of the Government of India and State Governments, specialists and representatives of NGOs active in the field of microfinance for women. The Governing Board is chaired by the Minister in charge of the Department of Women & Child Development in the Government of India.

The General Body of the Kosh consists of all members of the Board, institutional members and individual members.

The Kosh has three main roles:

Wholesaling Role -

it acts as a wholesaling apex organisation for channelising funds from government and donors to retailing intermediate microfinance organisations (IMOs).

[The Kosh has so far received only a one-time grant from government and has not needed to raise funds from any other sources].

Market Development Role -

It develops the supply side of the micro finance market by offering institution building support to new and existing-but-inexperienced IMOs by structures of incentives, transfers of technology, training of staff and other non-financial services -

[The Kosh realises that it can play a value adding wholesaling role only when a sufficiently large and well established micro finance sector already exists - this depends on the number of IMOs and the sustainability of IMOs - subsidised institution building increases the equity of any IMO as much as grants do - large and premature disbursement of funds to the IMO can reduce the effectiveness of any institution building effort].

Advocacy Role - whereby RMK acts as an advocate or agent for influencing development and micro-finance policy and creating a more enabling policy and legal environment for spread of micro-finance activities in India. Being a creation and a representative of the government, RMK has a particular advantage in this area.

Mahila Samridhi Yojana (MSY)

For empowerment of minorities, maximum emphasis is required to be given on empowerment of women because they are the weakest link among the minorities. The most effective strategy to reach the women and strengthening them should include:-

- i. capacity building through increasing income generating skills/activities; ii. encouraging them to form SHGs and provide them micro credit support; iii. setting up of production based activity suitable to women. Based on the above framework, NMDFC introduced the Scheme of Mahila Samridhi Yojana which links micro-credit to the women after training. During the training, the group is formed into a Self Help Group.

The scheme has been made broad-based to cover all the trades and activities practiced by women. The limit of micro-credit to each member of the Group is Rs.25000/- and the rate of interest to be paid by the women beneficiaries has been reduced to 4%. The details of the Scheme are as given below:-

Scope of the Scheme

A group of 20 women of minority communities at any location are given training in any production/service activity, most suitable for them. During the training, the group is formed into a Self Help Group practicing thrift & credit. After the training, the group is provided credit, jointly or individually, for pursuing the activity of training.

Implementing Agencies

The scheme will be implemented through the SCAs of NMDFC as well as NGOs.

Eligibility criteria for the beneficiaries

- Women candidates belonging to minority communities with preference to widows and destitutes.
- Preference to women already having some knowledge of the trade.
- Age 16-30 years
- Fulfill income criterion of below double the poverty line.

Duration of the training

Need based subject to maximum of 6 months duration.

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No.of candidates in a group for training

A group of 15-20 women to be given training at one location. The group will be transformed into Self Help Group (SHG) during the training.

Training fee: Subject to a maximum of Rs.400 per months per candidate.

Training material cost: subject to a maximum of rs.100 per candidate per month.

Stipend: rs.250/- per month per candidate to be deposited in the bank account of the beneficiary or the shg.

Micro-credit: needbased subject to a maximum of rs.25,000 after completion of the training.

Estimated cost per group of 20 number of beneficiaries i) On training - Rs.90,000/- ii) On

Micro-credit - Needbased, subject to maximum of Rs.25,000/- per beneficiary.

Pattern of financing i) On

Training

- NMDFC (Grant) - 85% to SCAs 100%toNGOs - SCA & Training Institute - 15% ii) On Micro-Credit - NMDFC (Loan) - 90%
- SCA/NGO of beneficiary - 10%

Rate of interest

i) From SCAs/NGOs to NMDFC 1 %

ii) From beneficiaries to SCAs/NGOs 4 %

Period of repayment

- i) Beneficiaries are required to repay the loan to the SCA/NGO over a period of 3 years after a moratorium of three months from the date of disbursement of the loan in monthly instalments.
- ii) SCA/NGO will repay the loan to NMDFC over a period of four years after the utilization of funds, in quarterly instalments.

Eligibility criteria for training agency

- i) Must be running similar training at least for three years.
- ii) Should have sufficient space for seating and working of 20 women.
- iii) Should have necessary training equipment and tools sufficient for 20 trainees.
- iv) Should have trained and experienced instructors.

Implementation details

- i) SCAs/NGOs may identify locations having potential for engaging women in any production/service activity for their income generation.
- ii) SCA/NGO will also identify a competent training agency having necessary manpower equipment and competence.
- iii) At each location, group of 20 women fulfilling the eligibility criteria will be identified by the SCA/NGO.
- iv) SCAs/NGOs may form a proposal on the lines of Mahila Samridhi Yojana and send the same to NMDFC for approval. Format of the proposal is at Annexure-VI.
- v) Once the approval is accorded by NMDFC, SCAs/NGOs will ensure proper conduct of training and keep NMDFC informed.
- vi) The SCA would intimate NMDFC the list of beneficiaries indicating their name, address, age and qualification, the details of training agency and the date of starting the programme.

NMDFC will release 50% of the grant on account of training on receipt of this information.

- vii) During the initial stage of training, the SCA/NGO will arrange to give education to the members of the group in the concept of forming and working of Self Help Groups, the strengths of self help groups, operation of thrift and credit activity, running production activities jointly or individually, working together in solving common problems, helping each other in solving individual problems, maintenance of accounts, repayment of loan etc. For this purpose, services of outside expert can also be availed if required. The objective is that the group of women selected for training should start functioning as Self Help Group (SHG) in production and marketing of their products.
- viii) After three months, the SCA/NGO would approach for drawal of remaining training grant alongwith the progress report of the training conducted by them.
- ix) Stipend of the trainees may initially be deposited in the bank account of the SHG. Its subsequent use may be decided by the SHG itself.
- x) SCA/NGO would complete documentation of papers relating to micro-credit to each woman during the period of training.
- xi) After completion of the training, SCA/NGO would provide need based micro credit to each woman. Fixed assets should preferably be given to the beneficiaries in kind instead of cash.
- xii) After a moratorium of three months, SCA/NGO will collect repayment every month from each woman towards repayment of loan, over a period of 36 months. The repayment to NMDFC will be on usual terms and conditions and repayment period as mentioned earlier. NMDFC sends the dues statement every quarter for making repayments.

Post training follow ups

- i) The SCA/NGO as well as the training agency should extend all assistance to the trained candidates in developing backward forward linkages. They should particularly ensure participation of these candidates in marketing events. It would be convenient to do so if the candidates are formed into a Self Help Group and it is with this objective so much emphasis has been given on promotion of Self Help Group in this scheme.

ii) The SCA/NGO as well as the training agency would maintain record of self employment or wage employment of the trained candidates. The assistance provided to them from time to time should be documented for the purpose of reference and reporting.

COMMUNITY DEVELOPMENT PROGRAMMES

Community: is a group of people who live in a geographical area and have an interest in each other for the purpose of making a living.

Development: connotes growth or maturation. It implies gradual and sequential phases of change. It refers to the upward or increasing differentiation.

Community Development: It is a movement designed to promote better living for the community with the active participation and/or the initiative at the community.

It is a method by which people of villages are involved in helping to improve their own economic and social conditions and thereby they become more effective groups in programmes of their national development.

It is a process of change by which people's efforts are united with those of group authorities to improve their economic, social and cultural conditions of communities, into the life of the nation and to enable them to contribute fully to national programmes.

GENESIS OF COMMUNITY DEVELOPMENT PROGRAMME (CDP - 1952)

Based on the experiences within the country and abroad, the recommendations of the Fiscal Commission (1949) and the Grow More Food Enquiry Committee (1952) the CDP was launched on October 2, 1952, the birth-day of Mahatma Gandhi.

At the initial stage in 1952 there were 55 community projects in 3 blocks. Each of the community development projects covered an area of about 450-500 sq.miles with about 300 villages and a population of about 2 lakhs. Each project area has been divided into three development blocks. A development block

consisted of about 100 villages with about 150-170 sq.miles and a population of about 60-70 thousands. Each block was further divided into groups of 5-10 villages each. Each such group formed the area of operation for a village level worker (Gram Sevak) who was the basic level extension functionary in the community development programme.

The need for rapid extension of the programme to other parts of the country led to the National Extension Service (NES) along side the CDP on October 2, 1953 covering the entire country within a period of 10 years.

In 1957, the Balvantroy Mehta team recommended the establishment of statutory elective of local leaders i.e., Panchayat Raj Institutions (Village Panchayat, Panchayat Union and District Development Council). This programme laid emphasis on all round development of the whole community with special emphasis on weaker and under privileged sections through the use of area development, self-help and integrated approaches. The CDP, however, could not bring expected change in improving the conditions of rural masses or there was not much development in the area of agricultural development.

OBJECTIVES OF COMMUNITY DEVELOPMENT IN INDIA

The fundamental or basic objective of Community Development in India is the development of people of "Destination Man".

Its broad objectives are (i) economic development, (ii) social justice and (iii) democratic growth. The attempt is to secure as good a balance as possible among these three objectives and to inter-relate them in a manner that they support one another. More specifically, objectives of the Community Development Programme are:

i) To assist each village in having effective panchayats, cooperatives and schools; ii) Through these village institutions, plan and carry out integrated multi-phased family, village, Block and District.

- a) Increasing agricultural production.
- b) Improving existing village crafts and industries and organising new ones.
- c) Providing minimum essential health services and improving health practices.
- d) Providing required educational facilities for children and an adult education programme.
- e) Providing recreational facilities and programmes.
- f) Improving housing and family living conditions, and
- g) Providing programmes for village women and youth.

ADMINISTRATION OF CDP - PRIOR TO PANCHAYAT RAJ

National level: For implementation of CDP at the national level there was a central committee with Prime Minister as Chairman. This committee was to lay down broad policies and to provide general supervision. It was also responsible for economic development. It was also responsible for economic development. It was assisted by an Advisory Board consisting of the secretaries of developmental departments of central ministries. Under central committee there was Community Projects Administration (CPA). At the beginning CPA was very small and it grew up as a big organisation. Therefore, from September 20, 1956 a separate central ministry was created known as ministry of community development.

This Ministry was overall in-charge of the programme. This department prepared national basis programmes, budgeting, directing and coordinating throughout the country.

State level: There was a State Development Committee or a similar body. This body was entrusted with the execution of CDP and NES. This committee was presided over by the chief minister and consists of all ministers of development departments.

The Development Commissioner acted as Secretary to this committee. This Development Commissioner had three-fold functions.

- I) He had two functions with the centre. He had to receive programme guidance from the centre and report progress and suggestions to the centre .
- II) He coordinated the programme at block levels. He also assure proper and adequate supervision.
- III) He maintained an administration relationship with the District Collector who in turn is responsible for planning, coordination, executing and evaluating the work of each block in his district.

District level: At district level the district collector is the chairman of the district planning of Development Committee. He is assisted in carrying out this development responsibilities by BDOs. The district Development Committee consists of all Heads of Department in the district.

It has both officials and non officials as members.

Block level: At Block level BDO is assisted by a team of experts in agriculture, cooperation, animal husbandry, cottage industries, etc. These technical personnel are assigned with the development works at block level. Block Development Committee consists of representatives of panchayats, cooperatives, progressive farmers, social workers, MPs and MLAs of the area.

Village level: VLW or Gram Sevak acts as a multipurpose man at village level. Each Gram Sevak is in charge of about 7 or 10 villages. He is in charge of both village and family development. He is guided and assisted by various technical specialists at the block level. He is the last official administrative person in the administrative chain for carrying out this nationwide programme for village development.

As seen, at every level along with the official setup, non-officials participation has also been emphasised. This programme is often called as a "peoples' programme". There is great stress on the peoples' participation not merely in the execution of the programme but also in its planning.

According to Nehru a Panchayat, a cooperative and a school are the three essentials for an Indian village. Panchayats deal with political affairs, cooperatives with the economic affairs and schools with education. With these three village institutions Indian villages are built on a strong foundation.

NATIONAL EXTENSION SERVICES (NES-1953)

NES was implemented from 2.10.1953. This was implemented in the areas which were not covered by CDP, so that entire country would get the benefit of development. When compared to CDP, the NES was less intensive in character.

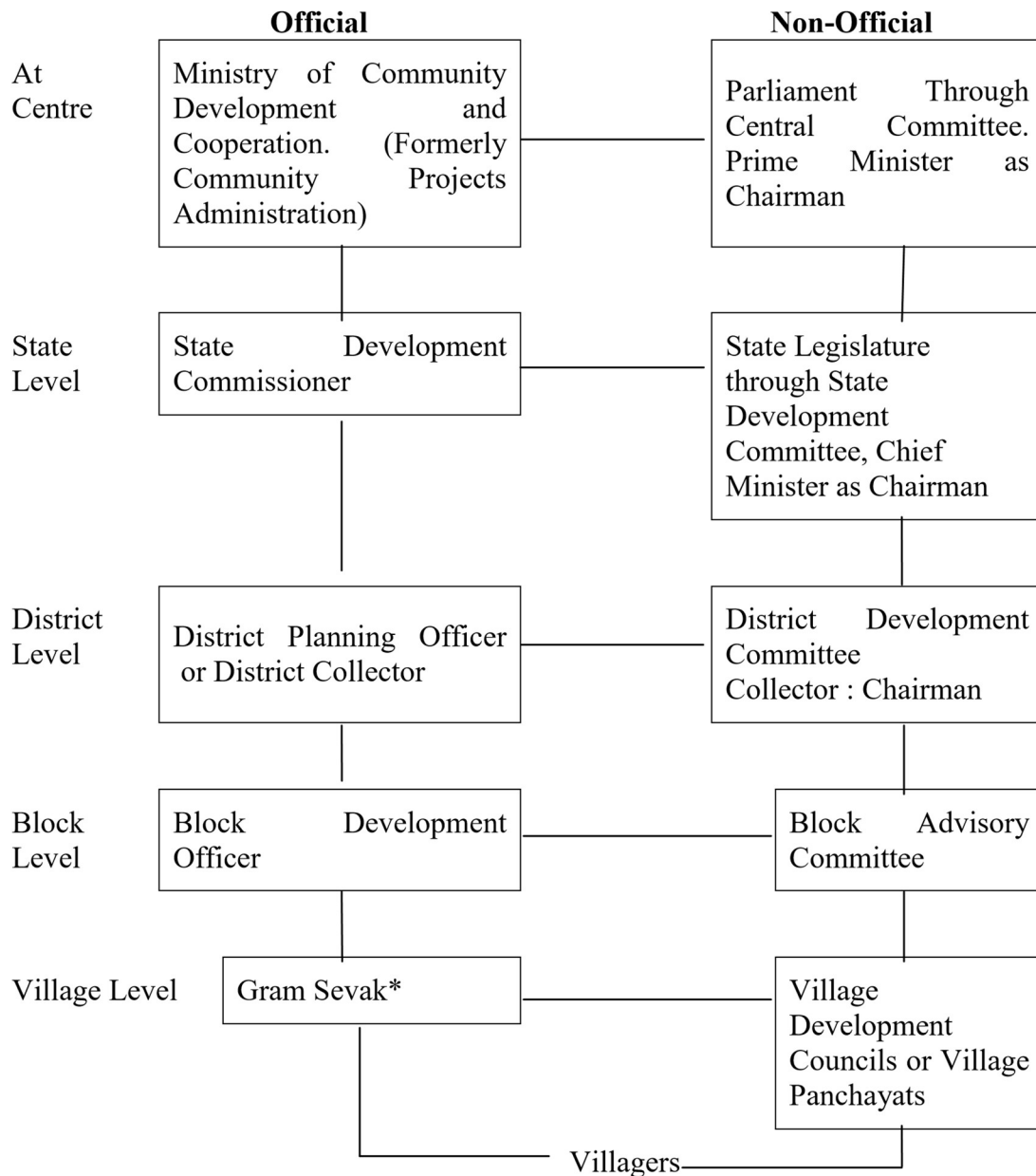
Since CDP and NES had the same basic ideas, they were integrated both at the centre and state. With effect from April, 1958 there was no distinction between CD blocks and NES. All NES blocks became CD blocks was achieved by October 1963.

NES covered almost all the villages in the country; For this national programme apart from the existing system, a new administrative organisation was built. At central level Planning

Commission itself headed by PM acted for direction and coordination of development. It was assisted by an advisory board comprising of secretaries of several Central Ministries concerned. An administrator for CDP was appointed to work under the control of the Central Committee for the overall management of the programme.

At state level, a state development committee under the chief minister was set-up with several ministers as its members. It was assisted by the state level advisory board with development department secretaries. A development commissioner was responsible for management of the programme.

CD/NES ORGANIZATIONAL PATTERN PRIOR TO PANCHAYAT RAJ (UPTO 1.11.1959)



*In Andhra Pradesh, the designation of "Village Level Workers" has been changed as Village Development Officer".

At district level, there was a district development council (DDC), headed by the District Collector. Various district level development officers, as well as non-officials such as legislative etc., direction of development commissioner is responsible for implementing all the projects within the district.

Project advisory committee in the block was headed by Block Development Officer (BDO). Several officials and non-officials are the members of this committee. Blocks were formed with the cutting edge of about 100 villages with an approximate population of 60,000 to 80,000. District Committee to guide and support BDO to implement the multi dimensional development project. The BDO was assisted by a number of extension officers representing agriculture, animal husbandry, cooperative, industries, health, social education etc.

The Block was divided into a number of circles of villages and a multi-purpose village level worker was appointed at each circle to motivate, guide and assist rural people to improve their social and economic conditions. A few multi-purpose women workers (gram sevikas) were also appointed to motivate and help rural women.

The central government provided substantial grants to state governments so as to augment their resources for allocation of funds to each development block. On the completion of first five years of the programme, the planning Commission appointed a high-ranking study team headed by Balvant Rai Mehta, Chief Minister of Gujarat.

This team pointed out both positive results and inadequacies in the implementation of the programme.

The study team made a significant recommendation with implementation of a programme. According to it there should be effective administrative decentralisation for the implementation of the programme. The decentralised administration was to be placed under the control of elected and integrated local self-government system ordinarily of 3 tiered bodies from village level to block level and then to district level. This democratic decentralised system was named as "Panchayat Raj". CDP was by and large bureaucratised management.

OBJECTIVES OF NES

- (i) to change the outlook of village people;
- (ii) to make the people participate effectively in development programmes;
- (iii) to develop village leaders accepted by all; and (iv) to increase the employment and production.

DEFECTS OF CD/NES

- (i) Uneven distribution of benefits;
- (ii) Absence of clear-cut priorities;
- (iii) Lack of self reliance and mutual aids; and
- (iv) Inadequate emphasis on development of cottage and small scale industries and agriculture.

PANCHAYAT RAJ SYSTEM

The realization that peoples' participation is crucial for successful implementation of programmes like CD and NES, was brought to sharp focus through the report of the team for the study of Community Projects and National Extension Service by Balvantray G.Mehta (1957). The Committee observed that one of the least successful aspects of CD and NES work is its attempt to evoke popular initiative and recommended democratic decentralization.

DEMOCRATIC DECENTRALISATION

The word 'democracy' is derived from the Greek 'demos' means 'the people'; 'cracy' means 'rule of'. It is the 'rule of people'. It is governance of the people, by the people, for the people. The rule by majority is an important feature of this programme.

Decentralisation means devolution of central authority among local units close to the areas served. Where authority devolves by this process on people's institution, it is 'democratic decentralisation'.

The State of Madras tried this as a pilot project as early as 1957. Based on the success in this State it was Rajasthan which became the pioneer to bring the whole state under democratic decentralisation on Oct. 2, 1959.

MEANING - PANCHAYAT RAJ

The concept 'democratic decentralisation' was not easily understood by the people. Therefore, as decided by the then Prime Minister the three-tier administration was introduced in the name of "Panchayat Raj". Panchayat Raj means the system of Government. Horizontally it is a network of village panchayats. Vertically, it is an organic growth of panchayat rising upto national level.

Panchayat Raj was easily accepted because it meant administration by mutual consultation, consent and consensus. It fitted closely into the ancient cultural patterns in India.

Three tiers of Panchayat Raj

The Gram Panchayat: The first formal democratic institution under the directive principle in the Indian constitution is the Gram Panchayat or Panchayat. It is the primary unit of local selfgovernment. Panchayat is a cabinet of the village elders, directly elected by the adult citizens of the village.

Gram Panchayats are constituted considering their income, population and area. The income varies from mere Rs.500/- kper annum to more than Rs.2.00 lakhs. The population varies from 500 to 25,000. The panchayat membership varies from 5 to 17. There is provision for reservation of seats for women and SC and STs. The panchayat has a tenure of five years and is directly elected. The meeting is to be convened atleast once in six months. It has income through taxes to perform its functions. The main functions of Panchayats are:

- (i) representative function, where the main role is to voice and represent the opinion;
- (ii) regulatory and administrative functions, which consists of regulating the conduct of individuals and institutions and also collection of taxes;
- (iii) service or developmental function, such as promotion of education, health, agriculture, etc.

The Panchayat Samithi or Panchayat Union: This is the second tier of the administration at Block level. It consists of Panchayat Union Chairman, presidents of all panchayats in the area, local MLAs, MLCs, MPs etc., with the right to vote, but not to hold office and nominated persons. Reservation and cooperation are given for women, SCs and STs and persons with experience in administration and public life.

Block Development Officer is appointed by the Government. He functions as the leader of the Block.

Functions of the Block

- (1) It has to instill among people within its jurisdiction a spirit of self-help and initiative and work for raising the standard of living;
- (2) It has to support for the implementation of development programmes;
- (3) It has the welfare and development activities in the fields of agriculture, animal husbandry, health, sanitation, elementary education, cottage industries and social.
- (4) It has to use the village housing project funds and loans.

DISTRICT DEVELOPMENT COUNCIL (ZILA PARISHAD)

This is the third tier of Panchayat Raj functioning at district level. The members are all Panchayat Union Chairman, District Collector, MLAs, MLCs, MPs of the district with right to vote but not to hold office and

women, SC, ST and persons interested in rural development are also given representation. District Collector leads the work with the help of District Development Officers.

Functions

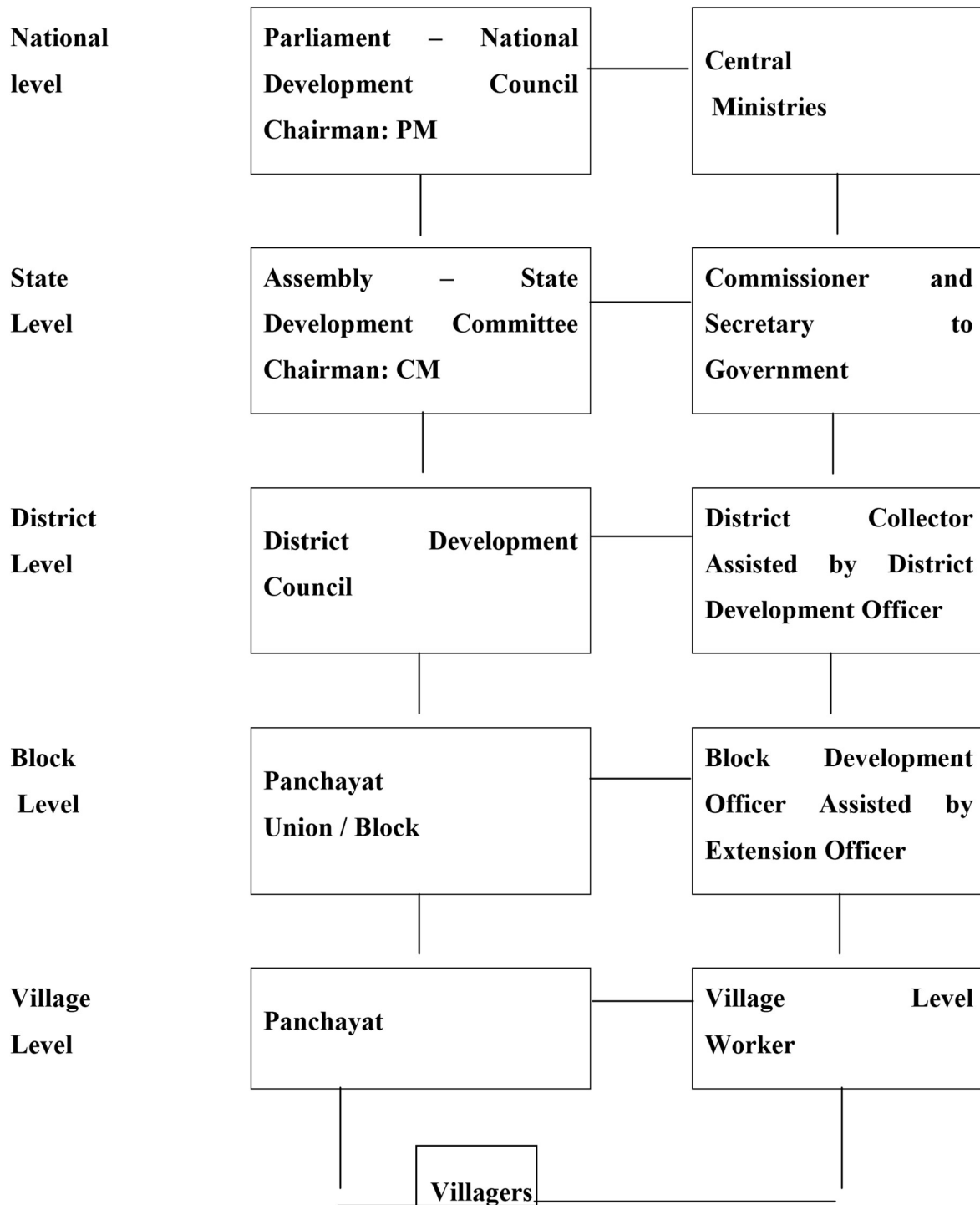
It works as advisory body for blocks. It approves budget and plan of blocks. It allots funds to the blocks. It approves budget and plan of blocks. It allots funds to the blocks. Secondary education is the responsibility of this council. It should advise Government in all matters relating to rural development in the district. It has to review the results achieved under various items in all the blocks.

The functions of Panchayat Raj Institutions can be summarised as below:

	Panchayat		Panchayat Union		District Development Council
1.	Sanitation, conservation and water supply	1.	Administration of blocks	1.	Approval of panchayat union budget
2.	Construction and maintenance of roads, bridges, drains etc.	2.	Execution of all programmes under CDP	2.	Distribution of funds of Panchayat Union
3.	Promotion of agricultural cooperative, cottage industries etc.	3.	Approval of panchayat budget	3.	Coordinating the plans and supervising it
		4.	Management of elementary schools.	4.	Advise the Government for all the district rural development works
		5.	Promotion of agriculture, cottage industries etc.	5.	Secondary education

Extension Organisation in Panchayat Raj Set-up

Level Non-Official Official



SOME SPECIAL FEATURES AND ADVANTAGES OF DEMOCRATIC DECENTRALISATION

- a) Previously the sanction of most of the works and schemes was invested in the hands of officials at higher levels. As a result of devolution of these powers, panchayat samithis and their standing committees can themselves now sanction most of the schemes in the overall programme of community development. Government are also advancing loans to the panchayat samithis so that they by in turn pass them on to panchayats according to needs and the latter may sanction to individuals and institutions.
- b) Most of the functions which were hitherto implemented by the Government through the Heads of Departments are now performed by and under the administrative control of the Panchayat Samithis. Thus, there is a single agency at Block level for all development programmes.
- c) The power and functions of the District Boards are allocated among the parishads and the samithis, which are within the reach of rural people.
- d) Panchayat samithis have all the technical assistance required at the block level itself.
- e) Elementary education is now the sole responsibility of the panchayat samithis.
- f) Rural medical institutions in the Block are under the administrative control of the panchayat samithis.
- g) Members of the panchayat samithis have the right to inspect institutions or works in the Block with a view to ensure efficient working and execution and draw the attention of the executive to any defects.
- h) All state aid and assistance from the All India Boards for various non-official organisations in the Blocks are routed through the samithis.
- i) Personnel functioning within the Block are pooled together so that they function in a coordinated way under the samithis.
- j) The responsibility for maintenance of minor irrigation works which was hitherto vested with Collectors and the Public Workers Department belongs to samithis now.
- k) Panchayat samithis provide financial and technical assistance and supervision to panchayats.
- l) Previously at village, block and district levels, especially the later two levels there were advisory bodies constituted by various departments. Now the functions of all these different advisory bodies are performed by the three statutory bodies and their standing committees.

- m) Block plans will be based on village plans and district plans on block plans, and the district plans will be made the state plans. Thus the state plans will be built up from the village panchayat upwards. This will make out plans truly reflect needs of the people.
- n) Panchayats and panchayat samithis have better finances.
- o) The panchayat samithis are given power to levy surcharges on taxes levied by the panchayats. This will help the panchayat samithis to build up their resources.
- p) The main function of the popular institutions will be planning and execution of all schemes of rural development on the twin principles of self-help and mutual co-operation.

Role of Officials: No doubt that any programme is peoples' programme. Local leaders knew the people and know the local needs and potentialities. However, the officials are the most competent persons to judge what is good for people. So, their roles are:

1. to identify the felt needs of the people.
2. To fix priorities for peoples' needs, with their assistance;
3. To list out the local resources available;
4. To harness available and potential resources;
5. To encourage peoples' involvement in programmes;
6. To develop a community outlook among the people;
7. To educate the people to think in terms of planned development;
8. To mobilise required resources
9. To act as SMS at the time of programme development and implementation; and
10. To assist people in evaluating their progress.

ROLE OF NON-OFFICIALS

- 1) to offer suggestion for block development;

- 2) to arrange priorities for maximum advantage within minimum period of time.
- 3) To organise work voluntarily;
- 4) To raise additional resources, if necessary;
- 5) To execute the plan;
- 6) To assist the official, in evaluating the progress of the programme etc.

SOURCES OF INCOME FOR PANCHAYAT RAJ INSTITUTIONS

The main source of income is from Government grants. Some income are also derived from local taxes on property and profession or trade, etc. Some revenue kare also accrued from surcharges or cesses on land revenue, water rates, etc. Income are also received from fees for local services, and rent or income from owned land and property. On the whole most of the Institutions have meagre incomes from taxes and other local resources. They are mostly depending upon the Government grants.

SALIENT FEATURES OF PANCHAYAT RAJ ACHIEVEMENTS

- (1) Panchayat raj system gave significant progress in the fields of primary and secondary education, communication, agricultural extension, cooperation, health, etc.
- (2) People could get drinking water. In some places people had protected water supply. Village streets, electric light provision, village sanitation, etc., had enough resources.
- (3) Rural awakening was brought up among rural people, as a result villagers became conscious of their rights and improved their standard of living.

SHORTCOMINGS AND FAILURE

- (1) Panchayat raj representative had a feeling that there is a dilution of their authorities and responsibilities in actual functioning.

- (2) There were cases which utilised directly the services of block level technical staff without involving the non-official.
- (3) Frequent transfer of staff gave poor image to the bodies.
- (4) Failure to mobilise resources to the extent necessary.

INNOVATIVE INFORMATION SOURCES CYBER EXTENSION IN RURAL DEVELOPMENT

Information is an important resource in modern agriculture. The development of computers and improvements in telecommunications offers farmers and extension workers, many new opportunities to obtain technical and economic information quickly and use it effectively for their decision-making. The modern farmer is an entrepreneur who tries to grow right crops and animals in the most profitable way. The amount of information a farmer can and should use for his management decision is increasing rapidly. Previously the mass media gave generalized advice to farmers, but with modern Information Technology, extension can provide for each farm and farmer without visiting the farm personally. The following are few modern information technology flows.

1. View data:

This transmits the information from a central computer by telephone line to the screen of a home television set or a computer. The amount of information the system can store is limited only by the capacity of its computer. The farmer interacts with the central computer containing the database. He can request the computer to make certain calculation by combining information from the database with information from his own farm.

2. Tele text:

It is a system somewhat like view data in which printed information is telecast through television rather than transmitted through a telephone line. It has no interactive capacity and it has a very much smaller database.

3. Micro Computer:

Through a microcomputer on the farm, the farmers can process accounts and data from their farm

production. Many extension agents in industrialized countries now have microcomputers and can make similar calculations for farmers.

4. Net work system:

Net work system in which view data is connected with the microcomputer of the farmers or extension agents. This makes it possible to use data or computer programmes from view data in the microcomputer or to process data from the farm in the view data mainframe computer, which can accommodate more complicated models than a microcomputer. These network systems become important between farmers and their suppliers and customers. They can also be used for extension information when they have been installed for that reason.

5. E-Mail

E-mail is the short form for electronic mail, which is based on the use of computers for the transmission of messages rather than through the postal system. The E-mail system connects a network of personal computer (PC) spread over the globe. A PC is set up as a message server in the system. The users at other PCs can link up with the server at any time to receive and transmit messages.

Each user to the E-mail system is allocated a look number or address in the E-mail directory. To send a message, a user has to "key-in" the message in his PC along with the directory numbers allotted to him and the receiver of the message. The sender can indicate if the message is confidential or universal and set a time limit for its retention. The receiver on receiving the message is his/her computer terminal can get it printed on paper.

The main advantages of E-mail are that it cuts down the delay involved in postal transmission of messages. Moreover, messages can be sent at any time of day or night which are stored and can be retrieved by the recipient at his or her convenience. Besides, once the contact between the transmitter and receiver PCs is established E-mail requires only a few minutes time to transmit even if it is a bulky message.

6. Fax (Or) Facsimile

It is a device used for transmission of a written document, photograph, map or any other graphic, material electronically. It is one of the variants of E-mail. For transmission, the original documents placed in the facsimile or fax machine which scans the document and converts the written or graphic information into electronic signals and establishes a link up with a similar receiving fax machine at the receiving end. The receiving fax reconverts the electronic signals into written or graphic form. As the sending machine scans the documents, the receiving machine reproduces the scanned image, which is an exact duplicate of the originals.

A typical fax machine can transmit a document of A4 size in less than a minute over thousands of kilometers. Since fax operates through the normal telephone lines the fax number is usually a telephone

number. In addition, the same STD and ISD codes are used for sending a fax to another city or another country. The document is scanned page by page in the fax machine. Like the E-mail, fax communication eliminates the postal delay and is very convenient for communication between persons located in different time zones, but it costs more than the E-mail.

7. Internet

The Internet is a network of networks, the international linking of tens of thousands of business, universities, and research organisations with millions of individual users. The Internet is a global electronic community of over 50,000 interconnected computer network, which means more than 50 million people are linked together, computing on what has been aptly termed as the "information super highway". Internet has added a new dimension to our existence by placing within easy reach an overwhelming range of information. It gives each of us the option to be a publisher of our information and views.

The Internet offers a wealth of business opportunities. More and more business firms are advertising their services to customers on the Internet. The Internet is a source of up-to-date information and assistance too, related to business, stock market, education, research, medical advances etc., Many organisations also set up an "Internet". This is a network used on the Internet to communicate and share information across the organisation.

8. Optical Communication Technology

Use of light waves for communication purposes gave rise to the modern technology of optical communication. In this new method, optical fibers that are very thin, long stands of ultra purity glass are being used to link the transmitter and the receiver. Information in the form of a series of light pulses produced by small semiconductor lasers is passed through such fibers. At the receiving end these light pulses are converted back into original information using appropriate detectors and decoders. Human voice, TV pictures and computer data can be transmitted and received with great ease and convenience using optical fiber communication techniques.

9. Cellular Mobile

It is popularly known as car telephone, and this service allows two-way communication between a mobile or fixed telephone and another mobile or fixed telephone. All standard facilities like STD, ISD, Fax etc., are available with mobile phones. The mobile phones need not be fixed to an ear but if the set is portable, one can carry it wherever he moves.

10. Radio paging

It is called as poor man's cellular telephone, facilitating one way mobile communication to users. A person carrying a pager can be contacted while he or she is on the move, by his office or even others. If one

gets a message on his pager that he was required and should call up the number, which flashes, on his pager, all one needs to do is to go the nearest public call office and establish contact with his office. In fact an extensive page-phone networks, in conjunction with radio paging, is a good substitute for cellular network. The pagers are particularly useful for professionals on the move.

11. Very Small Aperture Terminal Technology (VSAT) service

This service provides satellite-based network for business communication using the cost effective VSAT technology. All it does is to link head office of company or a corporate house to its various locations like factories, service units and other offices particularly those located in remote areas, using satellite network. Such networks are called Closed User Group (CUG) network. Besides high-speed data transmission from one location to another, people can even talk on the network.

12. Electronic Data Interchange (EDI)

It enables two organisations usually a customer and supplier to exchange routine documents such as purchase orders and invoices using standard electronic forms and their own computers linked through a service provider. It is faster. Cheaper and reliable means of exchanging export documents. It works on internationally accepted protocols and facilitates quicker exchange of documents.

13. Voice mail

If one wants to enjoy the benefits of telephone, without actually owing one, he should subscribe to voice mail. Get a voice mail address (similar to a telephone number) and he can get all his calls on that number. In the evening or any given point of time he can access his mailbox, from any telephone to see (or listen) if there is any mail waiting for him. It is just like owing a postbox in the post office.

14. Video Conferencing

Holding a conference with one's foreign partners or addressing a press conference in four different cities without travelling long distances has become a reality with the advent of video conferencing. All one has to do is to go to the studio of the service provider at the appointed hour and hold a videoconference, through satellite links, within India or abroad. Such a system cuts travel costs and time for executives of top companies.

KISAN CALL CENTER (1800-180-1551)

The country today has an impressive telecom network both in the private and Government sector. Over 5 lakh villages have a public telephone in the country. It has been felt for long that this impressive telecom network could be put to effective use for delivering knowledge and information to the farming community. A

call centre based extension service will be delivering knowledge and information exactly as per the requirements of the farming community. This system would also help to keep a record of what is being delivered to the farmers in terms of knowledge and information. The Kisan Call Centre scheme is available throughout the country. The Kisan Call Centre scheme has been functioning from 21.1.04. **The Call Centres can be accessed by farmers all over the country on common Toll Free Number 1800-180-1551.** Since 10th June, 2004, the Call Centres service has been made available right from 6 A.M. to 10 P.M. except on Sundays and gazetted holidays, beyond these hours the calls are attended in the voice recording mode.

KISAN CALL CENTRE – Concept

The challenges before Indian Agriculture are immense. This sector needs to grow at a faster rate than in the past to allow for higher per capita income and consumption. About two thirds of workforce directly or indirectly dependent on agriculture. This sector generates about 28 percent of its GDP and over 15 percent of exports. Rising consumer prosperity and the search by farmers for higher incomes will simultaneously drive crop diversification. Export opportunities for agricultural products are also expected to continue to grow, provided India could meet the stability, quality and presentation standards demanded by foreign trade and consumers and maintain its comparative advantage as a relatively low cost producer.

Given its range of agro-ecological setting and producers, Indian Agriculture is faced with a great diversity of needs, opportunities and prospects. The well endowed irrigated areas which account for 37 percent of the country's cultivated land currently contribute about 55 percent of agricultural production, whereas, rainfed agriculture which covers 63 percent accounts for only 45 percent of agricultural production. In these less favorable areas, yields are not only low but also highly unstable and technology gaps are much wider as compared to those in irrigated areas.

If it is to respond successfully to these challenges, greater attention will have to be paid to information-based technologies. Both technology generation and transfer will have to focus more strongly than ever before on the themes of optimization in the management of their available resources by producers. In order to make information transfer more effective, greater use will need to be made of modern information technology and communication among researchers, extensionists and farmers have to be utilized.

Public extension system requires a paradigm shift from top-down, blanket dissemination of technological packages, towards providing producers with the knowledge and understanding with which they solve their own location - specific problems. Continuous two-way interaction among the farmers and agricultural scientists is the most critical component of Agricultural Extension.

At present, the issues have been addressed by the Extension Systems of State Departments of Agriculture, State Agricultural Universities (SAUs), KVKs, NGOs, Private Extension Services through various extension approaches in transfer of technology. With the availability of telephone and Internet, it is now possible to bridge this gap to quite a large extent by using an appropriate mix of technologies.

The Department of Agriculture & Cooperation, Ministry of Agriculture, Govt. of India has launched Kisan Call

Centers with a view to leverage the extensive telecom infrastructure in the country to deliver extension services to the farming community. The purpose of these Call Centers is mainly to respond to issues raised by farmers instantly in the local language, on continuous basis.

Details of the Scheme:

1. The Indian Agriculture is on the threshold of a second revolution. It is becoming increasingly clear that the next leap will come from the information and the knowledge transfer to the agriculture sector, together with the other traditional inputs and interventions. The real challenge before the policy makers is to overcome the information asymmetry between farmer and farmer, village and village, region and region and the country as a whole versus other countries. Fortunately, the developments in the field of communication and information technology in India make it possible to attempt this task.
2. The country today has an impressive telecom network both in the private and Government sector. Over 5 lakh villages have a public telephone in the country. It has been felt for long that this impressive telecom network could be put to effective use for delivering knowledge and information to the farming community. With the limited number of extension workers, there is a need to use the latest technologies for delivering extension services. Towards this, the Department of Agriculture and Cooperation has been working on schemes to use both Mass-Media and telecom network for the delivery of extension services.
3. One of the draw-backs experienced in the current human resource based extension service has been that the monitoring authorities are not able to get a clear feed back on the quality of extension services being delivered in the villages. On the other hand a call centre based extension service will be delivering knowledge and information exactly as per the requirements of the farming community. This system would also help keep a record of what is being delivered to the farmers in terms of knowledge and information.
4. The objective of the scheme has been to make agriculture knowledge available at free of cost to the farmers as and when desired.
5. This scheme has an in-built system of monitoring and continuous evaluation for modifications and improvements. The services are also of a foundational nature. Many more exciting tiers will be built on this infrastructure.
6. The Kisan Call Centre scheme is available all over the country. At present the Call Centre services are available at a common toll free telephone number which can be dialed from anywhere in the country. The location is immaterial as the calls can originate from any village to land at a specific call centre and a specific seat which would be answered by an agriculture graduate knowing the local language and having an understanding of the local agricultural issues.

7. The call centres as operational today have been selected on the basis of a tender document which was floated by TCIL, a Govt. of India Company which was appointed by Department of Agriculture & Cooperation as the consultant.
8. The Kisan Call Centre scheme has been functioning from 21.1.04. The Call Centres can be accessed by farmers all over the country on common Toll Free Number 1551.

The calls are received at 13 Call Centres wherein 116 Agriculture Graduates attend to answer the queries of the farmer in the local language. 123 experts located in different parts of the country at State Agriculture Universities, ICAR institutes, State Department of Agriculture, Horticulture and other developments are answering the calls at Level –II.

New Initiatives:

1. Since 10th June, 2004 the Call Centres service has been made available right from 6 A.M. to 10 P.M. except on Sundays and gazetted holidays, beyond these hours the calls are attended in the IVRS mode.

Operational Mechanism

The Kisan Call Center is a synthesis of two hitherto separate technologies namely, the Information & Communication Technology (ICT) and the Agricultural Technology. To optimally utilize the strengths of both these systems, it was proposed to take full advantage of professionally managed Call Centre mechanism and dovetail it with the specialized knowledge of Agricultural Scientists and Extension Officers, so as to facilitate its reach to the farming community. Accordingly existing specialized infrastructure of Call Centers (which are normally industry-driven and serve to high-end and many a times, mission critical service sector) are made available to the Subject Matter Specialists of Agriculture, Horticulture, Animal Husbandry, Marketing and other related areas. The Kisan Call Center, consists of three levels – namely **Level-I** (the basic Call Center interface, with high quality bandwidth and local language proficient Agriculture graduate), **Level-II** (Subject Matter Specialists on concerned important crops and enterprises, connected through good bandwidth telecom and computer connectivity) and **Level-III** (the Management Group to ensure ultimate answering and resolution of all the farmers' queries which are not resolved at Level-II, connected on off line mode).

Level –I: The call coming to the call center is picked up by an operator (level –I functionary) who after a short welcome message takes down the basic information and the query of the caller. These details are fed into a computer located next to the operator by the operator himself. At the first level, receiver of the call would also feeds into the computer the question being asked by the farmer.

The first level operators preferably would be an agricultural graduate with rural background knowing local language. They should also possess good communication skills. They would be in a position to answer a majority of the questions likely to be asked by the farmers.

Level-II: The level –II consists of Subject Matter Specialists (SMS) who are located at their respective place (Research Stations, ATICs, KVKs, Agricultural colleges), of work. In case the first level operator is not able to answer the question, the operator forwards (in call sharing mode) the call to the concerned Subject Matter

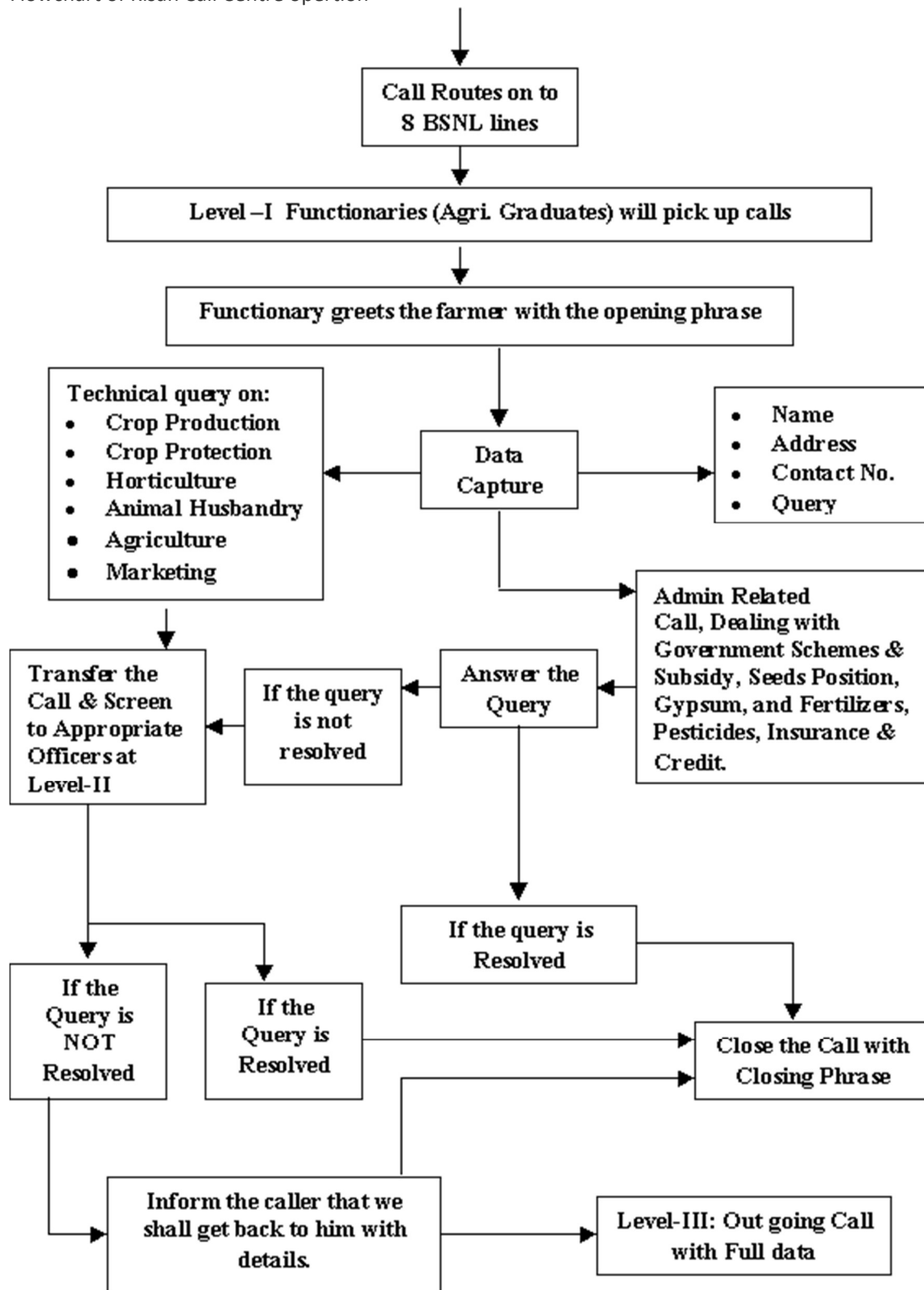
Specialist. The data relating to the caller including the question asked is also be transferred to the Level-II functionary on his computer along with the call. Hence, when the specialist takes the forwarded call, his computer also shows the data and question asked so that there is no repetition. It is envisaged that in normal cases, the entire spill over questions from the first level get answered at this level. In case, it is not possible to answer, there is a system to revert back to the caller by post / fax / e-mail or by telephone in 72 hours. While selecting the specialists, it would be important to first identify the major crops in that state and the issues on which the questions are likely to be asked. These specialists should be such that they will answer most of the questions that are likely to be asked. There could be two options available on the selections of the specialists.

One option could be to select commodity wise specialist, that is, every question related to a particular crop or commodity would be directed to that specialist, who would in turn answer that question. Other option could be to select general specialists who would deal with various subjects likely to arise. The specialists should ideally be located within a city. They should have good communication skills and should know the local language. These specialists should have at least a minimum of 10-15 years of field experience in their respective specialization.

Level – III: The level –III consists of a dedicated cell located at the Nodal Office. This would receive the questions that have not been answered at the first and the second levels. Appropriate replies to these questions would be then framed in consultation with the concerned specialists available within or outside the State, by the nodal cell. The replies would be sent to the farmers promptly by post/e-mail/fax/ telephone etc. within 72 hours of receipt of the question. **Knowledge Management System**

1. The Knowledge Management System is a software tool which has been developed by the Telecommunications Consultants India Ltd. (TCIL) a Government of India enterprise. The Kisan Call Centre shall be accessible on identified telephone number will provide all technical assistance to the caller and will record the queries along with the personal details.
2. The Knowledge Management System shall be supported by the data base built up using the asked questions and their answers. The Kisan Call Centre report generation software will be provided the user interface forms in which the call Centre Agents has to put the parameter according to which he want the report to get generated. The report/data generated like date wise, crop wise, location wise, district wise, state wise, problem wise, level wise, call type wise, All India level wise will be available at the users end. The data generated through this Knowledge Management System will be available on internet after hosting.

Flowchart of Kisan Call Centre operation



List of Kisan Call Centers

KCC Location	
State / UT	
Uttar Pradesh	Kanpur
Rajasthan	Jaipur
Jammu Kashmir	Jammu
Haryana	Chandigarh
Punjab	
Himachal Pradesh	Shimla
Jharkhand	Ranchi
Bihar	Samstipur
Orissa	Bhubneswar (Kolkata)
Karnataka	Bangalore
Tamilnadu	Madras
Andaman Nicobar	
Uttrakhand	Dehradun
Assam	Guwahati
Andhra pradesh	Hyderabad
West Bangal	Kolkata
Chattisgarh	Raipur
Kerala	Trichur
Lakshadeep	
Goa Daman Deu	Vanamati Nagapur
Maharashtra, Goa and Daman Diu	

CAPACITY BUILDING OF EXTENSION PERSONNEL AND FARMERS TRAINING FOR DEVELOPMENT

Training has become an inseparable part of HRD. It has become one of the components, which enables any institution to churn out its employees as the most productive and most suitable ones.

Training – Definitions

1. Training is the art of increasing the knowledge and skill of an employee for doing a particular job.
2. Training is a learning process, which seeks a relatively permanent change in behavior that occurs as a result of experience.
3. Training is the process of aiding employees to gain effectiveness in their present or future work through the development of appropriate habits of thought, action, skills, knowledge and attitude (Milton Mall, 1980).
4. Training is the process of changing employee behaviour, attitudes, or opinion through some type of guided experience (Krietner, 1989).
5. Training is a systematic process of changing the behavior, knowledge and or motivation of present employees to improve the match between employee characteristic and employment requirement (Milkovich and Boudreau, 1998)

Need for training

The process of training has caught up mainly in industries. This can be attributed to the sudden and competitive change that is occurring in the world. However, the needs for training can be fixed down to the following:

1. Rapid changes in technologies and jobs people do.
2. Immediate and long term skill shortage
3. Changes in the expectation and composition of work force
4. Competition and market pressure for improvement in quality of products and services.

Training Process

In case of training, the focus will be on a person-on-the job-in the organization. Whereas in the case of training process, the focus will be both at the starting point and at the end with difference. The application of what a person has learned during training process is called the effectiveness of training.

The training process has three phases as follows:

1. Pre-training
2. Training
3. Post-training
4. **Pre-training phase**
5. Pre-training process starts with understanding the situation, which calls for behavior that is more effective.
6. Key aspect of the process is analysis of situation and job on which improved performance is to be achieved.
7. Pre-training begins with description of the job to be changed by it.
8. The technical requirement of the job is not enough but also knowledge on operational description of the job is required so that the training programme can be designed to meet out those requirements.

9. The second aspect is the organization's receptivity to more effective behaviour of the trained people. How far the organization would respond to the change in knowledge and skill of the trainee after he returns from training is also to be considered.

10. Who feels the need for this new behaviour? Is it his immediate superior of the organization itself or the trainee himself has to be taken into account for an effective training programme.

11. Training phase

12. Most of the training programmes would be for a session or an evening course or a residential program.

13. In the training program, the trainee is exposed to a new subject matter, new people, new atmosphere and the participant would be at unease for a while, later when the subject which would be useful and stimulating is taught the participant would focus his attention on the subject of his interest and would be in line with other participants.

14. There would be several questions in his mind, such that he is lacking, the skill required for his job or is it an opportunity given for his sincere work in the organization or is it a plan of the organization to keep him away from the organization so that it would implement the programme which he had strongly opposed.

15. With all such questions in his mind, there will be no guarantee that the trainee will learn what he has chosen to learn. His mind would deviate and he would learn something of his interest from the training program provided. This error in selection would be due to the lack of necessary capabilities of the trainee or irrelevant training design and methodology followed by that training institution etc.,

16. Finally after overcoming all the hurdles in the initial stage of training programme, the participant would explore in training situation what interests him the more. After exploring, if he finds it useful he tries it again and checks for its effectiveness and satisfaction. There would be several trials repeatedly.

17. If he is satisfied with the results, he decides to incorporate it in his organization, but if he finds it to be not useful he discards it and tries some other variant, in some cases he may discontinue his learning.

18. Post-training phase

19. Here the situation changes, the participant goes back to his work place, meets his colleagues, family members etc. He goes prepared with some anticipations, as he had been away from them for a while and also had come back learning some new ideas.

20. Newly learned skills undergo modifications to fit in with the work situation. If the organization were encouraging and helping, the participant would use his training for the betterment of his organization. Some organization would offer support to the participants to have contact with the training institution even after the training program.

21. On the other hand, if the organization resented his absence and if his table is loaded with work, he would feel extra burden and would work to make up for lost time. He would loose his interest to make use of his training and the contact with the training institution is also broken off.

Training process – models

There are several models for training processes, of which there are three important models.

- 1.Simple model of training process
- 2.Elaborated model of training process
- 3.Spiral model of training process

Training Strategy

Effective training calls, in the first place, for clarity of objectives and means. In that respect it is just like a manufacturing process, both the ends and means must be appropriate to the purpose. Relating them demands clear specifications for each part of the training task, including the resources of time, skill, and facilities required for it. Ensuring this is a responsibility of the first order.

It is necessary to consider four strategic questions, which shall be examined in turn. The first and second are of external strategies,

1. Establishing training goals
2. Defining training specifications
3. The next two are outcomes of internal strategy
4. Organizing the training inputs and
5. Improving the training institution

I. External strategy

External strategy is concerned with two kinds of questions. The first is what are the training goals, that is, the changes to be effected? The second is, that are the number and kinds of people who therefore need to be trained and resources of time, skill and facilities required for this particular training.

1. Establishing training goals

Training institutions don't set any goal. They set tasks to work on goals which training can help to reach. Two strategic questions are asked in establishing training goals. 1. Are the goals realistic? and 2. Is the training input envisaged in the development - also realistic? There are two steps before setting up the training course. 1. After a change is decided, is training that much necessary? and 2. Defining the part that training can play in change.

DESIGNING EXTENSION TRAINING PROGRAMMES

While a training plan provides a structure for training, the design of a training programme provides its content. A training plan provides broad parameters within which training is required to take place in accordance with the assessed training needs of extension personnel within the frame work of extension training policy. The design of the training programme operationalises the training plan and provides actual

training. A well designed training programme will go a long way in ensuring success of training intervention. As a corollary, an ill-designed training programme is deemed to be a failure. The following are the steps in designing a training programme:

A. Objectives of training programmes

The first step in the design of a training programme is a clear statement of the objectives of the training programme. These objectives have to be based on the Training Needs Assessment (TNA) of extension personnel and stated, in order of priority, from general to specific objectives. These objectives have to be stated in terms of knowledge, Skills, Attitudes and Attributes, which the trainee will gain at the end of the training programme.

A clear enunciation of objectives of training programme will enable the trainees to have a clear idea as to what should they expect from training.

At a simple level of treatment the objectives of a training programme fall under two categories, namely, General behavioural objectives, and Specific Behavioural objectives. Both types of objectives are required to be stated in the objectives of a training programme.

At a more sophisticated level of treatment, following the Bloom's taxonomy of educational objectives, the training objectives can be classified into three classes of Cognitive Objectives, Psycho-Motor Objectives, and Affective Objectives, and their sub-classes.

If the design of a training programme is conceptualised to consist of (a) objectives, (b) learning experience and (c) evaluation, then the objectives provide the base upon which subsequent edifice of learning experience and evaluation could be built and hence their importance in the design of a training programme.

B. Skill - Mix

The second step in the design of training programme is determination of appropriate skill-mix for different levels of extension personnel.

Katz postulate three types of skills for a manager, namely (i) Technical Skills, (ii) Human Skills, and (iii) Conceptual Skills as proposed by Misra (1990) .

Fig.36. Skill mixes for the different levels of Extension Personnel

Source: Misra, D.C. (1990), New Dimension in Extension Training

For example, field-level personnel like Village Level Extension workers and Agricultural Extension Officers require technical skills in ample measure, human skills in fairly good measure and conceptual skills in moderate measure.

C. Curriculum Development

The next step in the design of a training programme is development of appropriate training curriculum. Curriculum is required to be developed for two reasons. Specific curriculum is required to be developed for a specific training course which is organised in response to assessed training needs of extension personnel which emerges out of the changing needs of farmers. Since no ready made curriculum exists for the purpose, specific curriculum is required to be developed for a specific training course which has a specific target group. Its challenge lies in the fact that it is interdisciplinary. Curriculum development is required to anticipate future

needs.

Components of a Standard Curriculum

Course objectives

Achievement Targets

Course Structure

Assessment

Course Contents

CONDUCTING AN ACTIVE TRAINING PROGRAMME

A training program can be totally successful only if effective exercises have been worked out previously. Attention should be paid on the physical setup, rapport building and content of the program. Programs that look gorgeous on paper are worthless if the trainer doesn't have delivery skills to carryout the design requirements.

Steps to conduct an active training programme :

1.Preparing yourself mentally

Feeling comfort with the course content

Thorough preparation well in advance

Preparation of material activities for training program

Course materials, manuals, rooms, audio visual equipments etc. and get connected with the participants

If a question is asked and you do not know the answer give it as a group exercise; another way is to write them down and promise to find the answer.

Repeating a course may be a bored one to the trainer but not to a new trainee - Focus your attention on the participants and not on oneself and make opportunities to learn from their experience through discussions.

2) Arranging the physical environment

The physical set up at first the participants receive will create permanent impressions of the program.

The seating arrangements should depend on many factors like number of participants, method of speech, and the like.

In case the program has little of writing work, the participants can get rid of tables and they can arrange the chairs to their comfort.

In other case, if small subgroups should be formed, care should be taken to leave enough space so that one group does not disturb another group.

A well-known arrangement is horseshoe type. This can be modified into a square or a circle. All these arrangements favour group discussions with face to face contact with each participant.

These arrangements can be formed with the help of the participants themselves for their own comfort.

3) Greeting participants and establishing program

The best and most desired start is a good welcome address. The trainer should be able to reach the mind of

each person, make each feel good in the new situation, allow his feelings to flow without any hesitation. Hence a trainer should ensure that his program should have a good greet and hence to build rapport with the participants.

A short refreshment before the actual training enables participants to mix well among themselves. Trainer himself can build relationship by knowing their names and making them feel comfortable. During the opening session he/she should introduce the participants to each of them and he himself should be introduced with a touch of un boastful higher knowledge.

There are number of wordings which can be addressed. To mention a few 'I have got something for you' This should make a feeling among the participants that they have a person with much greater knowledge and experience to his credit.

"I've been through this too"

This makes a 'we' feeling among the participants and the trainer. The participants feel that the trainer can understand one's problems and this workload so this helps to bring out their own experience in this field.

"I admire you"

This greeting puts the participants on a higher stand. This is the way one can express one's admiration over the participant's qualities and deed. It may be on very simple actions of theirs but such an admiration heartens the people to a much higher extent.

4. Getting the best from the first 30 minutes of trainers

The first 30 minutes of any classroom period is the most crucial period which a trainer should not trample upon. It is called the 'grave period' according to Napien and Gershenfeld (1983) during which any over hostility or antagonism will be submerged under a veneer of politeness, watchfulness and reserve. It is during this time that the participants perceive what role they expect to play during the training program, what they intent to accomplish during the course.

Begin the class at the time intended without creating impatience among the participants, once competence should be made known to the members. One should make himself compatible with the group and create trust. The trainee should be clear on what activities are there for the participants and how and when they can get connected to their home town.

5. Reviewing the agenda

In the beginning moments of the program, one should be made clear of what is going to be done i.e., What is expected of the programme and What is expected of the participants. The training objectives should be given in writing and these should be explained clearly. The list of what is to be accomplished should also be presented. They should be informed of how the program will be done with indications of the stay place, food arrangements, telephone messages etc. A content outline and a description of the activities designed should also be given.

6. Inviting feedback

After reviewing the agenda, one must not fail to get the feedback on the agenda. This gives the participants an opportunity to give their views or to tell what they expect more of the programs. The simplest approach is to ask directly "Does this m match what you hope to gain from this program?". "Is there anything you would like to add to it?".

The feedback helps the trainer to change his program if feasible to the requirements of the participants and remains compatible with them. Otherwise, the programme will be a waste with a content not interested to the participants.

After all these steps, one can readily and confidently enter into the actual training programme.

ASSESSMENT OF TRAINING NEEDS

Training Need

Johnson (1967) defined training need as matching in terms of what is going on now and what should go on now (or) in the future and the gap if any, between these two gives due insights into the kind and amount of training need.

David Deshler (1979) identifies four dimensions of need, four ways of viewing need. The first is felt need, the view from the perspective of the needers when asked what they want. The second dimension is expressed need, the need that people express when they sign up for, pay for or participate in services. The third dimension is normative need.

This is the option from the perspective of experts or public policy. And, the last is comparative need, an inequity in the availability of services, all other things being equal.

Dugan Laird (1978) a well known training expert, commented that a training need exists when an individual lacks the knowledge and skills to perform an assigned task satisfactorily.

Training Need Assessment

Before organizing training programme it is necessary to determine correctly the training needs of the group of personnel. The training needs may be determined in three ways.

First, from an analysis of organisational change, the organization must change if it is successfully to meet new conditions and so must the operations conducted within the organisation, 'this means that the people who operate the systems, procedures and role of the organisation must be trained to accept new jobs and new skills.

Second, from analysis of work problems as inefficiencies and problems within the organisation indicate that the worker has been inadequately trained. Thirdly, training needs can be derived from an analysis of manpower wastage data.

Comparing the performance achieved in the job with the performance demanded by the job needs can derive the individual training. If the worker's performance is less than that demanded by the job, then a potential training need has been

revealed. Training needs could be in the areas of skill, knowledge and change in attitudes.

Individual requires training to overcome problems as well as to avoid creating problematic situation in the organisations. It has been observed that most of the problematic situations are people-centered. When individuals have to learn new skills, replace incorrect habits with productive habits, modify attitudes and acquire additional knowledge, training is one of the best management tools available.

PRINCIPLES INVOLVED IN PLANNING AND CONDUCT OF TRAINING PROGRAMME

Training in an organisation is essentially a learning process in which learning opportunities the managerial purposefully structures, personnel and training staff, working in collaboration or by external agents acting on their behalf.

The aim of the process is to develop in the organisation's employees the knowledge, skill and attitudes that have been defined as necessary for the effective performance of their work and hence for the achievement of organisational aim and objectives by the most effective means.

Table 13.Components and sub-components of Training

Sl.No.	Component	Sub-Component
1.	Knowledge (K)	Knowledge of Extension Methods
		Subject Matter Knowledge
		Knowledge of Clients' Problems and their Solutions
		Knowledge of Farms, farm Families, and Farming Systems, and
		Knowledge of Farm Economics, Inputs Supply and Marketing
2.	Skills (S)	Communication Skills
		Technological Skills
		Demonstration Skills
		Organisational Skills
		Training Skills, and
		Diagnostic Skills
3.	Attitudes (A)	Attitude for Serving Clients
		Attitude for Acquiring Latest Knowledge and Technical Know-How
		Attitude for Problem - solving
		Attitude for Field Work, and
		Attitude for Self-Development
4.	Attributes (Os)	Personality Traits
		Conduct
		Empathy
		Experience, and
		Self-Development

Training Objectives

Any programme whether it be training or extension work should have objectives which are to be achieved. There are four types of objectives which are as follows:

Level	Type of objectives	What it should tell us
I	Policy/organisation	General direction of efforts, order of priorities
II	Target	How much is aimed
III	Operational objectives	Who has to do, what in order to attain the targets (in terms of clientele)
IV	Training objective	Who are the learners and what learning products are required

Principles involved in Training

Training should be based on the Principles of,

1. Achievement of organisational objectives
2. Training need assessed
3. Training objectives - Expected learning behaviour
4. Flexibility
5. Level of the learners
6. Past experiences - existing knowledge
7. Co-operative / Collective process-active participation of learners
8. Teaching - learning process
9. Continuous process
10. Informed options - alternatives
11. Learning varies from individual
12. Individual creation of learning environment

Building up of a Training Programme

Any programme whether it be extension activity / Training activity, it has the following activities.

Trainer Roles

The various trainer roles can be seen in three distinct phases : pre-training, training and post-training.

a. Pre - Training

1. Training Designer

The role of identifying and translating learning needs into objectives, content and designing the programme.

1. collecting and identifying learning needs
2. listing objectives
3. working out related contents/methods/materials/exercises
4. sequencing the contents/activities
5. identifying resource persons
6. preparing and selecting learning materials

2. Administrator/Organiser

The role of ensuring and meticulously planning in advance the facilities, learning materials, required equipment, participants and other related components of the training event and the coordination of the programme logistics.

1. choosing venue and time
2. selecting and scheduling facilities
3. regularly communicating with the trainees regarding the programme plans
4. identifying and arranging the needed support system at the training venue
5. scheduling the time of co-trainees and resource persons
6. distributing training materials
7. arranging resources

b. During Training

1. Facilitator

The role of guiding the learning process so that individuals learn from each other and the group functions effectively.

1. eliciting opinions
2. enhancing participation
3. focusing trainees' attention on their potentialities
4. summarising and synthesising information
5. organising groups such that issues and needs are addressed
6. intervening in the process

2. Instructor

The role of presenting information and concepts, clarify objectives, creating and sustaining a structured learning environment and helping generate new learning.

1. providing information and concepts
2. directing structured learning - role-plays, simulations, games and discussions
3. using learning aids - films, audio-tapes, video-tapes and other materials

3. Counsellor

The role of supporting and guiding individual trainees during periods of stress and strain and helping trainees to assess their potentialities and personal competencies, so as to enable them to reflect, grow and change.

1. developing a rapport with trainees
2. showing genuine interest in directing their process of growth
3. communicating on a one-to-one basis

4. organising sessions to enhance self-confidence and self-esteem of some individuals

4. Recorder

The role of maintaining records of the process and content to enable monitoring, analysis and documentation.

1. observing keenly both flow of content and process
2. maintaining detailed notes on a daily basis

5. Evaluator

The role of assessing the impact of training programme on the trainees.

1. planning evaluation mechanisms
2. using written as well as verbal reports to assess an event
3. utilising the evaluation design to assess individual changes in behaviour, attitudes and knowledge
4. forming steering committees to assist in day-to-day evaluations
5. conducting mid-term reviews
6. sharing reflections and analysis with co-trainer
7. providing relevant feedback

6. Organiser/Administrator/Manager

The role of managing all the related tasks during the programme

1. managing time and space for each session
2. solving problems related to accommodation, food, etc.
3. organising reservations, departures/arrivals, reimbursements, etc.
4. managing the learning situation (session timing, breaks, off-time, etc.)

c. Post - Training

1. Report - Writer

The role of preparing a report of the training programme.

1. organising the relevant information for the report-writing
2. disseminating the reports to all participants, and others interested

2. Follow-up Coordinator

The role of continuing contacts with individuals and their organisations to assess impact of training on the organisations and individuals and providing the necessary follow-up support whenever needed.

- communicating at regular intervals

- inviting feedback from both organisations and individuals
- collating learning needs for the next event, if so designed
- providing support in the field

DIFFUSION OF INNOVATIONS

Diffusion is the process by which an innovation is communicated through certain channels over time among the members of a social system. It is a special type of communication, in that the messages are concerned with new ideas.

Elements in the diffusion of innovations :

The four main elements in diffusion of innovations are

1. innovation
2. communication channels
3. time
4. social system.

The description for these elements is presented below:

1) The innovation:

An innovation is an idea, practice or object that is perceived as new by an individual or other unit of adoption. The perceived newness of the idea for the individual determines his or her reaction to it. The "newness" aspect of an innovation may be expressed in terms of knowledge, persuasion or a decision to adopt.

In this context, to know about the **perceived attributes of innovation** would be appropriate which are described in the succeeding paras:

a. Relative advantage:

It is the degree to which an innovation is perceived as better than the idea it supersedes. The degree of relative advantage may be measured in economic terms, but social-prestige factors, convenience and satisfaction are also often the important components.

b. Compatibility:

It is the degree to which an innovation is perceived as being consistent with the existing values, past experiences and needs of potential adopters.

c. Complexity:

It is the degree to which an innovation is perceived as difficult to understand and use. In general, new

ideas that are simpler to understand will be adopted more rapidly than innovations that require the adopter to develop new skills and understandings.

d. Trialability:

It is the degree to which an innovation may be experimented with on a limited basis. An innovation that is trialable represents less uncertainty to the individual who is considering it for adoption, as it is possible to learn by doing.

e. Observability:

It is the degree to which the results of an innovation are visible to others. The easier it is for individuals to see the results of an innovation, the more likely they are to adopt.

2) Communication channels:

A communication channel is the means by which messages get from one individual to another. The following classification of channels would help the communicator to use them appropriately:

i) Interpersonal channels - It refers to those which are used for face to face communication between two or more individuals.

ii) Mass media channels - These enable the messages to reach a larger, diverse audience simultaneously in a relatively shorter time. e.g.: Radio and T.V.

iii) Localite channels - They originate within the social system of the receiver. eg: neighbours, relatives, opinion leaders etc.

iv) Cosmopolite channels - They originate outside a particular social system. eg: Extension worker, sales personnel etc.

3. Time:

It is an important element in the diffusion process. Time is an obvious aspect of any communication process. Time does not exist independently of events, but it is an aspect of every activity. The time dimension is involved in diffusion (i) in the innovation - decision process, (ii) in the innovativeness of an individual or other unit of adoption, and (iii) innovation's rate of adoption in a system.

4. Social System:

It is defined as a set of interrelated units that are engaged in joint problem solving to accomplish a common goal. The members or units of a social system may be individuals, informal groups, organisations and / or subsystems. The social system constitutes a boundary within which an innovation diffuses.

INNOVATION - DECISION PROCESS

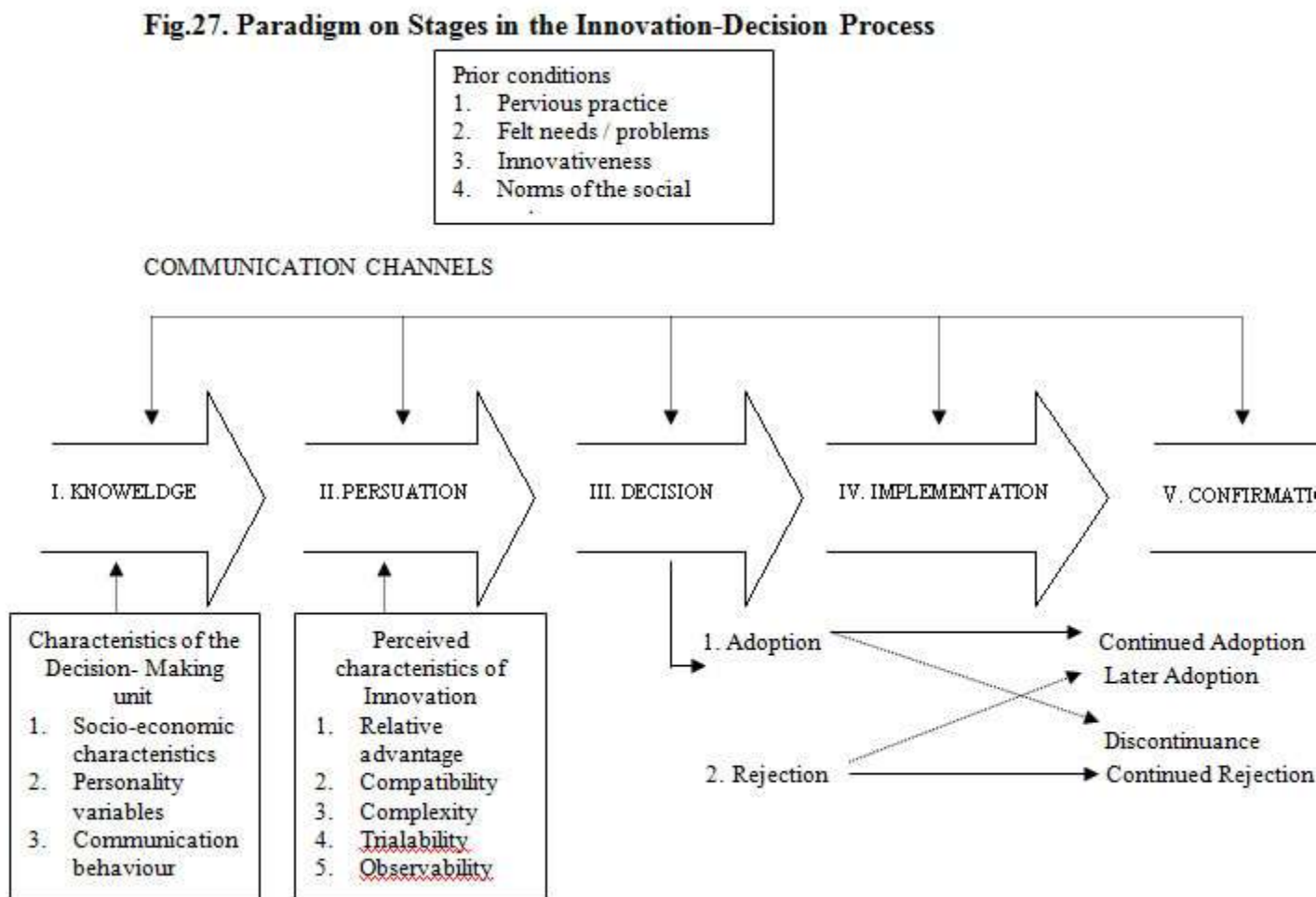
As an alternative to the "Stages in the adoption process" viz., Awareness, Interest, Evaluation, Trial and Adoption, due to the advancements in diffusion research, currently "Innovation - Decision process" is proposed which enlightens the sequential stages in the adoption - decisions made by individuals or other units of adoption.

The "Innovation - Decision Process" is the process through which an individual (or other decision - making unit) passes from first knowledge of an innovation, to forming an attitude towards the innovation to a decision to adopt or reject, to implementation of the new idea, and to confirmation of this decision.

This process consists of a series of actions and choices over time through which an individual or an organisation evaluates a new idea and decides whether or not to incorporate the new idea into on going practice.

The conceptualization of the model of the innovation decision process consist of the following five stages (as illustrated in fig.27.)

Fig.27. Paradigm on Stages in the Innovation-Decision Process



1. Knowledge stage:

Knowledge occurs when an individual (or the decision - making unit) is exposed to the innovation's

existence and gains some understanding of how it functions.

The following three types of knowledge possessed by an individual influence the decisions :

i). **Awareness - knowledge** motivates an individual to seek "how-to" knowledge and principles knowledge.

This type of information - seeking is concentrated as the knowledge stage of the innovation - decision process, but it may also occur at the persuasion and decision stages.

ii). **How-to knowledge** consists of information necessary to use an innovation properly. When an adequate level of how-to knowledge is not obtained prior to the trial and adoption of an innovation, rejection or discontinuance is likely to result. Change agents could perhaps play their distinctive role to concentrate on "how-to knowledge" at the trial and decision stage in the process.

iii). **Principles knowledge** consists of information dealing with the functioning principles underlying how the innovation works. It is usually possible to adopt an innovation without principles knowledge, but the danger of misusing the new idea is greater, and discontinuance may result. The long-range competence of individuals to judge future innovations is facilitated by principles knowledge.

2. Persuasion stage

Persuasion occurs when an individual (or other decision - making unit) forms a favourable or unfavourable attitude toward the innovation.

While the mental activity as the knowledge stage was mainly cognitive (or knowing), the main type of thinking at the persuasion function is affective (or feeling). At this stage, a general perception of the innovation is developed. The individual becomes more psychologically involved with the innovation and hence he or she seeks information about the new idea.

3. Decision stage

Decision occurs when an individual (or other decision - making unit) engages in activities that lead to a choice to adopt or reject the innovation.

Adoption is a decision to make full use of an innovation as the best course of action available. Rejection is a decision not to adopt an innovation.

The small - scale trial is often part of the decision to adopt, and is important as a means to decrease the perceived uncertainty of the innovation for the adopter.

4. Implementation stage:

Implementation occurs when an individual (or other decision - making unit) puts an innovation into use. Until the implementation stage, the innovation-decision process has been a strictly mental exercise. But implementation involves overt behaviour change as the new idea is actually put into practice.

Problems of implementation are likely to be more serious when the adopter is an organisation rather than an individual. Reason is that in an organisational setting, a number of individuals are usually involved in the innovation - decision process, and the implementers are often a different set of people from the decision makers.

5. Confirmation stage:

Confirmation occurs when an individual (or other decision - making unit) seeks reinforcement of an innovation - decision already made, but he or she may reverse this previous decision if exposed to conflicting

messages about the innovation.

The confirmation stage continues after the decision to adopt or reject for an indefinite period in time. At this stage, the change agents have the additional responsibility of supporting messages to individuals who have previously adopted.

As a sequential effect, there is a possibility for "discontinuance". A discontinuance is a decision to reject an innovation after having previously adopted it. There are two types of discontinuances:

- i). Replacement discontinuance - is a decision to reject an idea in order to adopt a better idea that supersedes it.
- ii). Disenchantment discontinuance - is a decision to reject an idea as a result of dissatisfaction with its performance.

ADOPTER CATEGORIES

There are different categories of farmers. According to Rogers (1971), the farmers based on their innovativeness can be classified as

1. Innovators (Venturesome)
2. Early adopters (Respectable)
3. Early majority (Deliberate)
4. Late majority (Skeptical)

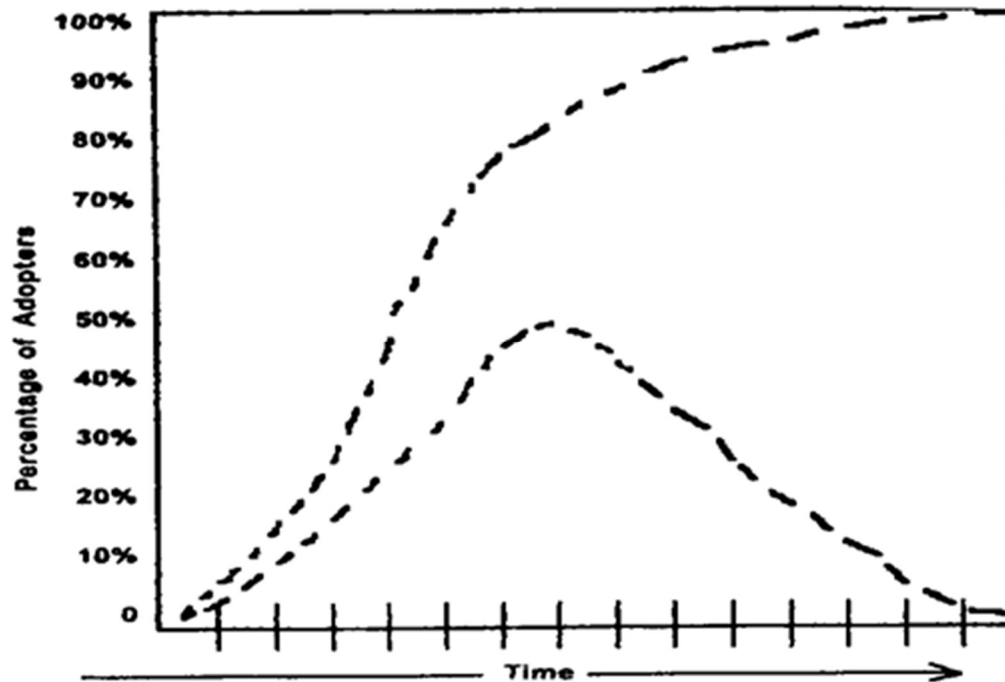
1. Laggards (Traditional)

Characteristics of farmers

All individuals in a social system do not adopt an innovation at the same time. Rather, they adopt in an ordered time sequence, and they may be classified into adopter categories on the basis of when they first begin using a new idea. In technology transfer programme, it is of great practical utility for the extension workers to identify the individuals who are likely to adopt innovations early and who may lag behind.

The adoption of an innovation over time follows a normal, bell-shaped curve when plotted over time on frequency basis. If the cumulative number of adopters is plotted, it results in an S-shaped curve. The S-shaped curve rises slowly at first when there are few adopters in a time period, accelerate to a maximum when about half of the individuals in the system have adopted and then increases at a gradually slower rate as the few remaining individuals finally adopt (Fig. 28.). The S-shaped curve is like that of a 'learning curve' as propounded by the psychologists. Each adoption in the social system is in a sense equivalent to a learning trial by an individual.

**Fig.28. The bell shaped frequency curve and the S-shaped cumulative curve
for adopter categories**



Both of these curves are for the same data, the adoption of an innovation over time by the members of a social system. But the bell-shaped curve shows these data in terms of the number of individuals adopting each year, whereas the S-shaped curve shows these data on cumulative basis.

The distribution of adopters over time closely approaches normality, and may be explained by the statistical concept of normal curve. The distribution of the adopters may be partitioned into five adopter categories by using the mean (\bar{x}) and standard deviation. The area lying to the left of the mean time of adoption minus two standard deviations includes 2.5 per cent of the individuals who are the first to adopt an innovation and are known as innovators. The next 13.5 per cent between the mean minus one standard deviation and the mean minus two standard deviations to adopt the new idea are called as early adopters. The next 34 per cent of the adopters between the mean date of adoption and minus one standard deviation are known as early majority. Between the mean and one standard deviation to the right of the mean are located the next 34 per cent to adopt the new idea, the late majority. The last 16 per cent to the right of mean plus one standard deviation are the last to adopt the innovation the laggards. The five-adopter categories are conceptualized as ideal types and are presented in Figure 29.

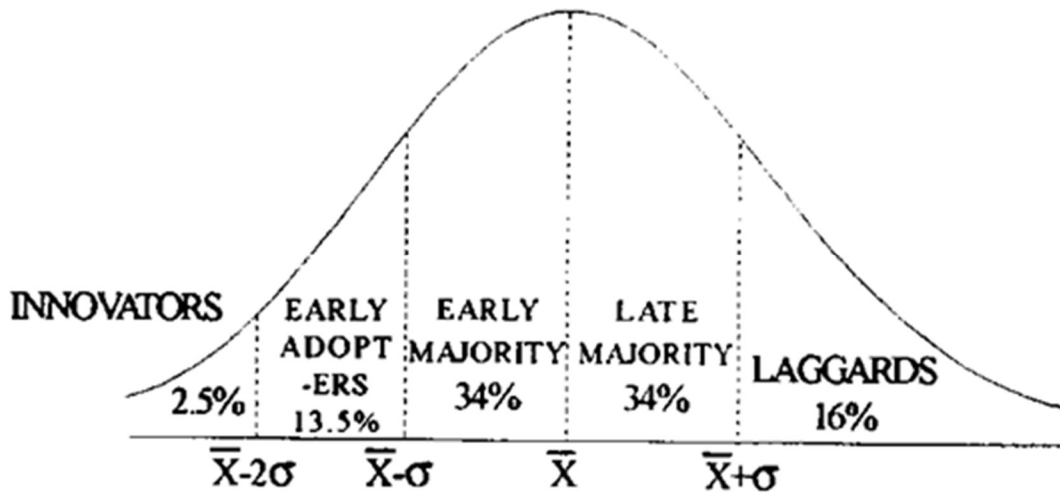


Fig. 29. Adopter categorization on the basis of innovativeness

The innovativeness dimension, as measured by the time at which an individual adopts an innovation, is continuous. However, this variable may be partitioned into five adopter categories by laying of standard deviations from the average time of adoption.

The detailed information on the characteristics of adopter categories is presented in the succeeding pages:

Innovators: Venturesome

Observers have noted that venturesomeness is almost an obsession with innovators. They are eager to try new ideas. This interest leads them out of a local circle of peers and into more cosmopolite social relationships. Communication patterns and friendships among a clique of innovators are common, even though the geographical distance between the innovators may be great. Being an innovator has several prerequisites. These include control of substantial financial resources to absorb the understand and apply complex technical knowledge.

The salient value of the innovator is venturesomeness. He desires the hazardous, the rash, the daring, and the risky. The innovator also must be willing to accept an occasional setback when one of the new ideas he adopts proves unsuccessful.

These are the first people to adopt a new idea, much ahead of other people. They are very few in numbers, probably not more than one or two in a community.

Characteristics:

1. Have larger farms.
2. High net worth and risk capital.
3. Willing to take risks.
4. Usually not past middle age
5. Generally well educated
6. Have respect and prestige in progressive communities but not in conservative type of communities.

7. Mentally alert and actively seeking new ideas.
8. Their sphere of influence and activity often goes beyond the community boundaries.
9. They have many formal and informal contact outside the immediate locality.
10. They often by-pass the local extension worker in getting information from the originating sources, and may learn about new things even before he does. They sometimes manage to get samples of seeds or chemicals even before they are released for public use.
11. They subscribe to many farm magazines and specialised publications.
12. Other farmers may watch the innovators and know what they are doing but the innovators are not generally named by other farmers as "neighbours and friends" to whom they go for information.

Early Adopter: Respectable

Early adopters are a more integrated part of the local social system than are innovators. Whereas innovators are cosmopolites, early adopters are localities. This adopter's category, more than any other, has the greatest degree of opinion leadership in most social systems. Potential adopters look to early adopters for advice and information about the innovation. The early adopter is considered by many as "the man to check with" before using a new idea. This adopter category is generally sought by change agents to be a local missionary for speeding the diffusion process. Because early adopters are not too far ahead of the average individual in innovativeness, they serve as a role model for many other members of a social system. Members of a social system respect the early adopter. The early adopter is respected by his peers. He is the embodiment of successful and discrete use of new ideas. And the early adopter knows that he must continue to earn this esteem of his colleagues if his position in the social structure is to be maintained.

Characteristics:

1. Younger than those who have a slower adoption rate, but not necessarily younger than the innovators
2. They are not the persons who test the untried ideas but they are quickest to use tried ideas in their own situations.
3. Have large farms.
4. Higher education than those who adopt more slowly.
5. High income.
6. They participate more in the formal activities of the community.
7. They also participate more in government programmes.
8. This group usually furnishes a disproportionate amount of the formal leadership (elected positions) in the community.
9. They read papers and farm journals and receive more bulletins than people who adopt later.
10. They may be regarded as community adoption leaders.

Early Majority: Deliberate (Local Adoption Leaders)

The early majority adopt new ideas just before the average member of a social system. The early majority interact frequently with their peers, but leadership position; are rarely held by them. The early majority's unique position; between the very early and relatively late to adopt make; them an important link in the diffusion process.

The early majority may deliberate for some time before completely adopting a new idea. Their innovation-decision is relatively longer than that of the innovator and the early adopter. "Be not the last to lay the old aside, nor the first by which the new is tried", might be the motto of the early majority. They follow with deliberate willingness in adopting innovations, but seldom lead.

Characteristics:

1. Slightly above average in age, education and farming experience.
2. They take a few more farm journals and bulletins than the average.
3. They have medium high social and economic status.
4. Less active in formal groups than early adopters, but more active than those adopting later.
5. In many cases, they are not formal leaders in the association
6. They also attend extension meetings and farm demonstrations.
7. They are most likely to be informal resources than early adopters and innovators, and so cannot afford to make hasty or poor decisions.
8. They associate mainly with people of their own community.
9. They value highly the opinions their neighbours and friends hold about them; for this is their main source of status and prestige.
10. They are mostly mentioned as "neighbours and friends" from whom the majority of farmers seek information.

Late Majority: Skeptical

The late majority adopt new ideas just after the average member of a social system. Adoption may be both an economic necessity and the answer to increasing social pressures. Innovations are approached with a skeptical and cautions air, and the late majority do not adopt until most other in their social system have done so. The weight of system norms must definitely favour the innovation before the late majority are convinced. They can be persuaded of the utility of new ideas, but the pressure of peers is necessary to motivate adoption.

Characteristics:

1. Those in this group have less education and are older than the early majority.
2. They form the major part of formal organisational membership, although they participate less in such formal groups.
3. They take fewer leadership roles than the earlier adopters.
4. They take and read fewer papers, magazines and bulletins, than the early majority.

5. They do not participate in as many activities outside the community as do people that adopt earlier.

Laggards: Traditional

Laggards are the last to adopt an innovation. They possess almost no opinion leadership. They are the most localite in their outlook of all adopter categories, many are near isolates. The point of reference for the laggard is the past. Decisions are usually made in terms of what has been done in previous generations. This individual interacts primarily with others who have traditional values. When laggards finally adopt an innovation, it may already have been superseded by another more recent idea which the innovators are already using. Laggards tend to be frankly suspicious of innovations, innovators, and change agents. Their tradition direction slows the innovation decision process to a crawl. Adoption lags far behind knowledge of the idea. Alienation from a too-fast-moving world is apparent in much of the laggard's outlook. While most individuals in a social system are looking to the road of change ahead, the laggards has his attention fixed on the rear-view mirror.

Characteristics:

1. Least education.
2. Oldest.
3. Participate least in formal organisations, cooperatives and government programmes.
4. They hardly read farm magazines and bulletins.

