
Reading Material

Course No: Ext. 111
Rural Sociology and Educational Psychology

Compiled By
Dr Anup Katoch
Professor (Sociology)
Department of Agricultural Economics, Extension Education &
Rural Sociology,
COA, CSKHPKV, PALAMPUR (HP)

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Sociology: The science of society

August Comte the French philosopher, commonly regarded the **father of sociology**, used the term 'Sociology' in 1839, for a body of knowledge, concerned with social behaviour and social institutions. August Comte named the field of study from two words, Latin word 'Socius' means society and Greek word 'logos' means study or science. **So etymological meaning of Sociology is the science or study of society**, that is, the **web of human interactions and interrelationships**. Sociology is the youngest of all social sciences. It joined the family of social sciences when it was recognized that the other social sciences failed to fully explain man's social behaviour.

Nevertheless, Sociology to some extent has following characteristics of science.

1. It is **empirical**; that is, it is based on reasoning and observation, not on supernatural revelation, and its results are not speculative.
2. It is **theoretical**; that is, it attempts to summarize complex observation in abstract, logically related propositions which purport to explain causal relationships in the subject matter.
3. It is **cumulative**; that is, sociological theories build upon one another, new theories, correcting, extending and refining the older ones.
4. It is **non-ethical**; that is, sociologists do not ask whether particular social actions are good or bad; they seek merely to explain them.

Definition of Sociology

Sociology is the science of society. However, it has been defined in different ways by different sociologists.

Max Weber defined sociology as a science which interprets social behaviour with the aim of arriving at **causal explanation** of human behaviour.

L.T. Hobhouse maintained that sociology is **comprehensive** science of society which aimed at the interpretation of social life.

Morris Ginsberg defined sociology as the study of the conditions and consequences of human interactions and interrelations.

All the definitions of sociology emphasize on the point that sociology is the study of social relationships. A brief definition of sociology is that it is a social science which makes a scientific study of men's relationships in the society.

Misconceptions about Sociology

Because of several misconceptions about sociology, it is useful to describe what it is not, thereby dispelling misconceptions and clarifying the major concerns of the field of sociology.

Sociology is a science, not a social philosophy.

A social philosophy is a system of ideas and values that tell people how to behave and lays down procedures, norms, and rules of behaviour according to which people are expected to act. Sociology studies how people behave without trying to influence how they should behave. It studies what is, not what should be. Social philosophies may be many such as Buddhism, Hinduism, Sikhism or Christianity. Sociology is a science not a design for loving.

Sociology is a science, not socialism.

Even though the words are similar, they are not connected one with another. One is science interested in studying human behaviour but the other is political and economic movement.

Sociology is science, not social reform or social welfare.

Sociology is knowledge not a direct treatment. It seeks knowledge about people and their behaviour. Sociologists and rural sociologists may serve as consultants for rural community development and social reform or welfare programmes, but they do no more than present facts, analyze social situations and give advice for action that may serve to facilitate achievement of objects.

Sociology is not a social science; it is one of the social sciences.

Sociology is youngest of all social sciences and has several specializations such as Rural Sociology, Industrial Sociology, and Political Sociology etc. In addition to sociology other social sciences are Political Science, Economics and Social Psychology. All these social sciences study man in various aspects of his life.

Rural Sociology

Rural Sociology is a specialized field of sociology. It is the study of life in rural environment, which systematically studies rural communities to **discover their conditions and tendencies** to formulate the principles of progress. It is limited to various aspects of rural society in the study of rural social relationships.

[Definition of Rural Sociology](#)

According to [F. Sturat](#) the sociology of rural life is a study of rural population, rural **social organization** and the **social processes** operative in rural society.

According to [Desai \(1978\)](#), Rural Sociology is the science of rural society.

So, it is clear that rural sociology is related to the **organized and scientific study** of the life of rural people and their personal inter-relationships.

Significance of rural sociology in agricultural extension

The knowledge of rural sociology is very important in agricultural extension for the following reasons:

- The basic purpose of agricultural extension is changing the behaviour of farmers as desired. Therefore, knowledge and understanding of rural people (farmers) is essential. It is the rural sociology which provides this knowledge and understanding about the farmer *vis-à-vis* rural social system in which he lives.
- It helps in devising an agricultural extension plans for farmers.
- It helps in identifying the groups, individuals, organisations and leaders.

Besides this, the interrelationship between agricultural extension and rural sociology also highlights the importance of rural sociology in agricultural extension.

The interrelationship between rural sociology and agricultural extension

Agricultural extension and rural sociology are extremely close to each other. Both fields are greatly concerned with the study of rural life. However, following are the major points which clearly indicate the relationship.

- Rural sociology is the scientific study of rural man's behaviour in relationship to other groups and individuals with whom he interacts. Agricultural extension is a non-formal education for farmers (rural people) with a view to develop rural society on desirable lines.
- Rural sociology studies the attitude and behaviour of rural people whereas agricultural extension seeks to modify or change the attitude and behaviour of farmers.
- Rural sociology studies the needs and interests of rural society and agricultural extension helps farmers to discover their needs and problems and build educational programmes based on these needs and wants.
- Rural sociology analyses rural social relationship or group or organisation and leaders in rural areas. Agricultural extension utilises the knowledge pertaining to groups, organisations and leaders to achieve the objective of agricultural development.
- Rural sociology studies social situations and collects social facts of rural society. Agricultural extension makes use of such social data as basis for building up extension programmes for farmers.
- Rural sociology investigates the social, cultural, political and religious problems of rural society. Agricultural extension also studies these problems with special reference to their impact on agricultural extension work in the village.

From the above interrelationship between the rural sociology and agricultural extension, one could understand that rural sociology will help the extension agent to identify problems of farmers and develop an extension programme to help in solving the problems of farmers. Thus it can be concluded that both sciences are closely related and benefited with each other by sharing the knowledge of each other.

Rural society and its important characteristics

Village community is a group of rural people living within a continuous geographic area, sharing common values and feeling of belonging to the group, who come together in the common concern of daily life. Village in general terms refer to settlement which originated many thousand years ago, during the early period of human society. Village is a historical necessity and the factors like land, water, climate, conditions of agriculture, economy, peace and security have played a very important role in the growth of village community. The primary forms of human association are far older than the secondary. Earliest men apparently lived in relatively small bands, formed on the basis of family and blood ties. Their economy consisted of seed and food gathering, of hunting and fishing.

Today, from two-thirds to three-fourths of the world's people are living in rural communities. Their culture stands intermediate between that of the band or tribe and urban patterns. A village community can be defined as a group of rural people living together in a continuous geographic area in such a way that they share, not this of that particular interest, but the basic conditions of a common life.

Features of village life

General Environment

Rural people are closely related to natural environment. So they have to face the vagaries of nature like rain, heat, snow and drought etc. – over which they have no control. Due to this they build up their beliefs and convictions about nature.

Occupation

Most of the rural people depend on agriculture for their livelihood. There are non-agricultural occupations in the rural areas, but these are secondary in economic importance. The farmers have to acquire a wide range of specialization as compared to urban workers. e.g. soil improvement, repairs to machine, skill in controlling pests and disease, skill as animal husbandry man and skills of agricultural economics etc.

Size of community

The rural communities are smaller as compared to urban communities. The land to man ratio is higher in rural areas as most of the rural people depend on agriculture. The density of per square mile is low as compared to urban areas.

Homogeneity & heterogeneity

Homogeneity is the similarity of social and psychological characteristics in the population such as languages, beliefs, mores and pattern of behaviour etc. are concerned. In this sense the rural population is more homogeneous.

Social differentiation

The segments of rural society, being highly homogenous in nature, are relatively independent, with a low degree of social differentiation.

Social stratification

The gap between low and high, poor and rich is not so wide in the rural society. This may be because both the very rich and very poor tend to move to the city. So the rural society tends to belong to middle classes.

Social mobility

It refers to movement from one social group to another. It may be occupation mobility from one occupation to another, territorial mobility from rural to urban areas, from urban to rural areas or within the rural or urban areas. So, mobility is more from rural areas to urban areas.

Social control

Because of homogeneity social pressure acts more as a mean of social control in rural society. In urban area the control is governed by law and order system.

Leadership pattern

More face to face contacts are there in the rural area. So the choice of leadership in rural areas tends to more on the basis of known personal qualities of the individual.

Social solidarity

The cohesion and unity in rural area is due to common traits, similarity in life experiences and common objectives etc. which are shared by the rural people.

Social Groups

Every human being from birth until he dies is associated with one or other group, by one or the other ways. These groups directly or indirectly have impact on the psychology of an individual. These groups influence the attitudes, thinking and behaviour of the people throughout the life period. These groups deeply influence the development of the personality and play a role in the socialisation. Every individual is born in the family. Afterwards other groups outside the family interact with various ways. From birth period and from family he interacts with neighbourhood, school, community and great society. These groups contact, expands outward as individual develop and assumes various roles as a member of the society.

A social group is a unit of two or more persons in the reciprocal interaction or communication with each other.

Characteristics of Group

1. A group always consists of at least two or more persons.
2. Each group must have a communication and interaction among its members.
3. The communication among the members should be always two ways. One way communication does not constitute the group interaction, which should influence each other.
4. The duration of the group exists only as long as there is reciprocal psychological interaction.
5. Continuity of a culture from one generation to other helps for the formation of a group.
6. Common interests, shared values and norms may be important constituents of a group.
7. The formation of group is affected by many forces i.e. blood, marriage, religion, caste, common possessions, common areas, common interests, responsibilities and occupation etc.
8. Different groups have different durations and purposes.

Classification of Groups

Even though completely adequate classification has been developed, different types of groups based on group attributes or characteristics have been identified. Although the types are not inclusive and do overlap. Some of the major types of groups are described here.

Primary and Secondary Groups

The persons in the primary group have face to face relationships, such as family and playgroup. A secondary group is one where the relationships are indirect. The members of secondary group have little personal affection and their relationships are governed by the fulfillment of some objectives. The specific characteristics of primary and secondary groups are compared here.

Sr.No	Primary groups	Sr.No	Secondary groups
1.	Small, mostly less than 20 to 30 persons are members	1.	Larger in size
2.	Personal and intimate relationships among the	2.	Indirect relationships with little personal affection

3.	members Face to face contact	3.	Contact through mostly other communication media
4.	Mostly permanent membership	4.	Temporary membership
5.	Relations among the members mostly informal	5.	The relation is mostly formal
6.	Rural society	6.	Urban society

Formal and Informal Groups

This classification is based on mode of organisation and functions of group.

Formal: These groups have a name, title, written purposes and place. There are definite rules and procedures, awards and punishments and standard discipline is followed here.

Informal: Informal groups like friends, neighbours, community members do not have such characteristics. There is no organisation, rules etc. and no definite mode of functions is followed here.

Reference group

This is a group of persons whom an individual consult before taking an important decision. Here the members may be form primary, secondary, formal and informal groups. Sometime an individual may not have reference group, but may be consulting some experienced person in a society to seek the advice.

Cultural Interest Group

These groups are created for the development of special interest like economic, religious, political, educational, or recreational interest etc.

Temporary and Permanent Groups

Group for short period is called temporary group i.e. Crowd. The groupings living in a common geographic area for longer period are called as permanent group i.e. Village, State, Religion, Tribe etc.

In-group and out-group

This name was given by William Graham Sumner an American academician. An in-group is one to which individuals feel, they belong and with which they identify themselves strongly. An out-group is one which other individuals cannot identify themselves. The individual feel themselves as outsiders to the group and the group have similar reciprocal feeling towards the individuals.

Involuntary and voluntary groups

An involuntary group is one, for the membership of which, an individual does not have choice or is not required to put any effort, e.g. membership by birth or residence, family, neighbourhood, community etc.

A voluntary group is one for the membership of which one has to have some deliberate choice or put in some conscious effort e.g. cooperative society, mahila mandal, youth club.

Peer group

A peer group is made up of individuals of roughly equal status in number of important areas, such as age or social status. Peer groups member generally interact with one another frequently e.g. teenage cliques.

Culture

Culture is one of the most important constituent as well as tool of the study of sociology. Our society is continuously changing, new ideas and experiences are acquired by the units of the society. These experiences or learned behaviour are shared by the members in the society. The culture is the sum total of the thought and behaviour, leading to total way of life of people in society. Therefore, culture may be defined as, "socially standardized ways of feeling, thinking and acting, which an individual acquires as a member of the society".

Features:

1. It is dynamic in nature: continuously changing.
2. It is a learned behaviour. An individual learn the various ways of thinking, values and attitudes from the family itself.
3. It is an organisation of phenomena of acts (pattern of behaviour), objects (tools, things made with tools), ideas and sentiments. Because of this character, culture is easily and readily transmitted from one human organism to another.
4. It satisfies ones biological and socio-cultural needs, not only for food, shelter and clothing but various relationships.
5. It is integrative in nature. Some forces may sometime tend to pull it in different directions, even there is a general tendency towards integration, so that the society is held together.
6. It is adaptive to various external forces. It must try to maintain its structure and functions in spite of all external forces.
7. It builds certain norms, rules and actions for creating harmony among various members of a particular group or society. As it provide common interests and needs. It helps the individual to come closer in touch to share their various day to day interests.
8. Culture is reality of human beings; it produces informal attachments with other members of the same group.

Types of Culture

1. Material Culture: Material culture refers to the tangible aspects of culture, those things that can be seen or touched; e.g. temples, bridges, furniture etc.
2. Non-Material Culture: Non material culture consists of the abstract aspects of culture, which cannot be directly seen or touched; e.g. values, folkways, ways of thinking and feeling etc.

Cultural Lag

The strength and intensity of cultural inertia, thus varies because certain aspects persist more than others. There is a tendency for non-material aspects of culture to present longer than material aspects, and this phenomenon is called as cultural lag. Cultural lag occurs when different parts of culture change at different rates, leaving some units behind others. Cultural lag, for instance occurs when technological change takes place more rapidly than non-material changes. The technological aspects are rapidly changing. But the changes in the non-material aspects are at a poor rate. This gap is due to old beliefs, traditionalism. Indian social system is highly complex in nature, and the population is also heterogeneous in respect to the individual as well as group characteristics, which causes the cultural lag in its socio-economic patterns.

Social Stratification

If we look around us, we find that society is heterogeneous in nature. Here are the rich, there the poor; here are the industrialists, there are peasantry; here are the rulers, there the sweepers. Everywhere society is divided into classes, economic, social, political and religious. Social stratification means division of society into different classes.

Murray, "Social stratification is the horizontal division of society into higher and lower social units."

Gisbert, "Social stratification is the division of society into permanent groups or categories linked with each other by the relationship of superiority and subordination."

Maciver and Page, "This understanding of social class on a distinct status group provides us with a precise concept and is generally applicable to any system of social stratification wherever found. It is the sense of status, sustained by economic, political or any other power and by the distinctive modes of life and cultural expressions, corresponding to them that draw class apart from class, gives cohesion to each class and stratifies a whole society.

Social stratification thus divides society into various sections. Some individuals are ranked higher than others on the basis of opportunities and privileges which they enjoy. It may therefore be seen that inequality of status is the distinguishing feature of social stratification. Thus we may define social stratification as division of society into classes on the basis of status.

Status is very important element in the concept of social stratification. It involves some special combination of social privileges. Therefore privileges determine the standard of living and the way of life of the members of each class. The upper class is thus accorded a high status.

Maciver, "status is the social position that determines for its possessor, apart from his personal attributes or social service, a degree of respect, prestige and influences."

Functions of Stratification

- **A means of accomplishing jobs in society:**

In society social stratification contributes as an essential means to get some of its jobs by distributing different amounts of prestige and privilege to various strata. A university is an example of stratification with clearly defined strata, each marked with visible symbols denoting status, specific roles and role expectations, norms and prescribed standards of behaviour and interrelationships – all clearly organised to do a job. The society gives rewards to serve as incentives to get the various jobs accomplished. These rewards are economic, aesthetic, materialistic and psychological.

- **Regulation and control of individual and group relationships:**

Stratification regulates and controls human relationships in society by defining the roles and role expectations. Whatever an individual's position, whether high or low, social stratification regulates his participation in certain areas of social life. Social stratification tends to regulate participation of groups and individuals in the total life of society, giving them access to certain areas and restricting them to others.

- **Contribution to social integration and structure:**

Stratification in society has a strong integrative function, serving to coordinate and harmonise units within social structure because in stratified society members are dependent one another.

- **Simplification:**

Stratification of society categorises people into different strata. Every status has its particular role. Thus role expectations simplify man's world in respect to his relations with other people.

Social Institutions

Social institutions are created by man from social relationships in society to meet basic needs such as stability, law and order and clearly defined roles of authority and decision making. These are organised systems of behaviour to meet basic needs of society.

Horton (1964) defined institution as an "organised system of social relationships which embodies certain common values and procedures and meets certain basic needs of society."

According to Landis, "social institutions are formal cultural structures devised to meet basic social needs."

Major Institutions in Rural Society

Generally, five basic institutions are recognised in rural society: the family, religion, the economic, government and education.

The family

It is the most multifunctional of all institutions in society, and is a system of organised relationships involving workable and dependable ways of meeting basic social needs. Family commonly fulfils the following tasks in society:

- I. Sex regulation
- II. Reproduction and perpetuation of the family and human race,
- III. Socialisation'
- IV. Provision of economic maintenance and livelihood in many cultures
- V. Provision of love, affection and security to individuals and
- VI.** Provision of class status to the individual of the family into he has been born

Within the basic institution of the family are secondary institutions such as engagement, marriage, courtship and relationships with the family into which marriage has taken place.

Religion

Religion provides a foundation for mores in society. The function of religion is to provide means where man can face the crisis with strength and fortitude. Most religions of the world have the following elements:

- I. A set of beliefs regarding the ultimate power in the universe
- II. A set of beliefs regarding the ideal and proper pattern of behaviour
- III. A set of ceremonial ways of expressing these beliefs

Government

It is also referred as the political institution. It administers the regulatory functions of law and order and maintains security in society. Within this major institution are secondary institutions such as military systems, political forces, legal systems, and diplomatic relations with other countries.

Economy and Maintenance

Such institutions provide basic physical subsistence for society and meet basic needs for food, shelter, clothing and other necessities. Included are the economic institutions of production – agriculture, industry, and the distribution, exchange and consumption of commodities, goods and services necessary for human survival. Secondary institutions included within the major economic institutions are credit and banking systems, advertising, cooperatives etc.

Education

Educational institutions are those institutions which seek to socialise individuals in society or introduce them in formal ways into their social and cultural world. Every new generation must be prepared and trained to play a role in society. This process referred as the process of socialisation, commences informally at home and then formally in the institution of education

Social Change

Social change refers to an **alteration in the material and non-material culture of a society**. It refers to **change that occur in the structure and functioning** of a social system, thus pointing to change in:

The roles individuals perform;

Values and norms;

Social structure and institutions;

Social relationships among people;

Pattern of social interaction;

Functions performed by different groups and institutions.

“By social change is meant only such alterations as occur in the social organisation i.e. the structure and functions of society.” Davis

Nature of social change

1. Only such changes are designated as social change that affects the **bulk of the community**. Minor alterations in social life do not usually constitute what is generally accepted as social change.
2. Social change is a **universal process**. It is founded in all societies and all stages of social evolution.
3. Social change does not always depend on the **willingness of society and its members**.
4. Speed of social change **differs** from society to society and in the same society. Many tribal and rural societies change at much slower pace than industrial societies. However, the pace of **change of contemporary societies is much faster** now than in the earlier stages.
5. Social change has both **qualitative and quantitative** aspects. Increase in number of household is an example of quantitative change. Changes in the composition of households or changes in roles are the examples of qualitative change.
6. Change is not **synonymous with development**; it may or may not lead to development.
7. Most of social change that took place in the earlier years was unplanned and undirected. Now planned or **directed social change is gaining in importance** as a means to achieve societal goals in shorter period in a more orderly fashion.
8. Social change is the result usually of both **internal** (endogenous) factors (the community itself recognises the need for change) and **external** (exogenous) factors, e.g. industrialisation, land reforms and urbanisation.

Dimensions of Social Change

A thousand years ago, the face of society was vastly different from that with which we are familiar today. Since the outbreak of World War I, numerous countries have passed through profound changes, not only in their public institutions but in their class structures, their economic systems, their mores and modes of living-in short, in all the fundamental relation of man to man.

Social inventions bring social change. Invention and discovery are significant characteristics of our age. The present age is often called the “age of power”, the

scientific age. Mechanisation have changed not only the economic structure of the society but was also profoundly altered our modes of life and thought. The changes in the means of transport and c communication have affected our social relationships. As the means of transport have changed, the spatial relationships have also changed. The rapid means of transportation and communication have encouraged the growth of international trade and interdependence of countries. Today, there is greater mobility of population. The rapid means of transport and communication have broken the barriers of cultural isolation and played a significant role in the diffusion of cultural elements.

Different people may look on the same social changes differently and to some they may spell progress, to others decadence. Social changes are welcomed by some and are opposed by others. Planned social change i.e. social change by planning has a very great importance in our life. Civil marriages, divorce, women's participation in public life free mixing of young boys and girls are the best examples of social change in our lives.

Factors of Social change

Social change is a historical process based on various factors of environment and human ingenuity to create conditions for better survival. Major factors of social change are the following:

The Physical Environment

Physical factors also known as geographical factors include all conditions of natural environment namely climate, earth's surface, water, season, storms, earthquakes etc, are permanent and independent of human existence. Many changes take place in natural environment and these changes are regardless of human activities. Many social geographers have analyzed the impact of natural conditions on social life. Floods, earthquakes, droughts, famine and storms, change of season etc. have significant effect on the social relationships and these are modified by such natural occurrences.

Cultural Factors

The main cause of social change is the cultural factor. Changes in the culture are accompanied by social changes. Culture gives speed and direction to social change and determines the limits beyond which social change cannot occur. The pace of change of material and non-material culture are not the same although they affect each other. Non material factors are affected by the material culture.

Population Factors

Even changes in the quality of population have an effect on the social organisation as well as customs and traditions, institutions, associations etc. increase and decrease of population, a change in the ratio of men and women, young and old, have an effect on social relationships. Decrease or increase in population has an immediate effect upon economic institutions and associations. The ratio of men to women in society effects marriage, family and the conditions of women in society. In the same way the birth and death rate also influence social change.

Psychological Factors

Most sociologists regard psychological factors as important elements in social change. The cause of social change is the psychology of man himself. Man by nature is a lover of change. He is also trying to discover new things in the sphere of his life,

and is always anxious for novel experience. Because of this tendency, the mores, traditions, customs etc. of very human society are perpetually undergoing change. This does not mean that man always considers the new superior to the old. While he is always, attending to what is new and unique; he wants to preserve what is old. Change is the law of life. When changes do not occur at the appropriate time revolution takes place, wars are fought, epidemics spread, and changes are violently introduced.

Biological Factors

Biological factors too have some indirect influence upon social change. Among the biological factors is the qualitative aspect of the population related to heredity. The qualitative aspect of population is based upon powerful and great men and their birth is dependent largely on heredity and mutation. Hence, biological factor play a part in social change in that extent.

In the course of human history, it is remarked that there are physical and mental differences among population distributed in the different countries of the world. This amounts to hereditary differences in races leading to ethnocentrism.

Technological Factors

The technological factor has immense influence in social change. To quote Ogburn, "Technological changes society by changing our environment to which we in turn adopt." This change is usually in material environment and adjustment we make to the changes often modifies customs and social institutions. In this way, the increase in the machines and methods due to new discoveries has had a very great influence upon social relationships. The form of society is undergoing change because of the development and invention of electric, steam and petrol driven machines for production, the means of transport and communication, and various mechanical appliances is everyday life. Even institutions like family and marriage have not remained immune to the effect of these developments. The explicit effects of the technological advance are labour organisation, division of labour, specialisations, high speed of life, increase in production etc. in modern age; technological factors are among the predominant causes of social change.

Other Factors

In addition to above mentioned factors, another factor of social change is the appearance of new opinions and thoughts, e.g. changes in the attitudes towards dowry, caste system, female education etc., have resulted in widespread social variations and modifications. In fact, a majority of social revolutions takes place because of the evolution of new ways of thinking. Similarly, war is also a cause of social change because it influences the population, the economic situation, and ratio of male to female etc.

Psychology: meaning and definition

What is psychology?

The term "psychology" is derived from two Greek words – psyche (soul) and logos (science or study). Thus, literally it means study or science of soul. But now it is no more considered as science of soul. It has moved away from this focus and established itself as a scientific discipline which deals with the various processes and behaviour of organism.

Definition of Psychology

Most of the contemporary psychologists agree on a definition of psychology as the scientific study of behaviour and mental processes of organism.

For more definition of psychology, [see Box#1](#).

There are three key terms in the above definition of psychology which have been clarified below: Scientific study means using techniques such as observation, description, and experimental investigation to collect information and then organising this information.

Mental processes refer to private and cognitive process such as attention, perception, remembering (memory), problem-solving, reasoning, decision-making, feelings, thinking, motives etc.

Box#1: Definitions of Psychology

- Psychology is the science of the activities of individual in relation to the environment (Woodworth).
- Psychology is the positive science of behaviour (Watson).
- Psychology is the science of human behaviour and experience (Cruze).
- Psychology is the science of mental activity of an organism (Guilford).
- According to Charles E. Skinner, psychology deals with the responses to any and every kind of situation that life presents. By responses or behaviour is meant all forms of processes, adjustments, activities, and experiences of the organism.

Behaviour refers to all the actions or reactions of an organism (person or animal) in response to external or internal stimuli. The behaviour of an individual, in a broad sense, refers to anything the individual does.

According to Leagans (1961), behaviour refers to what an individual knows (Knowledge), what s/he can do (skill – mental or physical), what s/he thinks (attitude), and what s/he actually does.

Behaviour may be simple or complex, short or enduring. Human behaviour may be overt (expressed outside) or covert (expressed inside). While symbolic adoption is an example of covert behaviour, use adoption is an example of overt behaviour. Both overt and covert behaviour can be measured.

People who study psychological phenomena are not necessarily limited to the study of human beings only; they also study the behaviour of animals. They study the behaviour and mental processes of individual not of group/community. Thus, when they are studying groups, the focus is generally on how individuals perform within the group rather than the study of the group as a whole.

What is education?

In order to know the educational psychology; we have to first understand what is education.

The world education is derived from Latin word educare which means to bring-up. Education is also derived from another Latin word educere which means to lead out. Education as educere is more acceptable as it means leading an individual from ignorance to knowledge.

Education can be defined as the process of imparting or acquiring knowledge and habits through instruction or study. It can also be defined as a process in which human behaviour is modified so as to be in closer agreement with some model or ideal determined by the values of society.

If education is to be effective, it should result in changes in all the behavioural components.

What is educational psychology?

Educational Psychology is a combination or overlapping of two separate fields of study; psychology and education. It is a distinct discipline with its own theories, research methods, problems and techniques. Educational psychology is distinct from other fields of psychology (see Box#2) due to its focus on understanding the processes of teaching and learning that takes place in formal environments. Educational psychologists study what people think and do as they teach and learn a particular curriculum in a particular environment where education and training are intended to take place. They help in developing instructional methods and materials used to train people in both educational and work settings. They are also concerned with research on issues of relevance for education, counselling and learning problems.

Box#2: Specialised Fields of Psychology

Today psychologists work in many specialised fields which have their own theories and methods. Some of the major fields of psychology are: cognitive psychology, biological psychology, health psychology, developmental psychology, social psychology, educational psychology, clinical psychology, environmental psychology, industrial/ organisational psychology, sports psychology, etc

Educational psychology deals with behaviour of human beings in educational situation (see Box#3) for definitions of educational psychology). This means that educational psychology is concerned with the study of human behaviour or human personality, its growth, development, guidance under the social process of education. Education is possible in human beings; hence, human learning is the central core of educational psychology.

Box#3: Definitions of Educational Psychology

- Educational psychology is that branch of psychology, which deals with teaching and learning. It takes its meaning from education, social process and from psychology, a behavioural science (Skinner).
- Educational Psychology is the discipline concerned with teaching and learning processes; applies the methods and theories of psychology and has its own as well (Woolfolk, 1995).

Importance of educational psychology in agricultural extension

The importance of educational psychology in agricultural extension is immense as both disciplines deal with human behaviour in educational environment. Following are the some of the reasons which explain the importance of educational psychology in agricultural extension.

- Educational psychology helps the extension agent to know the learner, his interest, attitudes, aptitude, level of aspiration, intelligence, interests, individual behaviour in group, etc. which plays a major role in one's learning.
- Its main concern is on teaching and learning. This helps in formulating training programmes for improving the knowledge and skill of extension agent and farmers. It also helps in selection of teaching methods and aids for organising effective learning situations and suggests technique of learning as well as teaching.
- It helps in imparting better education by organising the subject matter of learning experience, preparation of different text books, development of assessment patterns, etc for heterogeneous learners.
- Educational psychology helps in acquainting learner with the mechanism of heredity and environment.
- It also deals with the problem-solving which is very important for extension agent to develop problem-solving skills amongst farmers.
- It helps extension agent to find causes of prejudices, the habit of sticking to old practices of farming and ways of doing things, the doubts and lack of confidence and factors affecting motivation.
- It also helps them to know the emotions and feelings of farmers, how farmers learn new practices.

Personality: Meaning and definitions

The term personality is derived from the Latin word *persona*, which means mask. The mask used by actors in the Roman theatre for changing their facial make-up. After putting on the mask, audience expected the person to perform a role in a particular manner. It did not, however, mean that the person enacting the given role necessarily possessed those qualities. For a layperson, personality generally refers to the physical or external appearance of an individual. For example, when we find someone 'good-looking', we often assume that the person also has a charming personality. This notion of personality is based on superficial impressions, which may not be correct. When psychologists talk of personality, they mean a dynamic concept describing the growth and development of a person's whole psychological system. Rather than looking at parts of the person, personality looks at some aggregate whole that is greater than the sum of the parts. In psychological terms, personality refers to our characteristic ways of responding to individuals and situations (see **Box#1: Definitions of Personality**). People can be described the way in which

Box#1: Definitions of Personality

- Personality is the dynamic organisation within the individual of those psychophysical systems that determine his unique adjustments to his environment (Allport, 1930).
- Woodworth defines personality as the quality of an individual's total behaviour; that is, how he reacts when his activity is considered as a whole. Personality comprises an individual's experience, his knowledge, skill, temperament, attitude, habits, character, and physical traits.
- According to Carver and Scheier (2000), personality is a dynamic organisation, inside the person, of psychophysical systems that create a person's characteristic patterns of behaviour, thoughts, and feelings.
- Personality is the sum total of ways in which individual reacts to and interacts with others. It is most often described in terms of measurable traits that a person exhibits (Robbins, 2001).
- Personality can be defined as a dynamic and organised set of characteristics possessed by a person that uniquely influences his or her cognitions, motivations, and behaviours in various situations (Ryckman, 2004).

they respond to various situations. Certain catchwords (e.g., shy, sensitive, quiet, concerned, warm, etc.) are often used to describe personalities. These words refer to different components of personality. In this sense, personality refers to unique and relatively stable qualities that characterise an individual's behaviour across different situations over a period of time. If you watch closely, you will find that people do show variations in their behaviour. One is not always cautious or impulsive, shy or friendly. Personality characterises individuals as they appear in most circumstances. Consistency in behaviour, thought and emotion of an individual across situations and across time periods characterises her/his personality. For example, an honest person is more likely to remain honest irrespective of time or situation. However, situational variations in behaviour do occur as they help

individuals in adapting to their environmental circumstances. Once we are able to characterise someone's personality, we can predict how that person will probably behave in a variety of circumstances. An understanding of personality allows us to deal with people in realistic and acceptable ways. In essence, personality includes the unique pattern of psychological and behavioural characteristics that distinguishes each of us from everyone else. Personality characteristics are relatively stable and enduring, often developed in childhood, and affect the way we think, act, feel, and behave. Individual personality patterns are both consistent and stable and unique and distinctive.

TYPES OF PERSONALITY

Jung classified individual into two psychological types – introvert, extrovert, and ambivert was added later on, as all individuals could not be fitted in only these two types.

Introvert

An introvert limits his acquaintance to a few. This person is very conservative and suspicious of the motives of others. He is not social and prefers to remain in the background on certain occasions. He avoids embarrassment and public speaking. He is very reserved, self centred, introspective, absent minded, remains worried and is always day dreaming. He is generally slow and hesitant to take the initiative. Philosophers, poets, and scientists are generally introverts.

Extrovert

An extrovert is socially adaptable and interested in people. He likes to make friends and very soon creates a circle of friends around him. He prefers working in company with other people, is talkative and fond of talking. He is self assertive and generally takes things lightly. He never feels embarrassed. He has a keen sense of observation and is attentive. Reformers and social workers are generally extroverts.

Ambivert

Ambivert types are placed in between extrovert and introverts. Their behaviour is balanced. Their psychic energy is partially directed inwards and partly outwards. They are interested in their own thoughts and emotions and also in other persons and their action. Most of us belong to ambivert type.

FACTORS AFFECTING PERSONALITY

An adult's personality is now generally considered to be made up of hereditary and environmental factors and moderated by situational conditions.

Heredity

It refers to those factors that were determined at conception. Physical stature, facial attractiveness, gender, temperament, muscle composition and reflexes, energy level, and biological rhythms are characteristics that are generally considered to be either completely or substantially influenced by who your parents were that is by their biological, physiological, and inherent psychological makeup. The hereditary approach argues that the ultimate explanation of an individual's personality is the molecular structure of the genes, located in the chromosomes. Evidence demonstrates that traits such as shyness, fear, and distress are most likely caused by inherited genetic characteristics. It suggests that some personality traits may be built into the same genetic code that affects factors such as height and hair colour.

If personality characteristics were completely dictated by heredity, they would be fixed at birth and no amount of experience could alter them. For example, if you were relaxed and easy going child, it would be result of your genes, and it would not be possible for you to change those characteristics. But personality characteristics are not completely dictated by heredity.

Environment

Environment to which we are exposed plays a substantial role in shaping our personalities. For example, culture establishes the norms, attitudes, and values that are passed along from one generation to next and create consistencies over time. The environmental factors that exert pressures on our personality formation are culture in which we raised, our early conditioning, the norms among our family, friends, social groups, social interaction, etc that we experience.

Both heredity and environmental factors are important determinant of human personality. Heredity sets the parameters or outer limits, but, an individual's full potential will be determined by how well s/he adjusts to the demands and requirements of the environment.

Situation

It influences the effects of heredity and environment on personality. An individual's personality, although generally stable and consistent, does change in different situations. Situations seem to differ substantially in the constraints they impose on behaviour. Some situations (e.g., employment interview) constraints many behaviour; other situations (e.g., a picnic in a public park) constrain relatively few.

ROLE OF PERSONALITY IN AGRICULTURAL EXTENSION

The knowledge of human personality enables the extension agent to judge and follow the method of guiding by selecting suitable teaching methods. This helps the extension agent to properly plan the educational programme to accomplish the objectives for a desirable change in the farmers. By studying the personality of farmers, extension agent can understand the values and value systems of its clients and can proceed his work accordingly.

By studying the personality of a particular farmer, the extension agent can get a clear idea about his various traits such as sociability. If a person found with this trait, then he can be used as a key communicator to promote developmental activities in a particular village. Similarly, farmers with traits of empathy, sympathy, generosity can be engaged in trustworthy works like seed distribution etc.

learning and learning experience

What is learning?

All complex behaviours are learned. Learning is a theoretical concept. Hence, it is not directly observable. We can infer that learning has taken place if an individual behaves, reacts as a result of experience in a manner different from the way formally behaved. Learning has no universally agreed definition (see Box #1). The way one defines it emanates from, as well as influences, the way one theorises learning. Thus there are as many definitions as there are theories of learning. For instance, cognitive theories of learning, which emphasise the thought process and the role of the mind in learning, view it as the mind's ability to acquire, process, and retain new knowledge and information. Thus cognitive psychologists studying learning are interested in unobservable mental activities such as thinking, remembering, creating, and solving problems. On the other hand, behavioural psychologists view that the outcome of learning is change in behaviour and emphasises the effects of external events on the individual. But experiential theories, which emphasise the role of action and experience in learning, conceptualise it in terms of competencies generated among learners.

Box #1: Definitions of learning

- Learning is a process of progressive behaviour adaptation (Skinner, 1960).
- Learning is a process by which a person becomes changed in his behaviour through self-activity (Leagans, 1961).
- Learning is the process whereby knowledge is created through the transformation of experience (Kolb, 1984).
- Van den Ban & Hawkins (1988) defined learning as the acquiring or improving the ability to perform a behavioural pattern through experience and practice.
- Learning is any relatively permanent change in behaviour that occurs as a result of experience or practice (Weiss, 1990).
- Learning is a relatively permanent change in behaviour that results from practice (Atkinson et al, 1993).
- According to Woolfolk (1995), learning occurs when experience causes a relatively permanent change in an individual's knowledge or behaviour.

Features of learning

- Learning involves change: change may be good or bad, desirable or undesirable.
- The change must be relatively permanent: temporary changes may be only reflexive and fail to represent any learning. Therefore, the requirement of learning is that it must be relatively permanent, which rules out changes due to drugs, habituation, illness, fatigue, hunger, or temporary adaptations. For example, a person who has gone without food for two days does not learn to be hungry, and a person who is ill does not learn to run more slowly. Of course, learning plays a part in how we respond to hunger or illness.
- The change must be brought about by experience: The change may be deliberate or unintentional, for better or for worse. To qualify as learning, this change must be

brought about by experience – by the interaction of a person with his or her environment. The experience may be acquired directly through practice or indirectly, through reading or observation. Change due to maturation, such as growing taller or turning grey, do not qualify as learning.

What is learning experience?

The important point in the process of teaching learning, regardless of its content, form, or objective, is to enable learners to have an effective learning experience. An effective learning experience is one that results in a maximum of desirable change in behaviour on the part of the learners.

An effective learning experience involves far more than simply being physically present in a learning situation or placing oneself in a position to learn. It is what a learner does in the learning situation that is the all important aspect of learning. Learning, therefore, takes place through the experience which the learner has; i.e., through the reactions s/he makes to the content which is to be learned. Hence, it is what the learner does, not what the instructor does, that is especially important in a learning situation. A learning experience, then, is not the same as merely attending a meeting or a class or a demonstration.

Learning situation

What is learning situation?

An effective learning experience can only be had in a well-structured and skilfully executed learning situation. The essential role of the extension agent is to create learning situations that stimulate and guide learning activity. A good extension agent is one who can create and manage learning situations in which learners have effective learning experiences.

Elements of learning situation and their characteristics

Extension teaching requires learning situations that includes five major elements. The five elements necessary to constitute an effective learning situation and important characteristics about each are presented below.

1. Learner

Person who wants and needs to learn is the learner. In an effective learning situation, a learner occupies the most important central position and all efforts are directed towards him/her. Learners should:

- i) be capable of learning
- ii) have interest in the subject
- iii) have need for the information offered, and
- iv) be able to use the information once it is gained.

In the extension education, the farmer, farmwoman, and rural youth comprise the learner. To explain the learning situation, we take an example in which dairy farmers who need to increase milk production are learners.

2. Teacher

S/he is the extension agent who imparts training and motivates the learner. S/he not only knows what to teach, but also knows how to teach. The teacher should:

- i) have a clear cut and purposeful teaching objectives,
- ii) knows the subject-matter and have it well organised,
- iii) be enthusiastic and interested about the learners and the subject-matter,
- iv) be able to communicate and skilful in using teaching aids, and
- v) be able to encourage participation of the people.

3. Subject Matter

It is the content or topic of teaching that is useful to the learner. The subject matter should be:

- i) Pertinent to the learner's needs
- ii) Applicable to their real life situations
- iii) Well organised and presented logically and clearly
- iv) Consistent with the overall objectives
- v) challenging, satisfying and significant to the learner. Here, the subject matter is increasing milk production.

4. Teaching Materials

These are appropriate instructional material, equipments and aids. The teaching material should be:

- i) suitable to the subject matter and physical situation,
- ii) adequate in quantity and available in time, and
- iii) skilfully used.

In the present example, teaching materials may be improved breeds of bull or semen and fodder seeds suitable for the area, appropriate medicines, audio-visual aids relevant to the topic etc.

5. Physical Facilities

It means appropriate physical environment in which teaching learning can take place. The physical facilities should be:

- i) Compatible with objective
- ii) Representative of the area and situation
- iii) Adequate and easily accessible.

In the present example, physical facilities may include facilities for AI and administering medicines; suitable land, irrigation etc. for fodder cultivation; and a place easily accessible, free from outside distractions, adequate seating arrangements, electricity for projection, etc. for conducting training programme.

Principles of learning

There are some principles of learning which are very much applicable in extension. The principles are generalised guidelines which form the basis for taking action. Following are some of the principles of learning along with their implications in teaching.

1. Principle of association

Learning is growth-like and continuous. The kind of learning that takes place is the result of the kind of experience we have. Previous learning always sets the stage for subsequent learning. New learning may be associated with previous successful and satisfying responses.

For example, if the farmers have obtained profitable return by the application of nitrogenous fertilizer, they may be motivated to use balanced fertilizers containing phosphate and potash, for still higher return.

Implications for teaching

Implications of this principle are:

- Begin at the level of the learner.
- New must be related to the old.
- Adjust the pace to the learner's capacity, one idea at a time.
- Bring the idea to the attention of the learner repeatedly (in a variety of ways) and over a period of time.

2. Principle of clarity of objectives

Learning is more effective when it is purposeful. The learning must be useful to the learners. Objectives must be clear and meaningful to the learners. What is to be learnt must be important to a relatively large number of participants in the group and must be attainable.

Implications for teaching

- Learning must make sense to the learner.
- Progress must be constantly appraised and redirected.
- Purpose must be kept in sharp focus (objectives must be clear to the learner and teacher)

3. Principle of self-activity

Learning is an active process on the part of the learners. The instructor can create a situation and stimulate a person to learn. The door to learning is "locked on the inside" and unless the learner opens the door herself/himself, learning cannot take place. Activities appropriate to the specific learning must be used. For example, conducting demonstration by the farmers in their own fields provides opportunity of self-activity, that is, learning by doing. This makes learning effective and permanent.

Implications for teaching

- Activities appropriate to specific learning situation must be used.
- Learning activities should engage a maximum number of senses.

4. Principle of motivation

To learn, people need to feel the need for learning. When this desire exists, the learner will exert a high level of effort. The learning experience, therefore, should be designed so learners can see how it will help them achieve those goals they have set for themselves.

Implications for teaching

- Teacher motivation of the student is essential in making learning more challenging.

- Standards demanded of the learner should be suitable to their ability or capacity.
- Appropriate and timely recognition should be given to student achievement.

5. Principle of practice

When learner actually practice what they have read, heard, or seen, they gain confidence and are less likely to make errors or to forget what they have learned. Active involvement through practice, therefore, should be made part of the learning process.

Implications for teaching

- Course content should be organised into meaningful units.
- Theory should be related to practice.
- Provide activities that stimulate actual use situation.

6. Principle of disassociation

Learning is affected by emotions. The most effective way of eliminating an undesirable response is to set up a desirable substitute that must be more satisfying than the original reaction. For example, when planting a crop in lines gives better yield, the farmer may be advised not to practise broadcasting.

Implications for teaching

- Strive to increase pleasant emotions and decrease unpleasant emotions of students in connection with the learning process.
- Train the expression of emotions in the right direction.

7. Principle of readiness

Learning takes place more effectively when one is ready to learn.

8. Principle of set or attitude

An unfavourable attitude or set retards learning and a favourable attitude accelerates it.

9. Principle of reinforcement

Behaviours that are positively reinforced (rewarded) are encouraged and sustained. When the behaviour is punished, it is temporarily suppressed but is unlikely to be extinguished.

10. Principle of transfer of learning

It does not make much sense to perfect a skill in the classroom and then find that you cannot successfully transfer it to the job. Therefore, learning should be designed to foster transferability.

11. Principle of feedback

Learning is facilitated when the learners are provided with knowledge of progress of learning.

12. Principle of abilities

Learning abilities varies widely among individuals. The level of communication and the level of understandability of the subject matter taught must be in line with the learner's ability

Intelligence: meaning and definitions

What is intelligence?

The concept of intelligence is very important in education but it is quite controversial and often misunderstood. Intelligence is a key construct employed to know how individuals differ from one another. It also provides an understanding of how people adapt their behaviour according to the environment in which they live. Intelligence is the ability of an individual to cope with his environment. It may be thought out as a composite of organisation or an organisation of activities to learn, to grasp broad and subtle facts especially abstract facts with alertness and accuracy to exercise mental control and to display flexibility in seeking the solutions of problems (see box # 1 for definitions). Intelligence characterises the whole behaviour of an individual and is sum of her/his abilities which are quantitatively differentiable. Intelligence is the product of heredity and environment. The opportunities to learn vary widely, yet the inherited capacity as modified by maturation accounts for a greater part of the individual variability. In order to understand concept of intelligence, we have to know its theories.

Box #1: Definitions of Intelligence

- Intelligence is the ability to judge well, reason well and act well (Binet).
- Intelligence is the global or aggregate capacity of an individual to think rationally, act purposefully, and to deal effectively with her/his environment (Wechsler).
- Intelligence is the capacity to learn and adjust to relatively new and changing conditions (Wagnon).
- Intelligence is the the ability to adapt, to shape and select environment to accomplish one's goals and those of one's society and culture (Sternberg).
- Intelligence is the capacity to do something useful in the society in which we live. Intelligence is the ability to respond successfully to new situations and the capacity to learn from one's past experiences (Gardner).
- Intelligence is the ability or abilities to acquire and use knowledge for solving problems and adapting to the world (Woolfolk).

Uni or one factor theory

Some psychologists believe intelligence is a basic ability that affects performance on all cognitively oriented tasks. will do well in computing mathematical problems, analysing poetry, taking history essay examinations, and solving riddles.

Two-factor theory

Spearman suggested that intelligence consisted of a general factor (g-factor) and some specific factors (s-factors). The g-factor includes mental operations which are primary and common to all performances. In addition to the g-factor, he said that there are also many specific abilities. These are contained in what he called the s factor. Excellent singers, architects, scientists, and athletes may be high on g-factor, but in addition to this, they have specific abilities which allow them to excel in their respective domains.

Multiple theory of intelligence

According to Gardner, all human beings possess at least eight intelligences (see Box #2). Thus, intelligence is not a single entity; rather distinct types of intelligences exist. Each type of intelligence is independent one. It means, if a person exhibits one type of intelligence, it does not necessarily indicate being high or low on other types of intelligences. Gardner also put forth that different types of intelligences interact and work together to find a solution to a problem.

Box #2: Eight types of intelligence (Gardner)

- Linguistic (skills involved in the production and use of language): It is the capacity to use language fluently and flexibly to express one's thinking and understands others.
- Logical-Mathematical (skills in scientific thinking and problem solving): It is the ability think logically and critically.
- Spatial (skills in forming visual images and patterns): It refers to the abilities involved in forming, using, and transforming mental images.
- Musical (sensitivity to musical rhythms and patterns): It is the capacity to produce, create and manipulate musical patterns.
- Bodily-Kinaesthetic (using whole or portions of the body flexibly and creatively): This consists of the use of the whole body or portions of it for display or construction of products and problem solving.
- Naturalistic (sensitivity to the features of the natural world): This involves complete awareness of our relationship with the natural world.
- Interpersonal (sensitivity to subtle aspects of others' behaviours): This is the skill of understanding the motives, feelings and behaviours of other people so as to bond into a comfortable relationship with others.
- Intrapersonal (awareness of one's own feelings, motives, and desires): This refers to the knowledge of one's internal strengths and limitations and using that knowledge to effectively relate to others.

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Intelligence as a Process

Sternberg's triarchic theory suggests that intelligent behaviour is the product of applying thinking strategies, handling new problems creatively and quickly, and adapting to contexts by selecting and reshaping our environment. Sternberg believes that intelligence is comprised of three separate, analytical, creative, and practical (see box #3). though interrelated abilities:

Box #3: Sternberg's view of Intelligence

- **Componential (analytical) Intelligence:** It is the ability to think abstractly, process information and determine what needs to be done. This intelligence has three components, each serving a different function. First is the knowledge acquisition component, which is responsible for learning and acquisition of the ways of doing things. The second is the Meta or a higher order component, which involves planning concerning what to do and how to do. The third is the performance component, which involves actually doing things.
- **Experiential (creative) Intelligence:** It is the ability to formulate new ideas and combine unrelated facts. It is involved in using past experiences creatively to solve novel problems. It is reflected in creative performance. Persons high on this aspect integrate different experiences in an original way to make new discoveries and inventions.
- **Contextual (practical) Intelligence:** It is the ability to adapt to a changing environment and to shape one's world to optimise opportunities. It may be called 'street smartness' or 'business sense'.

Concept of Intelligence Quotient (IQ)

In 1912, William Stern, a German psychologist, devised the concept of Intelligence Quotient (IQ). The IQ is the ratio between the individual's mental age and her/his chronological age. In order to avoid fractions, the ratio is multiplied by 100.

MA

$$IQ = \frac{MA}{CA} \times 100$$

CA

Mental Age (MA): It is a measure of a person's intellectual development relative to people of her/his age group. A mental age of 12 means that a student's performance on an intelligence test equals

average performance level of a group of 12 year olds. **Chronological Age (CA):** It is the biological age or actual age in year from birth. A bright student's MA is more than her/his CA; for a dull student, MA is below the CA.

According to formula, a student with mental age of 10 and chronological age of eight should have IQ of 125. The level of intelligence may be indicated as follows:

S No	Category	Level of IQ
1.	Idiot	0-25
2.	Imbecile	25-50

3.	Moron	50-70
4.	Below Normal	70-90
5.	Normal	90-110
6.	Superior	110-120
7.	Very superior	120-140
8.	Genius	140 and above

Types or kinds of intelligence

The concept of general intelligence is too broad to be much practical value. For convenience, therefore, psychologists often distinguish three kinds of intelligence.

1. Abstract intelligence

It is the ability to understand and deal with verbal and mathematical symbols. Out of the three, this is the one that receive greatest weight. Professional people are high in abstract intelligence. For instance, if a farmer knows about iron deficiency in sugarcane, if same mineral deficiency occurs in other crop, he can find it.

2. Mechanical intelligence

It is the ability to understand and deal with things, objects etc and more concerned with the skills of individuals. Industrialists and building traders' are high in this intelligence. For instance, a farmer who is having mechanical skill to perform spraying operation does fast and effectively than those with less mechanical skill.

3. Social intelligence

It is the ability to understand and deal with persons, to apply psychological principles of human relationship. Salesperson, politician, diplomat possess this intelligence.

Factors affecting intelligence

There are numerous factors which directly or indirectly affect the intelligence of the individual and which make up the behaviour pattern of the individual. These factors may be of the following forms:

Heredity and environment

There is a general consensus among psychologists that intelligence is a product of complex interaction of heredity (nature) and environment (nurture). Heredity can best be viewed as something that sets a range within which an individual's development is actually shaped by the support and opportunities of the environment. For example, if a person has tall parents, it is likely that the individual will also grow to be tall. However, the exact height of the person can be influenced by environmental factors, such as nutrition and disease. Heredity provides the physical body to be developed with certain inherent capabilities, while environment provides for the maturation and training of the organism. Newman (1940) concluded that variation in IQ were determined about 68 per cent by heredity and 32 per cent by environment. This was an average statistical determination.

Age

A person who is bright or dull in his childhood tends to remain bright or dull throughout his life. The evidence shows that a person achieves his maximum IQ at about 20 years of age and remains relatively stable until around 70 years of age. Some abilities remain constant, while others decline rapidly due to declining physical efficiency.

Health and physical development

Physical and mental health may be related to one's ability to gain desirable achievements in mental activity. With delicate health, one may not possess enough energy to engage in mental activity to achieve necessary success. Physical defects such as incomplete maturation of brain cells may result in subnormal intelligence.

Sex

Analysis of performance on scientific items of intelligence test appear to show that there is a slight superiority of boys in questions that involve mathematical material and scientific concepts, and that girls excel in material that deals more directly with humanities.

Race

There is no convincing evidence to show how far race is a factor in determining intellectual level.

Culture

Culture also influences the intelligence of the individual to some extent. Sternberg's notion of contextual or practical intelligence implies that intelligence is a product of culture. In technologically advanced societies, persons are well-versed in skills of attention, observation, analysis, performance, speed, and achievement orientation due to the adoption of child rearing practices that foster these types of skills. Therefore, the test in this respect should be standardised from one culture to another culture.

Social and economic conditions

As the home plays a significant role in the early development years, it can be expected that home conditions can exercise considerable influence on behaviour and attitudes. The activities, interests, and financial status of parents and of other adults in the neighbourhood environment may provide for the child poor, relatively meagre, or an extremely rich series of experiences. Drive and motivation can operate to overcome social and economic handicaps.

Importance of intelligence in agricultural extension

The concept of intelligence can be used in various fields including agricultural extension. All type of individuals, irrespective of their mental strength can be utilised in some or other aspects. Extension agent can know the type of intelligence a farmer possesses and can be used accordingly. Similarly, the knowledge of some of the factors affecting intelligence of individual can be manipulated by extension agent.

Farmers with higher intellectual capacity can be better utilised by offering broader opportunities and with programmes for their accelerated growth. For example, if a farmer is found to have good teaching abilities then s/he can be used in general extension meetings to educate other farmers.

Thus, an extension agent can increase her/his effectiveness by using techniques for teaching farmers with different levels of intellect for smooth introduction of programmes of change.

