CHAPTER – I
INTRODUCTION

1.00 Introduction

Education is a process of human enlightenment and empowerment for the achievement of a better and higher quality of life. In general sense, it is a process through which the inborn qualities or latent powers of the child are improved and unfurled. The process of education facilitates the physical, mental, social, emotional and spiritual development of the individual. Education makes a man complete who is equipped with the power of understanding, observation and objectivity. It makes man a good thinker, a good worker and a good companion. Education develops the individual like a flower which distributes the fragrance all over the environment. Education is that conductive process which drags a person from darkness, poverty and misery by developing his individuality in all its aspects physical, mental, emotional and social. With this type of all-round development, the individual becomes a responsible, dynamic, resourceful and enterprising citizen of strong, good moral character who uses all his capabilities to develop his own self, his society and his nation to the highest extent by contributing his best to national honour, glory, culture and civilization of the nation of which he is an integral part.

1.10 Introduction of the Variables under Study

In the present study, three important variables are intended to be studied; these are Academic Achievement, Emotional Maturity and Intelligence. The variables are described along with the relationship between these in the context of secondary school students in Assam.

1.11 Academic Achievement

Achievement means performance. The Dictionary meaning of the word achievement is “to perform successfully”. Academic Achievement refers to educational performance of students studying in schools. How far they are successful in acquiring knowledge, understanding and skills in different subjects presented to them for study through curriculum is to be reflected as index of their Academic Achievement.
The concept of achievement is understood in social and educational context which centers around the success of students in terms of scoring higher marks in examination which in turn helps later in securing jobs at the higher level of employment or achieving reputed positions in the society. Otis Dudley Duncan and others (1972) argue that occupation is an important parameter of achievement. On the other hand, J.W.B Douglas (1968) and his associates define achievement in terms of high performance of children in school tests. It is true that they have not specified the explicit model for educational achievement but their data do address the relationship between the socio-economic status and other characteristics of the family, on one hand, the performance of children in both primary and secondary schools, on the other hand. Higher performance in terms of scoring more than the mean in school tests has been regarded as the basis of comparing achievement. There may be controversy the type of examination intended to test the intelligence of the students but there is no controversy regarding as to the scoring of higher marks or grades as the basis of achievement for scoring of higher marks or grades is the only valid yardstick of testing intelligence, merit and academic excellence.

Achievement is a relative quality which depends on various factors such as merit, atmosphere of studies and living environment, growth of a person, standard of schools, teachers and economic status of families etc. According to different psychologists and educationists, every aspect of personality and environment may affect the academic achievement at all levels of education. The term academic achievement refers not only to the performance of students in different examinations, but also to their performance in games and sports, social activities, cultural activities and so on.

Academic Achievement implies the accomplishment of the performance carried out successfully by students in their academic life. It is a multidimensional activity and a central concept in the area of educational psychology.

English & English (1981) defined academic achievement as, “the attainment ability to perform in school tasks. This attainment may be general or specific to a given subject matter. The word ‘academic’ stands for those aspects of school that involve the study of subject books. The achievement of the students in the courses, syllabus, subjects and books studied by them and expressed in the
form of grades, percentage or on any other point scale, can broadly be termed as academic performance”.

According to Encyclopedia Dictionary of Education (1996), Academic achievement means, “knowledge acquired and skills developed in school subjects, generally indicated by marks obtained in tests”. Academic Achievement can also be called as the acquired potential (knowledge and capabilities) in a subject or subjects. It is the level of performance in school subjects as exhibited by an individual. The study of the academic achievement of secondary school students will be helpful in providing guidance and counseling to this section of the students. Secondary stage is most important. The students after completing this stage join higher education or professional education. Their standing and school subjects will help them in their course selection and success in that endeavor. The study becomes more significant as secondary school students are in terminal stage whereas for some students secondary stage becomes terminal on account of socio-economic circumstances. Moreover, the secondary school years are shadowed by the spectra of achieving responsible board examination marks. The marks obtained in the board examination will determine future options for the students. ‘Academic Achievement is of paramount significance in the educational process. The formal system of education has its own hierarchy based on academic achievement and performance. The school performance guides the function of selection and differentiation among students on the basis of their scholastic and other attainments’ Soni (1985). The academic achievement of students assumes enormous importance in view of its practical values. It forms the main basis of admission and getting jobs. It serves as an important educational goal. Morge and Wingo (1970) defined Academic Achievement as the total information a student has when he finishes a course of instruction. Garrett (1968) also observed the relative importance of academic achievement for students. Various factors like intelligence, achievement motivation, sex, race and background contribute more to the achievement of students.

A test of educational achievement is one that is designed to measure knowledge, understanding and skills of students in a particular subject or a group of subjects taught in schools. It is designed to measure the individual’s quality and quantity of learning in a single or more school subjects yielding a score for each subject and a total score for all the subjects combined. Academic
Achievement is of paramount importance particularly in the present socio-economic and cultural context. Obviously, in the school great emphasis is placed on achievement right from the beginning of formal education. The school has its own systematic hierarchy which is largely based on achievement and performance rather than other considerations. Thus, the school tends to emphasise achievement which facilitates among other things, the process of role allocation for the social system. The school performs the functions of selections and differentiation among students on the basis of their scholastic and other attainment and opens avenues for advancement again, primarily in terms of achievements. The students at school are trained to accept this hierarchy based on achievement. This helps the students to be released from the family status in certain ways. His personal status is inevitably a direct function of the position he achieves, mainly in the formal classroom setting. Researches have shown that besides being the criteria of promotion to the next class, academic achievement is an index of all future successes in life. Superior achievers in the academic world generally tend to maintain their level of achievement in the occupational field also. To reach the goal of excellence in the academic achievement to the maximum, a review of correlate of academic achievement and its implications for educationists and policy makers would be meaningful. The role of academic achievement in the educational system in particular and in the development of nations in general is assuming greater importance. This is because of the new demand arising from the rapidly changing societies as well as because of the increased aspirations of individuals for economic, cultural and intellectual improvement.

Thus, it can be concluded that the academic achievement is said to be level of proficiency attained in academic work or formally acquired knowledge in school subjects. This is often represented by students in examination. In view of this, the factors affecting it play an important role in determining an individual’s position and status in the reference group.

**Importance of Academic Achievement**

In the present world changes are taking fast. There is an explosion of knowledge in all walks of life. The growth of science and technology has brought changes in socio-economic conditions of the society. Because of explosion of aspirations, every parent today sets high goals to educate his Childs. Thus,
academic achievement has become a case of educational growth. Good academic achievement helps to develop self-esteem, self-respect and self-confidence and helps the individual to create a niche for him-self in the competition ridden society. Academic achievement has a great importance in personal life. Success in academic subjects act as an emotional tonic and any damage done to a child in the home or neighbourhood may be partially repaired by success in school or college. It motivates the students to set high goals for themselves. Importance of academic achievement can be judged when you realise fuller and happier life, which we wish for every student, would be impossible unless he has attended high degree of proficiency in his subjects. Academic achievement to a great extent predicts the future of student. At the time of admission, for entrance in job or for further studies, good academic achievement record is the only recommendation. Therefore, academic achievement is the unique responsibility of all educational institution established by society to promote a whole some scholastic development of the students.

**Factors Affecting Academic Achievement**

Academic achievement depends upon so many factors without which one cannot show the attainment in a better way in academic pursuits. Academic achievement is a multi-dimensional process which involved complex phenomena encompassing intellectual and personality factors. Academic achievement plays significant role in shaping the career of the individual and planning for further education. Therefore, the researchers have been attempting since long to investigate various such factors which determine academic achievement.

Academic achievement assures that child is making use of his abilities. In common man’s parlance, there exists terms such as ‘bright’, ‘dull’ and ‘average’ students which necessitate to make a fresh look at these terms with cynical empiricism. For unravelling the psychological mysteries surrounding the factors that influence individual student in academic achievement, either positively or negatively, is very important. The problem why students achieve or fail to achieve in school was always a matter of interest to psychologists and educators. There are many cognitive and non-cognitive factors such as intelligence, creativity, socio-economic status, adjustment, study habits, social acceptance and level of aspiration, achievement motivation, location of schools or residence and gender, which influence the learning of students.
The relationship of convergent and the divergent thinking and intelligence with academic achievement of students is quite conclusive. The world is becoming more and more competitive. Quality of performance has become one of the key factors for personal progress. Parents desire that their children climb the ladder of performance to as high a level as possible. The desire for a high level of achievement puts a lot of pressure on students, teachers and schools and in general to the educational system itself. In fact, it appears as if the whole system of education revolves round the academic achievement of students, though various other outcomes are also expected from the system. Thus, a lot of time and energy of the school are used for helping students to achieve better in their scholastic endeavours.

1.12 Emotional Maturity

The word emotion has been derived from the Latin word “emovere”, meaning “to move out”. Emotion may be defined as the stirred up condition of the organism involving internal and external changes in the body. Crow and Crow (1959) have defined emotion as: “An affective experience that accompanies generalized inner adjustment and mental and psychological stirred up states in the individual, and that shows itself in his overt behaviour”. According to Kimball Young, “Emotion is the aroused psychological state of the organism marked by increased bodily activity and strong feelings directed to some subjects”. According to Woodworth (1945), “Emotion is a ‘moved’ or ‘stirred-up’ state of an organism. It is a stirred-up state of feelings that is the way it appears to the individual himself. It is a disturbed muscular and glandular activity that is the way it appears to an external observer”. According to Charles G. Morris (1979), “Emotion is a complex affective experience that involves diffuse physiological changes and can be expressed overtly in characteristic behaviour patterns”. McDougall (1949), “Emotion is an affective experience that one undergoes during an instinctive excitement”.

P.T. Young (1960) offers the definitions of emotions as: “An emotion is distributed state of organism: an emotion includes visceral changes due to increased activity of autonomic nervous system and an emotion originates within the psychological situation”. It is expressed in love, fear, anger, laughter and tears, etc. It involves feelings of jubilation or depression and impulse to action-
awareness of perception. Basically, human beings are creatures of feelings or emotions. Our emotions control our behaviour. Emotion in the organism is a dynamic internal adjustment that operates for the satisfaction and welfare of the individuals.

Emotional Maturity is always relative. A five year old child has emotional maturity if he is capable of the emotional behaviour we judge fit for a five year old. Emotional maturity however, develops throughout life. It is also a form of maturity from which one can regress most quickly. The adolescent becomes emotionally more mature as the parents permit him to accept responsibilities and become independent and self-sufficient.

**Nature of Emotion**

It is very difficult to define emotion. In fact, it is easier to understand than to define it. Everyone realizes what kind of feelings he experiences when he is grief-stricken, happy, angry or excited. Psychologists have named such experiences as emotions. Emotion is a powerful weapon in the hands of politicians, leaders and teachers. They try to have desired effect by arousing emotions of children and citizens. Under the influence of an emotional fit, a person may commit murder, get angry with others, run away out of fear or get senseless or become so happy that he may even dance. Emotion not only impels and creates activity but also inspires other attitudes. The experiences of peace, happiness and love are also counted as emotional experiences. The following points are reflecting to the nature of emotional maturity.

1. **Capacity to Stand Emotional Tension**

   The emotionally mature person is able to control the expression of his feelings. Emotionally immature person speaks out whatever comes to his mind during an emotional outburst. He may do anything in an emotional fit. Of course, there should be an outlet for emotional expressions. The emotionally mature person chooses this outlet within the limits of ideals and norms of the society.

2. **Indifference towards some Emotional Stimulus**

   Emotionally mature person may show indifference to those emotional stimuli which provoke children and adolescents immensely.

3. **Absence of Sentimentalism**

   During adolescence an individual may be easily affected by something irksome and show great annoyance. Some adolescents may become irritated at
very simple things. They may show immense happiness by their outbursts of laughter. The emotionally mature person is free from such bad manners.

4. In the action of an emotionally mature person his whole self is involved. But in an emotionally immature person the behaviour may be only hypocritical.

5. An emotionally mature person at times may show only partial response, that is, he may control it. But an immature person may show full response or more.

For success in life emotional maturity is necessary. For acquiring this individual may participate in various activities of real life situations. The following things are necessary for emotional maturity.

1. **Good Health**

   It is generally seen that one, when tried, easily gets into an emotional tension. The one having bad health is not able to exercise reasonable control over his emotional expressions. Therefore, it is very necessary to follow health rules if emotional maturity is to be acquired. The adolescent is in the process of acquiring maturity. Health has an all pervading influence, so due care should be taken of health.

2. **Control over the Environment**

   Both full freedom and strict control during childhood and adolescence obstruct the attaining of emotional maturity. If the environment of the child or adolescent is favourable for his physical and mental development, he will not fail in showing the desirable behaviour in a particular situation. Gradually, he will acquire the expected emotional maturity.

3. **The Tendency of being Cheerful**

   The tendency of being cheerful is very helpful in attaining emotional maturity. This tendency may even lighten the misery of a person. Not to lose oneself at one’s own defects and to be able to see the recreative aspect of a certain thing is very helpful in obtaining emotional maturity. If this tendency is developed during childhood and adolescence, the individual will easily acquire emotional maturity by the time he reaches adulthood.

4. **Development of Reason or Wisdom**

   The child or adolescent is still in the process of mental and social development. Therefore, at times he is not able to react according to the demand of a situation and sometimes others are naturally annoyed by his emotional
outbursts. If suitable opportunity is provided to the child or adolescent to understand the implied social setting of a certain phenomenon there will be a development of reason or wisdom in him and simultaneously he will also be acquiring emotional maturity when he reaches his adulthood.

5. Redirecting Emotional outburst towards a Healthy Channel

In spite of the best efforts the child and adolescent confront some such situations which naturally create emotional tension. Blocking of this tension will be harmful. If the children and adolescents are engaged in some healthy pursuits, such an emotional tension will automatically disappear. Music, fine arts, games and sports as well as involvement in social activities may be some of these pursuits. In this manner, they will gradually learn to control their emotional tension.

Nature of Maturity

1. One of the most obvious pathways of development long emphasized by Sigmund Freud (1923) and Franz Alexander (1946) is from the parasitic dependence of the foetus to the relative independence of parents, with parental capacity for responsibility for spouse and child.

2. Intimately bound-up with the organism’s development from parasitism on the mother to relative independence from the parents is its increase of capacity for responsibility and productivity and its decreased receptive needs. Children learn to control their hostilities, their sexuality and other impulses and to develop the orientations of maturity largely through the incentive of being loved.

3. Third characteristic of maturity are relative freedom from the well-known constellation of inferiority, egotism and competitiveness.

4. Another aspect of maturity consists in the conditioning and the training necessary for socialization and domestication.

5. Hostile aggressiveness, using the term to include all sorts of anger, hate, cruelty and belligerency, is always a sign of emotional irritation or threat.

6. Another example of important attribute of maturity is a firm sense of reality.

7. Still another characteristic of maturity is flexibility and adaptability.

Genesis of Emotional Disturbances

Dependence on his mother, the ambitions for prestige and success which imbibed the rivalry with his father and the depreciatory attitude toward him, the
failure to be identified with other men, the whole constellation continued on, still potent, although, for the most part unconscious effort to change. This test of his potentiality developed adequately in the direction of those attitudes, feelings and ways of functioning which we are beginning to recognize as mature.

The genesis of emotional disturbances can be reduced with some over simplification through the following steps:

1. Childhood emotional influences interact with the infant’s congenital endowment and developmental forces, the child being most formative up to the age of about six.

2. These influences, facilitate, retard or warp the development and cause an emotional pattern which persists, mostly unconsciously, in later life.

3. These “nuclear patterns” contain certain vulnerable emotion points; everyone has specific emotional vulnerabilities.

4. The environment exerts certain demands, pressures and frustrations.

5. The individual endeavours to harmonize the conflicting impulses within himself and to adjust himself to his environment.

6. In general, the more mature the individual is, the more stably and flexibly he adjusts, but when pressure impinges upon his emotional vulnerabilities, he reacts with mobilization for fight to flight.

7. The fear and the fright and the danger and hostile aggression tend to be handled as they were in childhood forms of satisfaction, thinking and behaviour.

8. These regressive reactions constitute and produce symptoms which can be grouped as:
   i. Inner (a) Psychosomatic (b) Neurotic (c) Psychotic and
   ii. Acting out (a) Masochistic (b) Destructive social behaviour
       (c) Criminal.

9. The ego reacts secondarily to the tension and the symptoms over a range, from denying to exploiting them.

In the present circumstances, youth as well as children are facing difficulties and are giving rise to many psychosomatic problems such as anxiety, tensions, and frustrations and emotional upsets in day-to-day life. So, the study of emotional life is now emerging as a descriptive science, comparable with anatomy. It deals with interplay of forces with intensities and quantities. Available tests are crude and measure chiefly the degree of dependence. As self-
acceptance is an important aspect of maturity, it must be preceded by acceptance from others.

Actually, emotional maturity is not only the effective determinant of personality pattern but it also helps to control the growth of adolescent’s development. The concept “mature” emotional behaviour of any level is that which reflects the fruits of normal emotional development. A person who is able to keep his emotions under control, who is able to break delay and suffers without self-pity, might still be emotionally stunned and childish. Morgan (1924) stated the view that an adequate theory of emotional maturity must take into account of the full scope of the individuality, powers and his ability to enjoy the use of his powers.

According to Walter D. Smitsen (1974), emotional maturity is a process in which the personality is continuously striving for greater sense of emotional health, both intra-psychically and intra-personally.

Kaplan and Baron (1986) elaborate the characteristics of an emotionally mature person; and say that he has the capacity to withstand delay in satisfaction of needs. He has the ability to tolerate a reasonable amount of frustration. He has belief in long-term planning and is capable of delaying or revising his expectation in terms of demands of situations. An emotionally mature child has the capacity to make effective adjustment with himself, members of his family and his peers in the school, society and culture. But maturity means not merely the capacity for such attitude and functioning but also the ability to enjoy them fully.

L. S. Hollingworth (1928) mentioned some characteristics of emotionally mature person in the following points:

1. He is capable of responding in gradation or degree of emotional responses. He does not respond in all or none fashion, but keeps within bounds. If his hat blows off, he does not blow up.

2. He is also able to delay his response as controlled without the impulsiveness of young child.


Childhood emotional stresses influence the infant’s congenital heredity plus physical and emotional forces acting upon sperm and egg (prior to
conception and until birth), endowment and developmental forces, the child being most formative up to the age of about six.

Many criteria have been suggested by various researchers to evaluate the concept of maturity. A few of them are being mentioned below:

According to Bernard (1954) the following are the criteria of mature emotional behaviour:

i) Inhibition of direct expression of negative emotions.

ii) Cultivation of positive, up building emotions.

iii) Development of higher adjustment for disagreeable circumstances.

iv) Increasing satisfaction from socially approved responses.

v) Increasing dependence of actions.

vi) Ability to make a choice and not bother about other choices.

vii) Freedom from unreasonable fear.

viii) Understanding and action in accordance with limitations.

ix) Awareness of the ability and achievement of others.

x) Ability to err without feeling disgraced.

xi) Ability to carry victory and prestige with grace.

xii) Ability to delay the gratification of impulses.

xiii) The enjoyment of daily living, etc.

The most outstanding mark of emotional maturity, according to Cole (1944), is ability to bear tension. Other marks are indifference towards certain kinds of stimuli that affect the child or adolescent and he develops moodiness and sentimentality. Besides, the emotionally mature person persists the capacity for fun and recreation. He enjoys both play and responsible activities and keeps them in proper balance. Further, the characteristics of an emotionally mature are hetero-sexuality, appreciation of attitude and behaviour of others, tendency to adopt the attitudes and habits of others and capacity to delay his own responses.

According to another author Seoul (1951), if the emotional development of the individual is relatively complete, his adaptability is high, his regressive tendencies are low, and vulnerability is minimal. Therefore, the emotionally mature is not the one who necessarily has resolved all conditions that aroused anxiety and hostility but it is continuously in process of seeing himself in clearer perspective, continually involved in a struggle to gain healthy integration of feeling, thinking and action.
Guilford, J.P. (1954) has prepared a matrix of temperamental factors which is being reproduced below **Table-1:**

**Table-1**

**Matrix of Temperamental Factors**

<table>
<thead>
<tr>
<th>Kinds of Dimension</th>
<th>Areas of Behaviour Involved</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>General</td>
</tr>
<tr>
<td>Positive Vs Negative</td>
<td>Confidence Vs Inferiority</td>
</tr>
<tr>
<td>Responsive Vs Non-responsive</td>
<td>Alert Vs Inattentiveness</td>
</tr>
<tr>
<td>Controlled Vs Un-controlled</td>
<td>Impulsive Vs Deliberatedness</td>
</tr>
<tr>
<td>Objective Vs Ego-centric</td>
<td>Objective Vs Hypersensitive</td>
</tr>
</tbody>
</table>

*Source: Manual of Emotional Maturity Scale (EMS)*

An individual with emotionally disturbed behaviour reacts like a child, he looks for sympathy, conceited, quarrelsome, infantile, self-centred and demanding person, has preservative emotions, is emotionally excitable and feels very much upset to loose a game (Gibb, 1942; Brogden, 1944, Cattell, 1945). Taking these factors following are five broad factors of the emotional maturity level in individuals.

Emotionally disturbed behaviour can be described through ways reflected in these factors. The factors are:

i) Emotional Stability.

ii) Emotional Progression.

iii) Social Adjustment.

iv) Personality Integration.

v) Independence.
(i) Emotional Stability

Emotional Stability refers to the characteristics of a person that does not allow him to react excessively or given to swings in mood or marked changes in any emotional situation. The emotionally stable person is able to do what is required of him in any given situation. Contrary to it, emotional instability is a tendency to quick changing and unreliable responses and is a factor representing syndrome of irritability, stubborn, temper, tantrums, lack of capacity to dispose of problems and seek help for one’s day to day problems.

(ii) Emotional Progression

Emotional Progression is the characteristics of a person that refers to a feeling of adequate advancement and growing vitality of emotions in relation to the environment to ensure a positive thinking imbued with righteousness and contentment. Whereas emotional regression is also a broad group of factors representing such syndromes as feelings of inferiority, restlessness, hostility, aggressiveness and self-centeredness.

(iii) Social Adjustment

Social Adjustment refers to a process of interaction between the needs of a person and demands of the social environment in any given situation, so that they can maintain and adapt a desired relationship with the environment. Therefore, it may be described as a person’s harmonious relationship with his social world. Whereas socially maladjusted person shows a lack of social adaptability shows hatred, reclusive but boasting, liar and shirker.

(iv) Personality Integration

Personality Integration is the process of firmly unifying the diverse elements of an individual’s motives and dynamic tendencies, resulting in harmonious co-action and de-escalation of the inner conflict (English & English, 1958) in the undaunted expression of behaviour, whereas disintegrated personality includes all those symptoms, like reaction, phobias formation, rationalization, pessimism, immorality etc. Such a person suffers from inferiorities and hence reacts to environment through aggressiveness, destruction and has distorted sense of reality. In brief, such a person shows varied degrees of neuroticism which could be put as below

\[ Vs \times S \alpha \quad Ad/F \times R/P \alpha \quad T/E \alpha \quad N \]
Where:

Vs = Specific emotional vulnerability.
Ss = External stresses especially in relation to emotional vulnerability.
Ad = Difficulty of adjustment – internal and external.
F = Flexibility.
R = Regressive Forces.
P = Progressive Forces.
T = Emotional tensions.
E = Ego strength.
N = Degree of Neuroticism.
\( \alpha \) = Directly Proportional

**v) Independence**

Independence is the capacity of a person’s attitudinal tendency to be self-reliant or of resistance to control by others, where he can take his decisions by his own judgment based on facts by utilizing his intellectual and creative potentialities. He would never like to show any habitual reliance upon another person in making his decisions or carrying out difficult actions, whereas a depended person shows parasitic dependence on other is ego tic and lacks ‘objective interests’. People think of him an unreliable person.

**1.13 Intelligence**

Intelligence is a component of successful living. One indicator of the difficulty involve in understanding intelligence is the variety of the definitions used in its measurement. Intelligence refers to ease or difficulty with which people are able to learn various things. On the basis of this working definition, people of high intelligence in a particular function learn you behaviour in that area with comparative ease, which people with low intelligent find it difficult to learn the same things.

**Meaning of Intelligence**

In our day-to-day conversation we often comment that a particular child or individual is very intelligent. All such comments are based on our observation of the performance or behaviour of the individual concerned in comparison to others of his group.
A person’s intelligence is evaluated in terms of overt behaviour that reflects the functioning of complex elements comprising mental capacity. The concept of intelligence is readiness to learn, ability to do abstract thinking and ability to adapt to novel situations with speed and accuracy. In the mental process, it is said that it is a degree of effectiveness in perception, memory, reasoning and imagination. It is general capacity of an individual consciousness to adjust his thinking to new requirements. Stoddard (1943) says, “Intelligence is the ability to undertake activities that are characterized by difficulty, complexity, abstractness, speed, adaptiveness to goal, social value, innovativeness and to maintain such activities under conditions that demand a concentration of energy and resistance to emotional forces. Others say that it is the ability to adapt adequately to the environment, general tendency toward achievement. Some say that it is the mixture of particular abilities called as amplitudes.

As intelligence is an important determinate of one’s performance in any field of activity, it tries to make an estimate of one’s future success or failure. It is the future reference to predict the degree of attainment or success of an individual in an area or activity. Behaviour is generally influenced by the intellectual potential of a person. Intelligence refers to a student’s ability and capacity and maintaining a definite direction in thinking to attain goal. Wundt in Germany, Galten in England and Cattel in America discovered that individuals differ in the accuracy and speed of their responses when they are tested in single functions. Intellectual development responds to the influence of this nature. Although dull children can’t be made bright children, who tend to remain bright, yet there are evidences that a child may be born with high degree of potential ability to act intelligently, but unless he is stimulated through learning (improved environment) to exercise that capacity he may appear to be relatively dull or retarded.

Intelligence is power or faculty which helps us in understanding thinking and reasoning about the things. Intelligence is the only word which makes the human being different from animal. God has endowed human beings with certain cognitive abilities by which man becomes a rational being. David Wechsler (1944) said, “Intelligence is the aggregate or global capacity of an individual to act purposefully, to think rationally and to deal effectively with his environment.” Our learning and thinking are possible through intelligence only. It is an organization comprising the abilities of readiness, correctness and of
understanding complicated and abstract things and with its help a person shows necessary mental control and action in solving problems. ‘Intelligence’ is a term describing one or more capacities of the mind. In different context, the term ‘intelligence’ can be defined in different ways, including the capacities for abstract thought, understanding, communication, reasoning, learning, planning, emotional intelligence and problems solving. Intelligence is most widely studied in human beings, but it is also observed in animals and plants.

Intelligence is the necessary condition for achievement. It is impossible to achieve without corresponding intelligence which is comprised of mental abilities. Ability is about the quality of being able to do something which serves as the foundation of achievement.

The process of achievement fostered the development of intelligence. Kornhaber, Krechevsky and Gardener (1990) convinced of intelligence as the product of dynamic process involving individual abilities, the values and opportunities afforded by society. This statement emphasizes that the development of individual abilities infers the development of intelligence in a given social environment. The development of intelligence is correlated with the development of individual abilities through individual experience in particular environment. The process of achievement is an important individual experience and displays directly the development of individual competencies.

Intelligence is evidenced by past and present achievement used for predicting future achievement. Intelligence sets up the foundation of achievement. The occurrence of achievement requires not only the corresponding intelligence but also motivated and supported by appropriate academically congenial environment.

**Defining Intelligence**

Intelligence is a concept. It is difficult to define. Psychologists have defined the term ‘intelligence’ in different ways. The term is usually applied to those mental activities that constitute higher mental processes.

Stern (1914) defined intelligence as a general capacity of an individual consciously to adjust his thinking to new requirements. It is the general mental adaptability to new problems and conditions of life.

According to Thorndike (1914), Intelligence may be defined as “the power of good responses from the point of view of truth or fact”.

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To Terman (1921), an individual is intelligent in the proportion that he is able to carry on abstract thinking.

Wagnon (1937) defined, “Intelligence is the capacity to learn and adjust to relatively new and changing conditions”.

According to Woodworth and Marquis (1948), “Intelligence means intellect put to use. It is the use of intellectual abilities for handling a situation or accomplishing any task”.

Jean Piaget (1952) defined, “Intelligence is the ability to adapt to one’s surroundings”.

There are other definitions which define intelligence as the ability to learn, to deal with abstractions, to make adjustments, to adapt to new situations, or the ability or power to make appropriate responses to certain stimuli in a given situation. If these are taken separately, they give an incomplete picture because each of them emphasizes a single aspect.

In view of the lacunae in the existing definitions, David Wechsler (1944), who devised the adult intelligence test, tried to provide a somewhat comprehensive definition: Intelligence is the aggregate or global capacity of an individual to act purposefully, to think rationally, and to deal effectively with his environment.

Wechsler (1944) also provided a criterion for defining intelligent behaviour in terms of four characteristics, i.e., it involves awareness, is goal directed, rational and has value. Taking a cue from this criterion, Stoddard (1943) defined intelligence as: The ability to undertake activities that are difficult, complex and abstract and which are adaptive to a goal, and are done quickly and which have social value and which lead to the creation of something new and different.

Keeping all these definitions discussed, we may attempt a viable definition of intelligence as a sort of mental energy, in the form of mental or cognitive abilities, available with an individual which enables him to handle his environment in terms of adaptation to face novel situations as effectively as possible. In terms of this definition, we can assess a person’s intelligence in proportion to his ability to use his mental energy to handle his problems and lead a happy and well-contented life.
Characteristics of intelligence: While going through above definitions, we come to know certain characteristics of intelligence. These are as follows:

- Intelligence is an inborn natural power but highly influenced by environment. Hence there is a great influence of heredity and environment upon intelligence.
- Intelligence is the sum total of various power and faculties.
- It is a power to act purposefully, to think rationally and to deal effectively with environment.
- It is analytic and synthetic ability of mind.
- Intelligence is adjustment or adaptation ability of human.
- It is an ability to learn and to carry on abstract thinking.
- Intelligence deals with level, range, areas and speed.

However, it can be said that intelligence is the ability of the organism to adjust consciously to new conditions and problems of life. It is the capacity to learn, to solve higher kinds of mental activities, to do harder task in shorter time and to perceive the relationship between things, the ability to perceive the relationship between different things, the ability to perceive the situation in an organised whole. It is the ability to deal with ideas, concepts and images. It refers to soundness of judgement at critical situations.

Intelligent Behaviour

Intelligent behaviour is classified into three kinds; they are: a) Social, b) Mechanical, c) Abstract.

a) Social Intelligence: Understanding of people and the ability to act wisely in human relationship.

b) Mechanical Intelligence: It means the skill in manipulation of tools and managing the working of machines.

c) Abstract Intelligence: It is the ability to handle symbols and ideas such as words, numbers, formulas and scientific principles.

Theories of Intelligence

Various theories have been formulated in connection with the structure and organization of the intelligence. Out of these, four theories are important.

1) Connection Theory or Multi-Factor Theory (Thorndike).
2) Two-Factors Theory (Spearman).
3) Group Factor or Primary mental Abilities Theory (Thurstone).
4) Three Dimensional Theory (Guilford).

1) Connection Theory or Multi-Factor Theory (Thorndike)

Multifactor theory of intelligence was developed by E. L. Thorndike. He was an Associationist who opposed the theory of general intelligence. He proposed that there are specific stimuli and specific mental responses. Intelligence to him is nothing more than a convenient name for an almost infinite number of actual or potential specific connections between these stimuli and responses. Differences of intelligence among people are due to the number of connections in the neurological system. According to this theory, there is no general intelligence. Thorndike’s theory is atomistic theory of intelligence. He distinguished four attributes of intelligence.

- **Level:** This attribute refers to the difficulty of a task that can be solved. If we think of all tasks or test items arranged in sequential order of increasing difficulty then the height that we can attain on this ladder of difficulty determines our level or altitude of intelligence. Level is the important factor of intellect, but we cannot measure it alone.

- **Range:** Range or width refers to the number of tasks at any given degree of difficulty that we can solve. Theoretically an individual, possessing a given level of intelligence, should be able to solve the whole range of tasks at that level. Range of intellectual growth is determined not only by level but also by breath of experience and by opportunity to learn. In intelligence tests, range is represented by items of equal difficulty, we cannot measure attitude without range or width.

- **Area:** Area in a test means the total number of situations at each level to which the individual is able to respond. Area is summation of all the ranges at each level of intelligence processed by an individual. It is in general highly correlated with altitude level.

- **Speed:** This is the rapidity with which we can respond to test items. Speed and altitude are positively correlated. The co-efficient comes to .50. Speed is much less closely bound up with altitude than are the other attributes. We should not, therefore, emphasize speed too much in our intelligence tests.

Every intelligence test consist these four attributes. When we test a person, we give him/her a certain number of tasks (area) and these tasks vary in difficulty (altitude) and there is certain number of items at each level of difficulty.
(range) they are responded in a given time (speed). Emphasis on the aspect of these attributes varies from test to test.

2) Two Factory Theory (Spearman)

Two-factor theory was developed by an English psychologist, Charles Spearman in 1904. He proposed that intellectual abilities comprise two factors, general ability or common ability known as ‘G’ factor and group of specific abilities known as ‘S’ factor.

Characteristics of ‘G’

- It is universal inborn ability.
- It is general mental energy.
- It is constant in the sense that for any individual in respect of all the correlated abilities, it remains the same.
- The amount of ‘G’ differs from individual to individual.
- It is used in every life activity.
- Greater the ‘G’ in an individual and greater the success in life.

Characteristics of ‘S’

- It is learned and acquired in the environment.
- It varies from activity to activity in the same individual.
- Individuals differ in the amount of ‘S’ ability.

3) Group Factor or Primary Mental Ability Theory (Thurstone)

This theory is most popular because it has led to construction of famous Chieqge tests and primary mental abilities. According to him, there is a primary factor operation in different mental activities of a common nature. Thus, it is assumed that there are number of group of mental abilities having their own primary factors which are to provide unity and cohesion to group of mental activities. Thurstone has given the following six primary factors:

(i) **The Number Factor (N):** Ability to do Numerical Calculations rapidly and accurately.

(ii) **The Verbal Factor (V):** Found in tests involving Verbal Comprehension.

(iii) **The Space Factor (S):** Involved in any task in which the subject manipulates the imaginary object in space.

(iv) **Memory (M):** Involving ability to memorize quickly.
(v) The Word Fluency Factor (W): Involved whenever the subject is asked to think of isolated words at a rapid rate.

(vi) The Reasoning Factor (R): Found in tasks that require a subject to discover a rule or principle involved in a series or groups of letters.

4) Three Dimensional Theory of Guilford

Structure of intellect was developed by Dr. J. P. Guilford and his associates in the psychological laboratory at the University of Southern California in 1966 on the basis of factor analysis of many tests. He suggests that the mind is composed of at least three dimensions, instead of unidimensional model of intellect which permeated earlier writing. According to him in every intellectual ability, in the structure, is characterized in terms of the type of operation, the content and sort of product which results. The three dimensions of intellect are given below:

(A) Operations

The kind of classification on the basis of operations gives five major groups of intellectual abilities:

(1) Cognition: It is the most important fundamental operation in learning process.

(2) Memory: It is a primary mental process. It means retention of what is recognised.

(3) Divergent thinking: In divergent thinking operations, we think in different directions, searching and seeking some variety and novelty. Divergent thinking is most closely associated with creativity.

(4) Convergent thinking: Convergent thinking is the generation of information from given information, where the emphasis is upon achieving best outcomes.

(5) Evaluation: It means taking decisions or making judgements concerning criterion satisfaction of information.

(B) Content

A second way of classifying the intellectual factor is according to the kind of material or content involved. The factors known thus far involve four kinds of material content. These are as follows:
(1) **Figural content:** It is concrete material such as perceived through the sense. It does not represent anything except itself. Visual material has properties as size, form and colour, etc. Things we hear or feel, provide other figural material.

(2) **Symbolic content:** It is composed of letters, digits and other conventional signs usually organised in general patterns such as the alphabet or the number system.

(3) **Semantic content:** It is in the form of verbal meanings or ideas for which no examples are necessary.

(4) **Behavioural content:** It means the social behaviour in society.

(C) **Products**

When a certain operation is applied to certain kind of content, as many as six general kinds of products may be involved such as:

1. Unit
2. Classes
3. Relations
4. System
5. Transformations
6. Implications

All the factors under three dimensions produce a (4 x 5 x 6) complex structure of intelligence constituting 120 factors in all. Please see Figure 01
Measurement of Intelligence

One of the oldest and most useful of the tests of behaviour is that which is intended to measure and predict the intellectual capacity of man. The tests of intelligence hold a very practical origin in selecting grade school children who would profit from different training. Intelligence tests are useful for assessing differences among persons. The intelligence test has been analysed for its contribution to the understanding of various performance differences among the persons.

There are a number of intelligence tests (standardized) which can be classified from different stand points:

- From the stand point of the size/number of individuals to be tested, they can be classified as individual and group tests of intelligence.
- From the stand point of language used, they can be divided into two groups i.e. verbal and non-verbal tests of intelligence.
- on the basis of medium used, they can be of (i) paper and pencil tests, and (ii) performance tests.
The culture-free tests though relatively independent of cultural or environmental influences, are thought of as being fair to people of most cultures.

However, the most popular way of classifying intelligence tests is see Fig 02:

![Diagram](https://via.placeholder.com/150)

**Tests of intelligence**

- **Verbal**
  - Vocabulary
  - Information
  - Arithmetic
  - Comprehension
  - Similarities
  - Digit span, etc.
  (This type of intelligence Tests contains the flowing types of items

- **Non-Verbal/performance**
  - Block design
  - Picture arrangement
  - Object assembly
  - Mazes
  - Picture completion, etc.
  (This type of test contains the items:

Further each type of tests can be divided into

- Individual
- Group

**Fig 02**

1. **Individual tests**: These tests are administered to one individual at a time. These cover age group from 2 years to 18 years. The tests are: (a) The Binet-Simon Tests,(b) Revised Test by Terman, (c) Mental Scholastic Test of Burt, and (d) Wechsler Test.

2. **Group tests**: Group tests are administered to a group of people. Group tests had their birth in America when the intelligence of the recruits who joined the army in the First World War was to be judged. These are: (a) The Army Alpha and Beta Test, (b) Terman’s Group Tests, (c) Otis self-Administrative Tests.

The group tests are of two types: (i) **Verbal** and (ii) **Non-Verbal**.

**Verbal tests** are those which require the use of language to answer the test items. These tests contain the following types of items—vocabulary, information, arithmetic, comprehension, similarities and digit span, etc. Again
verbal tests are grouped into individual verbal tests of intelligence eg: Standford Binet Scale and Wechsler Scale and group verbal tests of intelligence e.g.; Cattle Culture free test, California tests of mental ability and Large Thorndike intelligence Test.

Besides these, some group verbal tests of intelligence have also been developed in India. These are:
- S. S. Jolata’s group verbal test of intelligence
- L .S. Jha’s Hindi version of “Simplex mental test by Richardson”.

Non-verbal tests do not require the use of language to respond to the item. For example, this type of test contains the items such as block design, picture arrangement, object assembly, maize and picture completion, etc. Again non-verbal tests of intelligence has been grouped into individual non-verbal test and group non-verbal tests i.e. Porteus Maze test (1924) and Chicago non-verbal examination.

Performance tests: These tests are administered to the illiterate persons. These tests generally involve the construction of certain patterns of solving problems in terms of concrete material. Some of the famous tests are: (a) Koh’s Block Design Test, (b) The Cube Construction Tests, and (c) The Pass along Tests.

It is important here to mention that as this topic of intelligence has been included as a sub-content of a unit, details about the test is not possible to be described. Students are requested to consult reference books for detail knowledge about these tests.

However, this much is clear that in order to judge the mental capabilities of persons/students/children, intelligence tests are used. Some of the uses of these tests are mentioned below:
* For measuring general learning readiness.
* For indicating the extent of differences of IQ among the children of same chronological age.
* For identifying individual differences.
* For selecting students for admission to various courses.
* For detecting the mentally superior and mentally backward.
* For selection in jobs.
* For remedial teaching for slow learners.
* For clinical situations.
* For guidance and counselling.
* For research (in homogeneous grouping).
* For understanding the personality of students, etc.

**Intelligence Quotient (I.Q.)**

William Stern (1914) says that you can get a number that would show how intelligent a person. This is calculated by dividing his mental age by his chronological age. The I.Q. is obtained by dividing mental age by chronological age and multiplying by 100. Formula of I.Q. is

\[ I.Q = \frac{M.A}{C.A} \times 100 \]

The concept of mental maturity raises an interesting problem. Example Imagine that 15 years old with a mental age of 15. Clearly, his I.Q. is 100 or his mental age is still presumed 15 year. Therefore his I.Q. sunk from 100 to 75 I.Q. we must take the denominator age as 15. For avoiding these difficulties Wechsler-Bellevue adult Intelligence scale is used. Here final score is not calculated from mental age values of the tests passed by the person being examined, but from the total number of points made by him on all tests.

**Factors Affecting Intelligence**

Intelligence is the capacity for learning. The more intelligent you are, the more you can learn and potentially accomplish the task in hand. Human beings are complex and that makes generating a concise list of factors affecting intelligence difficult. Some factors, like brain damage, have an immediate and measurable impact. Other physical aspects, like heredity, birth order and nutrition, are less easy to quantify. Education, overall health, and culture affect how well people can utilize their intelligence, but they don’t necessarily “change” intelligence.

In one of the precise ways, it is observed that heredity and genetics play a role in intelligence isn’t entirely understood, in part because genetic theories often spawn controversy. In 1969, Arthur Jensen published an essay in the “Harvard Educational Review” presenting “evidence that racial differences in intelligence test scores may have a genetic origin.” In “The Bell Curve”, a book published in
1994, the authors Richard Herrnstein and Charles Murray say that people with high IQs will produce intelligent children, while people with low IQs will produce less intelligent children.

Evaluating environmental influences on intelligence is like trying to unravel the Gordian Knot; it is next to impossible to tear apart one factor from another. The population of lower economic classes have lower IQ scores compared to their more well-to-do counterparts. The question is, does the poverty cause low intelligence or does low intelligence cause the poverty? A well balanced diet, medical care and physical exercise all work together to produce an environment where potential can be recognized and children can thrive. In addition, some research studies indicate that breast feeding can enhance a child’s intelligence. A study by University of Illinois researchers states, “In humans, children who are breastfed have higher IQs than children not fed breast milk and this advantage persists into adulthood.”

Ethnicity appears to have an effect on intelligence, but in reality, the impact is cultural. In the United States, Japanese children tend to receive higher scores than other groups. Within Japan itself, the Buraku, a Japanese minority group, consistently scores lower on intelligence tests than the rest of their peers. Outside of Japan, Buraku children receive scores more in line with other Japanese children.

Within families, birth order seems to have an effect. A Norwegian study found that first born boys, on average, outscored their younger siblings on IQ tests, but only by two or three points.

The most surprising factor that affects intelligence is that intelligence can change. According to the American Psychological Association, “Believing you can get smarter can make you smarter”. A research study conducted in 2002 compared two groups of seventh graders. “During the first eight weeks of the spring term, these students learned about the malleability of intelligence by reading and discussing a science-based article that described how intelligence develops. A control group of seventh-grade students did not learn about intelligence’s changeability, and instead learned about memory and mnemonic strategies. As compared to the control group, students who learned about intelligence’s malleability had higher academic motivation, better academic
behaviour, and better grades in mathematics.” In other words, the children who learned they could get smarter made themselves smarter.

Intelligence is a facet of the mind that is not static. There is a certain baseline of intelligence that humans are born with, but after that, they have the capability to refine what they have and make the most of it. Following are the factors affecting intelligence:

1) **Heredity and Environment**

Heredity provided the physical body to be developed with certain inherent capabilities while environment provides for the maturation and training of the organism. In 1940 Newman concluded that variations in I.Q. were determined about 68% by heredity and 32% by environment.

During an individual’s life time variation in I.Q. is due to environment, since the heredity cannot change. Improved nutrition, health, and stimulus situations would account for this change. Environment of children of ages 2 to 4 years appears to be critical since the children normally learns language at this time. Better homes, school and medical facilities, less economic discrimination, provide a mean for achieving a mentally able population.

2) **Age**

A person who is bright or dull in childhood tends to remain bright or dull throughout his life. Growth in intelligence can continue through the early twenties; a person achieves his maximum IQ at about 20 years and remains stable till another 10 years and decreases after that. Some abilities remain constant while others decline rapidly due to decline in physical efficiency. It is observed that the more intelligent person has more rapid mental growth and continues to develop longer than does the mentally less able one.

3) **Race and Nationality**

There is no prominent evidence to show that race is a factor for determining intellectual level. Differences existing between families are due to environment. The differences in races are also due to opportunity for training in early years.

All evidences indicate that there is little or no difference in inherited intellectual capacity due to race. There are differences, mostly due to opportunities for training and learning. The idea of inferior races due to heredity is not true.
4) Culture
   Answers to intelligent test questions are highly cultural. Culture will determine the degree of a person’s attitude and abilities.

5) Health and Physical Development
   Physical and mental health is related to one’s ability to gain desired achievement. One, who does mental activity with delicate health, may not possess enough energy to engage in mental activity to the extent that he achieves success. Physical defects such as incomplete maturation of brain cells, sensory and physical handicaps may interfere with observable intelligent behaviour. Diseases also affect intelligence. Emotional bodies may interfere in one’s ability. Unfavourable health affects mental status of the individual.

6) Sex
   It is a popular belief that boys are supposed to be more intelligent than girls. The research studies have shown that there is no significant differences between the sexes, on the average, girls seems to show slight superiority in language, memory and appreciation. Differences in intelligence are caused partly by environmental conditions.

7) Social and Economic Conditions
   Home plays a significant role in the early developmental years. Home conditions exercise influence on behaviours and attitudes. The financial status of the parents, neighbourhood and environmental conditions have effect on the intelligence due to their socio-economic status.

Intelligence Testing
   Interest in intelligence dates back to thousands of years, but it wasn't until psychologist Alfred Binet was commissioned to identify students who needed educational assistance that the first IQ test was born.

Alfred Binet and the First IQ Test
   During the early 1900s, the French government asked the famous psychologist Alfred Binet to help decide which students were most likely to experience difficulty in schools. The government had passed laws requiring that all French children attend school, so it was important to find a way to identify children who would need specialized assistance.

   Faced with this task, Binet and his colleague Theodore Simon began developing a number of questions that focused on things that had not been taught
in school such as attention, memory and problem-solving skills. Using these questions, Binet determined which ones served as the best predictors of school success. He quickly realized that some children were able to answer more advanced questions that older children were not generally able to answer, while other children of the same age were only able to answer questions that younger children could typically answer. Based on this observation, Binet suggested the concept of a mental age, or a measure of intelligence based on the average abilities of children of a certain age group.

This first intelligence test, referred to today as the Binet-Simon Scale, became the basis for the intelligence tests still in use today. However, Binet himself did not believe that his psychometric instruments could be used to measure a single, permanent and inborn level of intelligence (Kamin, 1995). Binet stressed the limitations of the test, suggesting that intelligence is far too broad a concept to quantify with a single number. Instead, he insisted that intelligence is influenced by a number of factors, changes over time and can only be compared among children with similar backgrounds (Siegler, 1992).

**The Stanford-Binet Intelligence Test**

After the development of the Binet-Simon Scale, the test was soon brought to the United States where it generated considerable interest. Stanford University psychologist Lewis Terman took Binet's original test and standardized it using a sample of American participants. This adapted test, first published in 1916, was called the Stanford-Binet Intelligence Scale and soon became the standard intelligence test used in the U.S.

The Stanford-Binet intelligence test used a single number, known as the Intelligence Quotient (IQ), to represent an individual's score on the test. This score was calculated by dividing the test taker's mental age by their chronological age, and then multiplying this number by 100. For example, a child with a mental age of 12 and a chronological age of 10 would have an IQ of 120 (12 /10 x 100).

The Stanford-Binet intelligence test remains a popular assessment tool today, despite going through a number of revisions over the years since its inception.

**Intelligence Testing During World War I**

At the outset of World War I, U.S. Army officials were faced with the monumental task of screening an enormous number of army recruits. In 1917, as
president of the APA and chair of the Committee on the Psychological Examination of Recruits, psychologist Robert Yerkes developed two tests known as the Army Alpha and Beta tests. The Army Alpha was designed as a written test, while the Army Beta was administered orally in cases where recruits were unable to read. The tests were administered to over two million soldiers in an effort to help the army determine which men were well suited to specific positions and leadership roles (McGuire, 1994).

At the end of World War I, the tests remained in use in a wide variety of situations outside of the military with individuals of all ages, backgrounds and nationalities. For example, IQ tests were used to screen new immigrants as they entered the United States at Ellis Island. The results of these mental tests were inappropriately used to make sweeping and inaccurate generalizations about entire populations, which led some intelligence "experts" to exhort Congress to enact immigration restrictions (Kamin, 1995).

The Wechsler Intelligence Scales

The next development in the history of intelligence testing was the creation of a new measurement instrument by American psychologist David Wechsler. Much like Binet, Wechsler believed that intelligence involved a number of different mental abilities, describing intelligence as, "the global capacity of a person to act purposefully, to think rationally, and to deal effectively with his environment" (1939). Dissatisfied with the limitations of the Stanford-Binet, he published his new intelligence test known as the Wechsler Adult Intelligence Scale (WAIS) in 1955.

Wechsler also developed two different tests specifically for use with children: the Wechsler Intelligence Scale for Children (WISC) and the Wechsler Preschool and Primary Scale of Intelligence (WPPSI). The adult version of the test has been revised since its original publication and is now known as the WAIS-IV.

The WAIS-IV contains 10 subtests along with 5 supplemental tests. The test provides scores in four major areas of intelligence: a Verbal Comprehension Index, a Perceptual Reasoning Index, a Working Memory Index, and a Processing Speed Index. The test also provides two broad scores that can be used as a summary of overall intelligence: a Full Scale IQ score that combines performance on all four index scores and a General Ability Index based on six subtest scores.
Subtest scores on the WAIS-IV can be useful in identifying learning disabilities, such as cases where a low score on some areas combined with a high score in other areas may indicate that the individual has a specific learning difficulty (Kaufman, 1990).

Rather than score the test based on chronological age and mental age, as was the case with the original Stanford-Binet, the WAIS is scored by comparing the test taker's score to the scores of others in the same age group. The average score is fixed at 100, with two-thirds of scores lying in the normal range between 85 and 115. This scoring method has become the standard technique in intelligence testing and is also used in the modern revision of the Stanford-Binet test.

**Implications of Intelligence Testing**

The values of intelligence testing are determined by its various following uses:

**Use in selection:** Results of intelligence tests can be properly used for selection of suitable candidates for educational and professional activities such as the following:
1. Admission to a special educational programme or course of instruction.
2. Identification and offer of scholarships to gifted students.
3. Selection of students for assigning specific responsibilities in the school’s academic and co-curricular programmes.
4. Selection of trainees for a vocational programme or job.

**Use in classification:** Intelligence tests help in classifying individuals according to their mental make-up. In the school, it is possible for the teacher to classify the students in his class as backward, average, bright or gifted and thus arrange for homogeneous grouping to provide them with proper educational opportunities according to their individual capabilities. Enrichment programmes for the gifted and remedial education for the backward and dull can thus be possible with the help of classification done through intelligence testing.

**Use in assessment for promotion:** The results of intelligence tests along with the achievement tests can be successfully used for promotion of students to the next higher grades of classes. Besides this, such tests can also be used in deciding the promotion of people in their chosen profession and social careers.
Use in provision of guidance: The results of intelligence tests may be successfully used in providing educational, vocational and personal guidance to students by teachers and guidance personals. Problems like, which courses or special subjects one may study, how one should proceed on one’s courses of learning, what can be achieved by the removal of some learning or emotional difficulties, which profession or occupation should be aimed at by a particular individual, etc. may be successfully solved on the basis of the results of intelligence testing.

Use for improving the learning process: Results of the intelligence testing may prove helpful to teachers to plan the teaching-learning activities. In this connection, Crow and Crow (1973) wrote:

“Results of intelligence tests can help a teacher to discover what the child can learn and how quickly he can learn, as well as the teaching methods that should be applied and the learning content that should be utilized to guide the learner to use his mental potentialities to their utmost”.

Use in setting proper level of aspiration: According to Sawrey and Telford (1964) one should aim at what one desires. In other words, one should very carefully set one’s level of aspiration, neither too high nor too low, if one ventures to be successful. It is possible only when one’s potentiality can be properly assessed. Intelligence tests can serve this purpose, and hence they are found to assist the individual to establish a level of aspiration that is realistic in terms of one’s intellectual potential.

Use for diagnosis: The other use of the intelligence testing relates with its capacity to diagnose, distinguish and discriminate the difference in the mental functioning of individuals. The potentiality of intelligence testing can be utilized for:

a) Identifying exceptional children like gifted, backward and the mentally retarded (both on a general or specific dimension).

b) Assessing the degree of mental retardation or extent of giftedness.

c) Diagnosing the causes of problematic behaviour and suggesting possible remedial action.

d) Arranging suitable educational programmes in view of the varied individual differences found in the mental functioning of the learners.
Use in research work: Finally, the results of intelligence tests can be used in carrying out research in the fields of education, psychology and sociology. For example, to ascertain:

i) Whether individual differences in mental capacities are the result of heredity or environment or both?
ii) Whether delinquency or problematic behaviour is caused by inferior intelligence.
iii) How mental capacities grow with age, experience or training?
iv) How far scholastic achievement depends upon the results of intelligence testing or how far the I.Q. tests can predict one’s school performance?
v) What is the interrelationship among mental traits, and to discover definite mental or psychic types?
vi) The relationship of intelligence with creativity, anxiety, task performance, job satisfaction, adjustment or a number of other variables?

Misuse and Abuse of Intelligence Testing

Intelligence testing has sufficient scope for being misused which leads to unhealthy effects on the welfare of individuals and society. These effects can be briefly summarized as follows:

Ill-effect on students: The subjects whose intelligence is tested through intelligence tests may be adversely affected by the knowledge of their I.Q. The test finding may colour not only their interests and attitudes towards learning and work but also their total behaviour and personality in dealing with their environment. The dull or below average children prove clever enough to realise through the results of intelligence testing that they are inferior and slow to learn. This can give rise to disappointment and inferiority feelings and adversely affect their future. On the other hand, the label of high I.Q. may also be misutilized by the above average and gifted students. The awareness may make them careless, over-confident and too conscious and proud. Such an attitude may, in the long run, prove to be a potent factor in spoiling their otherwise good behaviour and turning them into problem children. The results of such testing may prove harmful even to the average children as they may lose interest in striving sufficiently to achieve higher goals only because of that they are merely average. In this way, the knowledge of the results of intelligence testing may prove harmful to all types of students on account of its misutilization by them.
**Misuse by teachers and parents:** The I.Q. labels tagged to the children are very carefully remembered and mutualized by their teachers and parents. They try to see them in the light of their I.Q. They tend to discourage students with lower I.Q. and to generate excessive confidence in students with higher I.Q. In fact, they are using the I.Q. as an excuse for their own slackness and in efficiency. They either make no effort to teach the child or humiliate him by saying that he is too dull to understand and, therefore, there is no point in wasting time on him. The gifted may be neglected because they are presumed to have enough intelligence to defend for themselves. In this way, the teachers who themselves are irresponsible may be tempted to use the knowledge of intelligence tests for their own convenience.

**Misuse by society:** Not only students and teachers, but society in general has tried to misinterpret and mutualize the results of intelligence testing for upholding the theory of elitism resulting in segregation, sectarianism, casteism and racial discrimination in many societies, including the most developed societies of the West, etc.

### 1.20 Conceptual Framework of Secondary Education in Indian Context

The secondary education has a special role to play and the system as a whole moves toward universalizing secondary education. In our country, secondary education is regarded as the connecting link between the primary and the higher education. According to Secondary Education Commission (1952-1953), four aims of secondary education are: (i) Development of democratic education; (ii) All-round development of personality; (iii) Development of vocational efficiency and (iv) Development of leadership quality. Secondary education helps the children to become a full member of a complex modern society of today. It develops the highest potentiality of child’s ability, aptitudes, interests and qualities of character.

The mass scale provision of elementary education and an increasing aspiration for secondary education during the post independent period have resulted in tremendous growth of secondary education in India. The commission analyzed the various problems faced in secondary education and has suggested suitable remedies for them. Two major tendencies discernible at the secondary stage since 1950, are gradual transition of traditional pattern of bookish
education into a vocational one and attempt to make secondary education a self-
contained stage. The Education Commission (1964-66) has also recommended a
rapid vocationalization of secondary education. This leads to making the
secondary stage a self-contained one in itself and related more and more to the
life of the individuals as well as to the community. The national education policy
has also recommended in 1968 a structural change in the formal secondary stage
in the country by adopting the 10+2+3 uniform structure. The All India Education
Council for Secondary Education was set up in August 1955. The main functions
of the council were to review from time to time the progress of secondary
education throughout the country and to serve as an expert body to advise the
state and central governments on the improvement and expansion of secondary
education and are being presented with the change of language. A long list of
aims of first ten years of school education are presented in the national
curriculum framework prepared by NCERT in 2000. In the national curriculum
framework, 2005 more emphasis has been laid on rational values and secularism.
At present, the aims of secondary education are as follows:

1. To train children to look after their health and develop it.
2. To provide children knowledge of different subjects and to make them
proficient in thinking, imagination and decision making.
3. To socialize children and to bring about necessary social change.
4. To provide children knowledge of different cultures and develop cultural
tolerance among them.
5. To inculcate social, cultural, moral and rational values among children to
guide them to behave accordingly and to develop their character and
morality.
6. To guide children to do some physical works according to their interest,
ability and need.
7. To provide children knowledge about principles of democratic system of
governance and to train them in democratic way of living.
8. To make children aware about the national goals-conservation of
environment and population control and to develop among them
scientific attitudes, national integration and feeling of internationalism.
9. To provide children general information about the main religions of the
world and to develop religious tolerance.
Now, it is clear that the role of education is no longer considered as a mechanism for the perpetuation of the best traditions, but it is now being viewed as an investment in social transformation, human resource development and in advancing revolutionary development in the field of science and technology for the life of mankind as a whole. Secondary school level of education is significantly important as it is a period of intense vibrancy and energy. UNESCO’s recently published global monitoring report discovers systematic standards as the appropriate context of the quality debate. From this point of view the child’s performance needs to be treated as an indicator of systematic quality as reflected in national curriculum framework, 2005. The thrust objective of secondary education during the tenth plan has been achieved only partly and therefore the 11th plan (2007-11) aims to:

1. Raise the minimum levels of education to class X and accordingly universalize access to secondary education for all.
2. Ensure good quality secondary education with focus on science, mathematics and English, and
3. Remove disparities of education in gender, social, regional gaps in enrolment, dropout and secondaryretentions. The norm will be to provide a secondary school within 5 kms and a higher secondary school within 7 kms of every cluster of habitation. The gross enrolment ratio (GER) in secondary education is targeted to increase from 52% in 2004-05 to 75% by 2011-12 and higher secondary GER from 40% to 60% in the same periods.

An amount of Rs 5000 crores is being provided during the 11th plan for providing information communication technology (ICT) infrastructure in secondary schools. In order to bridge social gaps in secondary education in respect of ‘SC’, ‘ST’, Minorities and OBC, the eleventh plan addressed specific areas including the following:

1. Upgradation of elementary schools secondary schools in geographic concentration areas of relevant to social groups.
2. Supply of free uniforms, textbooks and foot wears.
3. Supply of bicycles and wheel chairs.
4. Hostels for boys and girls.
5. Stipends to the deserving children.
6. Support to all madras as for adaptation of general education.
7. Pre-matric and post-matric scholarships.
8. Special remedial coaching within local area schools for weaker students
9. An area intensive approach with community participation.

The government on 4th October approved the 12th five year plan (2012-17) that set average growth target at 8.2 percent. The theme of the Approach Paper is “Faster, Sustainable and more inclusive growth”.

Objectives of 12th five year plan (2012-17)

i) Basic objective: Faster, More Inclusive, and Sustainable Growth.

ii) Could aim at 9.0 to 9.5 percent GDP growth is expected. Higher investment and fund mobilization will induce market development and employment.

iii) For growth to be more inclusive we need: Better performance in agriculture

iv) Faster creation of jobs, especially in manufacturing

v) Stronger efforts at health, education and Infrastructure.

vi) Special plans for disadvantaged/backward regions.

Strategic Challenge

Based on an intensive process within the Commission, following "Twelve Strategy Challenges" have been identified:

1. Enhancing the Capacity for Growth.
2. Enhancing Skills and Faster Generation of Employment.
5. Decentralization, Empowerment and Information.
6. Technology and Innovation.
7. Securing the Energy Future for India.
10. Managing Urbanization.
11. Improved Access to Quality Education.
Education and Skill Development


ii) It aims at raising the Gross Enrolment Ratio (GER) in Higher Education to 20 percent by 2017 and 25 percent by 2022.

iii) This Plan focus on quality of education. Must invest in faculty development and teachers’ training.

iv) This plan targets to be set for significant reduction in social, gender and regional gaps in education.

v) Research and innovation in higher education must be encouraged with cross-linkages between institutions and industry.

vi) Vocational education will need to be given greater emphasis and made more attractive.

1.21 Brief Historical Background of Secondary Education in Assam

Historical record shows that there was no outstanding performance in the field of secondary education in Assam in between the period of 1937-1947. This stage in Assam was non-existent in the pre-British days. In fact, it was in the grip of foreign rulers. The system of secondary education in Assam was firstly introduced by the Christian missionaries. The Christian missionaries deserved credit for promoting the cause of the education in Assam. The history of secondary education in Assam reveals the fact that there was encouragement of middle schools system but the secondary education came into existence very late. Prior to 1835, there was no such type of schools in Assam. But in1835, the then commissioner of Assam, captain Jonkings started an English school at Guwahati, the present capital of Assam. This school was established as a good support.

Assam was considered as a separate province in 1974. Therefore, a separate directorate of public instruction was created in Assam to look into the affairs of education. The newly created directorate took maximum initiative for the expansion of secondary education in Assam.

Moreover, after the attainment of independence, many valuable committees and commissions have been formed for the wide development of secondary education throughout the country. As a result of independence the following bodies were formed:
1. Tarachand Committee, 1948.
4. Indian Education Commission, 1964-1966 and

All these Commissions and Committees took initiative to develop the secondary education throughout the country and submitted their valuable recommendations and suggestions for the complete development of secondary education.

Tarachand committee report suggested that the secondary schools should be multipurpose type though unipurpose schools were not to be discouraged. It also urged on the necessity of appointing a commission for enquiring into the problems of secondary education.

University Commission, 1948-1949 reviewed the positions of secondary education and remarked that secondary education is the real weak spot in educational system. The Central Advisory Board of Education was appointed in 1944 to examine the prevailing education system and offered some valuable suggestions for its improvement. Meanwhile, the successive Five Year Plan began to function both in centre and state since 1951. This implementation of Five Year Plan programmes towards the development of secondary education was also remarkable.

The government of Assam adopted a scheme for the recognition of secondary education as envisaged in the report of the Secondary Education Commission, 1952-1953. This suggested three major reforms in secondary education:

1. Reorganization of the educational pattern of secondary education.
2. Diversification of secondary curriculum and
3. Reforms in the examinations system.

As regards reorganization of the pattern of secondary education the commission recommended as under:

1. 8 years of integrated elementary education for children in the age group of 6 to 14 years.
2. 3 years of secondary education from 14 to 17 years and 2 years of higher secondary education with marked diversification and

3. First degree courses should be of 3 years duration after higher secondary.

Moreover, there should be diversification of secondary curriculum through conversion of selected high schools into multipurpose schools. As a consequence of recommendation, high schools were upgraded to higher secondary schools and the higher secondary schools converted into multipurpose schools. The recommendations of the commissions were integrated in the successive Five Year Plans and began to be implemented, both at centre and in the states since 1953. The Secondary Commissions Report is, however, a very lucky blueprint since it was not placed in the cool storage and the government tried to implement the majority of its suggestions. In achieving these objectives and reconstructing secondary education for the purpose, every effort should be made by all concerned.

The Education Commission, 1964-1966 has examined the whole field of the secondary education. This Commission made radical structural change in the system of secondary education. It has recommended two types of secondary schools: Lower secondary or high schools of three years from 14 to 17 years leading to matriculations examination and higher secondary schools of two years and three years of university degree courses. The sole purpose of these changes is to strengthen the standard of secondary education. The impact of these recommendations has already been perceptible throughout the state. History of secondary education shows that the first Secondary Education Act of Assam was passed in 1961. The Act came into effect from January 1962 and the first Board of Secondary Education of Assam was constituted in the same year. Prior to 1962, the secondary education was controlled by the government and by the Guwahati University in Assam. Secondary education in Assam for the period under reviewed registered progress through state patronage and public venture. In 1977, an Act was passed, which was known as the Assam Provincialisation Act of secondary education. It is expedient to provincialized secondary schools covered by deficit scheme under the government of Assam for its improvement, better control, the management of such schools in the state. But in spite of these attempts, the secondary education still represents a poor show till today in Assam. No action was possible without development of a sound system of education. It is
the instrument of education by which a nation is transformed and its future is shaped. But the system that prevails in our state, particularly in secondary stage, is full of reasonable inequalities and imbalance.

It is obvious that secondary education form the central link in the chain of education, and secondary education has to be so structured so that students can be sufficiently equipped both with the knowledge and skill to join any part of economic life. Moreover, secondary education is of decisive importance in the economy of a developing country. It has a determining qualitative influence reaching out into all important sectors. Secondary education determines the quality of a nation and its citizens, since it deals with the children between the age of 14 to 16 or 18 years which is the most critical and precious period of an individual’s life. The importance and significance of secondary education lie in the utilitarian and socio economical aspects. The Sarva Shiksha Abhiyan (SSA) is now focussing on elementary education and RMSA (Rastriya Madhiyamic Shiksha) on Secondary Education of satisfactory quality with emphasis on education for life. The development of curriculum of secondary education was done previously by Board of Secondary Education, Assam (SEBA) but was transferred to SCERT (State Council of Educational Research and Training) from 25th January, 2003. In the light of NCF (National Curriculum Framework) 2005, a composite school curriculum and syllabi have been developed for secondary stage in Assam in 2007. The salient features of new curriculum are as follows:

1. Foundation of curriculum rests on three basic pillars built on the principle of Equity, Relevance and Excellence.

2. Curriculum provides and ensures equality of opportunity for all, quality education to all including girls and especially focus group of children as it:

   i) Fosters desires and ability in learners to live and work together in a
global village by inculcating universal values such as human rights,
respect for others, etc.

   ii) Emphasizes inculcation of values, i.e. personal, social, national, spiritual
and environmental so that the learner is able to inculcate and test values
both through scholastic and co-scholastic areas throughout the school
life.

   iii) Links education with life skills.

   iv) Focuses on development of basic skills and technical knowledge.
3. Emphasis on environmental education, its awareness, problems and solutions in learner’s day-to-day life.

4. Work education has been made a compulsory subject under the ‘scheme of studies’; it aims at enabling children to become self-dependent and self-reliant.

5. Enormous scope and provisions for practice on the areas like Health, Sports, Yoga, Scouts and Guides, Morning and Evening assembly, cultural and literary activities, Mela’s, fields trips and camps.

6. Shifting from traditional teacher-centred learning strategy to the learner-centred approach where participatory, activity- based, environment based learning process has been suggested.

7. In place of theoretical education, knowledge-based examination, practical and need-based periodical evaluation and Continuous and Comprehensive Evaluation (CCE) are introduced.

8. Selection of learning areas/content is mostly done on the basis of local socio-cultural needs and keeping in view of meeting the future challenges and requirements in 21st century.

9. Inclusion of knowing the learner and guidance and counselling are other salient features of this curriculum.

10. In the curriculum, slight modification in the three language formula has been made with a view to providing opportunities to different linguistic groups, without affecting curriculum load.
**Figure: 03** Scholastic and Co-scholastic Components of Secondary School Curriculum According to SCERT, Assam (2009).

Source: Reports of SCERT, Assam 2009

The Administrative set up of Secondary Education in Assam in State Level:

```
Education Minister
  ↓
Education Commission, Govt. of Assam
  ↓
Secretary of Education.
  ↓
Director of Public Instruction (DPI).
  ↓
Additional Director of Education.
  ↓
Deputy Director of Education.
```
District Level:  
(i) Inspector of Schools.  
(ii) Assistant Inspector of Schools.  
School Level:  
Head Master or Principal of Schools.

1.22 SEBA and HSLC: Functions and Importance

High School Leaving Certificate (HSLC) Examination is the first public examination of the students of secondary stage schools in Assam. This examination is conducted by The Secondary Education Board of Assam (SEBA) and it is held annually in the month of February and March. Conduct of the HSLC Examination is assumed to be the prime duty of the SEBA.

The matriculation examination of the North-East Region was conducted by the Calcutta University till 1948. From the next year, i.e., 1949 onwards the preparation of syllabus, formulation of curriculum, production of text-books and all other academic matters of secondary schools of the entire North-East Region were conducted by Guwahati University for more than a decade. Later on, when the SEBA was instituted in 1964, Guwahati University has delegated the responsibility of conducting matriculation examination and all other academic matters at the school level to the SEBA. From 1964 the matriculation examination has been known as the High School Leaving Certificate Examination. In addition to conducting HSLC examination, SEBA had to conduct the HSSLC examination till the AHSEC (Assam Higher Secondary Education Council) was established.

SEBA was established with a purpose of regulating, supervising and developing the secondary education in the state. SEBA is the one of the first boards in the country to implement and switch over to the 10+2 pattern of secondary system in the academic session of 1973. SEBA has prescribed the curriculum and text-books for secondary schools of Assam. It also maintained a scheme of scholastic and non-scholastic achievement. The results of HSLC examination conducted by SEBA determine future education of secondary level students.

1.23 Study Area

The present study is undertaken in Assam, situated in the Himalayan foothills, the land of blue hills and red rivers with the area of 78,438 square
kilometres, and it represented 2.39 percent of the total land area of the country. The mighty river Brahmaputra flows through it, serving as a source of literature for its people settled on both of its banks. A meeting ground of several language families, ethnic groups and a mosaic of cultural patterns, Assam present a unique case of sociolinguistic pluralism bound by a single thread of cultural homogeneity. It is divided into 27 districts. The state capital is Dispur (Guwahati) in Kamrup district. Assam is surrounded by Bhutan and Arunachal Pradesh on the north: Nagaland, Manipur, and Arunachal on the east; Meghalaya, Mizoram and Tripura on the south; and Bangladesh, Meghalaya and west Bengal on the west. Assam is connected with the rest of Indian Union by a narrow corridor (called the ‘Chicken’s or ‘Bottle Neck’) in west Bengal that runs for 56 kms below foothills of Bhutan and Sikkim (Sources: Assam Year Book 2014). The population of the state is 3.12 crores as per the 2011 census. The density of the population is 398 persons per square kilometre, the highest in the North Eastern Region. The state has 45,590 schools (pre-primary to high school). Out of 27 districts in Assam the researcher selected two districts namely, Lakhimpur and Sonitpur for the investigation on convenience basis.

**Figure: 04** Districts Map of Assam shows the Study Areas:

![Districts Map of Assam](https://example.com/districts_map_assam.png)
**Lakhimpur District**

Lakhimpur is an eastern district of borderline of Assam. The Lakhimpur is believed to have been originated from the word ‘Lakshmi’, the goddess of wealth or prosperity. The region is mainly dependent upon agriculture and hefty amount of paddy cultivation is practiced here. Paddy is regarded locally as Lakshmi. The word Pur means fulfilled. Lakhimpur therefore means ‘Full of Paddy’ or the place where paddy are grown abundantly. According to another common belief, the word originated from Lakshmi Devi, the mother of Bhuyan Raja, who was the descendent of king Arimatta. The district was notified as Lakhimpur through a proclamation issued by the then Governor General Lord Auckland in July, 1839. After independence, on 2nd October, 1971 comprising Dhemaji and North Lakhimpur as sud-divisions the district was reformed. Later in 1980 Dhemaji was formed as an independent district and Lakhimpur district was formed taking Dhokuwakhona and North Lakhimpur as sub-divisions. The district was known as ‘kaleeapani’ until 1950, due to flood damage and uncomfortable transport system. A temporary airport was built here in 1954 and the Assam State Transport Corporation started transportation facilities to this district in 1957. Similarly in 1963, NF Railway service also included this district. The main livelihood is agriculture and the district is lacking in the industrial and educational sector.

The total area of Lakhimpur district is 2,277 sq. km. and it is divided into 2261.26 and 15.74 sq. km. as rural and urban areas respectively. Total population of Lakhimpur district is 10,42,137; out of this 5,29,674 are males and 5,12,463 are females population (Source: Assam Year Book, 2014). The sex ratio of the district 968 female per 1000 male and density of the population is 458 persons per sq. km. District headquarters and sub-division of Lakhimpur district is North Lakhimpur. The boundaries of Lakhimpur district are Arunachal Pradesh in the north; Dhemaji and Dibrugarh in the east; Jorhat, Sibsagar and Brahmaputra in the south and Sonitpur and Arunachal Pradesh in the west. The main rivers and tributaries of the district are Brahmaputra, Dikrong, Subansiri, Ranganadi, Cici, Jiyadhal and Ghunasuti. Important places located in the district are North Lakhimpur, Narayanpur, Bihpuria, Dhakuakhana and Pabhoi Sanctury. In Lakhimpur district the total number of secondary schools is 339; out of them urban and rural secondary schools are 15 and 324 respectively.
Figure: 05 Lakhimpur District Map

Literacy Rate of Lakhimpur District

Literacy is the most important indicator for the educational development of any society. Literacy has been defined as the ability to read and write a letter with understanding of language. A person who could merely read but not write was defined as illiterate. The literacy rates of Assam and Lakhimpur districts are shown in Table – 02.
Table-2
Population, Literacy Rate, Sex Ratio and Population Density of

<table>
<thead>
<tr>
<th>State/District</th>
<th>Area/sq.km</th>
<th>Year</th>
<th>Population</th>
<th>Literacy Rate</th>
<th>SR</th>
<th>PD/Km²</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Total</td>
<td>Male</td>
<td>Female</td>
<td>Total</td>
</tr>
<tr>
<td>Lakhimpur</td>
<td>2,277</td>
<td>1991</td>
<td>7,51,517</td>
<td></td>
<td></td>
<td>58.96</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2001</td>
<td>8,89,010</td>
<td>4,55,691</td>
<td>433,319</td>
<td>68.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2011</td>
<td>10,42,137</td>
<td>5,29,674</td>
<td>5,12,463</td>
<td>78.39</td>
</tr>
<tr>
<td>Sonitpur</td>
<td>5,324</td>
<td>1991</td>
<td>14,24,287</td>
<td></td>
<td></td>
<td>48.14</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2001</td>
<td>16,65,125</td>
<td>8,63,298</td>
<td>8,01,827</td>
<td>59.07</td>
</tr>
<tr>
<td>Assam</td>
<td>78,438</td>
<td>1991</td>
<td>2,24,14,286</td>
<td>1,16,58,153</td>
<td>1,07,56,133</td>
<td>52.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2001</td>
<td>2,66,38,407</td>
<td>1,37,87,799</td>
<td>1,28,50,608</td>
<td>63.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2011</td>
<td>3,11,69,272</td>
<td>1,59,54,927</td>
<td>1,52,14,345</td>
<td>73.18</td>
</tr>
<tr>
<td>India</td>
<td>32,87,263</td>
<td>1991</td>
<td>84,63,02,688</td>
<td>43,62,30,458</td>
<td>40,70,72,230</td>
<td>52.89</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2001</td>
<td>1,02,70,15,247</td>
<td>53,12,77,078</td>
<td>49,57,38,169</td>
<td>63.25</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2011</td>
<td>1,21,01,93,422</td>
<td>62,37,24,248</td>
<td>58,64,69,174</td>
<td>74.04</td>
</tr>
</tbody>
</table>

Source: Census of Assam and India, 1991-2011

It is observed from Table-02 that the literacy rates for both males and females are higher for Assam than that of Lakhimpur District for years 1991 to 2011. Though there is consistent increase in literacy rate of both males and females from 1991 to 2011, yet literacy rates of Lakhimpur district remained quite behind than that of Assam. This shows that Lakhimpur district is still educationally backward.

It is evident from Table-02 that the total population of Assam in 2001 was 2,66,55,528 (M:1,37,77,037 and F: 1,28,78,491) and that of Lakhimpur District was 8,89,010 (M: 4,55,691& F: 4,33,319). The total populations of Assam and Lakhimpur District are 3,11,69,272 (M: & F: 1,59,54,927 & 1,52,14,345 ) and
1,042,137(M: 529,674) & (F512,463:) respectively in the year 2011. The population of Assam has increased by 17% in the last decade. The population densities of Assam in 2001 and 2011 are 340 and 397 persons per sq.km, and 390 and 457 respectively for Lakhimpur district as shown in the **Table-02**. The sex ratio of Assam in the 2011 is 954 and that of India is 940 which is evidently one of the better states in the country with respect to sex ratio.

The literacy rates of Assam in 2001 and 2011 are 63.25 and 73.18 respectively whereas 68.6 and 78.39 respectively for Lakhimpur District. The male literacy rates for Assam in 2001 and 2011 are 75.23 and 78.81 with the female literacy rates of 51.85 and 67.27 respectively.

The male literacy rates for Lakhimpur District in 2001 and 2011 are 77.1 and 84.66 and the female literacy rates are 59.6 and 71.91 respectively. The comparison further shows that the females are still lagging behind their male counterparts in Assam and Lakhimpur District.

### Sonitpur District

Sonitpur covers 5324 sq. km. Area, 5,296.63 sq. km being rural areas and 27.37 sq. km urban area. Out of the 19, 25,975 total population, Sonitpur has 9, 89,919 males and 9, 36,056 females populations. The density of population is 365 per sq. km. The four boundaries of Sonitpur are: Arunachal Pradesh in the North; Lakhimpur district in east; Nogaon, Golaghat and Brahmaputra river in the south; and Darrang in the west. The headquarter of the Sonitpur district is Tezpur and sub-divisions are Tezpur, Biswanath and Gohpur. Tezpur is declared as the city of culture and civilization and surrounded by hills. The main river of the district is Brahmaputra and the tributaries are Khawoi, Bihali, Borgang, Burhigang, Jiaibhore, Panchai, Likarai, Ghiladhan and Belshiri. Tezpur, Rangapara, BiswanathChariali, Gohpur, Chariduar, Sotia, Helem, Dhekiajuli, Shingori and Michamari are the important places located in Sonitpur district. There are 305 secondary schools in Sonitpur district, out of them urban and rural secondary schools are 36 and 269 respectively.
Literacy Rate of Sonitpur District

Literacy is the stepping stone of the development of education. A man without literacy skill may be a good person but the same person with literacy skill could prove better and more functional. Literacy is a basic part of development process, an endeavour to improve the quality of life, building awareness among the disadvantaged sections, democratization of political power and to bridge the gap between rich and poor. Inequality between men and women is one of the most crucial and yet the most persistent disparities as found in most studies. Difference in female and male literacy rates is one aspect of this broader phenomenon of gender based inequalities in India.

Literacy denotes power ability and illiteracy denotes powerless and disability. According to 1991 census directives, “a person who can both read and write with understanding in any language is to be taken as literate. A person who can merely read but cannot write is not literate”. The literacy rates of Assam and Sonitpur district are shown in Table – 03.

It is observed from Table-03 that the literacy rates for both males and females are higher for Assam than that of Sonitpur District for years 1999 to
2011. Though there is consistent increase in literacy rate of both males and females from 1991 to 2011, yet literacy rates of Sonitpur district remained quite behind than that of Assam. This shows that Sonitpur district is also still educationally backward.

It is evident from Table-03 that the total population of Assam in 2001 was 2,66,55,528 (M:1,37,77,037 and F: 1,28,78,491) and that of Sonitpur District was 16,65,125 (M:8,63,298 & F: 8,01,827). The total population of Assam and Sonitpur District are 3,11,69,272 (M:1,59,54,927 & F: 1,52,14,345) and 19,25,975 (M:9,89,919) & (F:9,36,056) respectively in the year 2011. The population of Assam has increased by 17% in the last decade. The population densities of Assam in 2001 and 2011 are 340 and 397 persons per sq.km, and 315 and 365 respectively for Sonitpur district as shown in the Table-03. The sex ratio of Assam in 2011 is 954 and that of India is 940 which is one of the better states in the country with respect to sex ratio.

The literacy rates of Assam in 2001 and 2011 are 63.25 and 73.18 respectively whereas 59.07 and 69.96 respectively for Sonitpur District. The male literacy rates for Assam in 2001 and 2011 are 75.23 and 78.81 and the female literacy rates are 51.85 and 67.27 respectively.

The male literacy rates for Sonitpur District in 2001 and 2011 are 67.61 and 76.98 and the female literacy rates are 49.80 and 62.53 respectively. The comparison further shows that the females are still lagging behind their male counterparts in Assam and Sonitpur District.

Education holds the key to an improvement in position in society and is accepted as a passport to a better life. Therefore, it is strongly desired for any betterment of the society as a whole; ignorance and poverty go hand in hand; a person is poor because he is ignorant and he is ignorant because he is poor. Only literacy has the power to break this vicious circle. According to Frank Lauback, an American Missionary “Literacy is a tool to be used in everyday life; a tool to be constantly sharpened and perfected so that it becomes a person’s constant companion”. Thus, literacy is more than an end in itself. Obviously, the most urgent priority is to ensure access to it and improve the quality of learning particularly the education of girls and women community so that obstacles in the way of empowerment of weaker sections may be removed at any cost. Among the poorest, literacy has important ramifications in providing better employment
opportunities, higher productivity in agricultural activities, better health status through reduction in child mortality rate, and participatory role of women in various spheres, thereby enhancing the overall standard of living.

The district wise population, literacy rates, sex ratio and population density of Assam are given in Table -03 whereas administrative units are presented in Table -04. The population parameters for all the eight states accordingly to 2001 and 2011 census are given in Table -03.

**Table – 3**

District wise Population, Literacy Rate, Sex Ratio and Population Density of Assam (2011)

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>District</th>
<th>H.Q./ Capital</th>
<th>Population</th>
<th>Literacy</th>
<th>SR</th>
<th>PD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Barpeta</td>
<td>Barpeta</td>
<td>1,693,190</td>
<td>65.03</td>
<td>951</td>
<td>632</td>
</tr>
<tr>
<td>2</td>
<td>Bongaigaon</td>
<td>Bongaigaon</td>
<td>732,639</td>
<td>70.44</td>
<td>961</td>
<td>425</td>
</tr>
<tr>
<td>3</td>
<td>Cachar</td>
<td>Silchar</td>
<td>1,736,319</td>
<td>80.36</td>
<td>958</td>
<td>459</td>
</tr>
<tr>
<td>4</td>
<td>Darrang</td>
<td>Mongaldoi</td>
<td>908,090</td>
<td>64.55</td>
<td>923</td>
<td>491</td>
</tr>
<tr>
<td>5</td>
<td>Dhemaji</td>
<td>Dhemaji</td>
<td>688,077</td>
<td>69.07</td>
<td>949</td>
<td>213</td>
</tr>
<tr>
<td>6</td>
<td>Dhubri</td>
<td>Dhubri</td>
<td>1,948,632</td>
<td>59.36</td>
<td>952</td>
<td>1171</td>
</tr>
<tr>
<td>7</td>
<td>Dibrugarh</td>
<td>Dibrugarh</td>
<td>1,327,748</td>
<td>76.22</td>
<td>952</td>
<td>393</td>
</tr>
<tr>
<td>8</td>
<td>Goalpara</td>
<td>Gualpara</td>
<td>1,008,959</td>
<td>68.67</td>
<td>962</td>
<td>553</td>
</tr>
<tr>
<td>9</td>
<td>Golaghat</td>
<td>Golaghat</td>
<td>1,058,674</td>
<td>78.31</td>
<td>961</td>
<td>302</td>
</tr>
<tr>
<td>10</td>
<td>Hailakandi</td>
<td>Hailakandi</td>
<td>659,260</td>
<td>75.26</td>
<td>946</td>
<td>497</td>
</tr>
<tr>
<td>11</td>
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<td>Jorhat</td>
<td>1,091,295</td>
<td>83.42</td>
<td>956</td>
<td>383</td>
</tr>
<tr>
<td>12</td>
<td>Kamrup(m)</td>
<td>Guwahati</td>
<td>1,260,419</td>
<td>88.66</td>
<td>922</td>
<td>2010</td>
</tr>
<tr>
<td>13</td>
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<td>Guwahati</td>
<td>1,517,202</td>
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<tr>
<td>14</td>
<td>KarbiAnglong</td>
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<td>965,280</td>
<td>73.52</td>
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<tr>
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<td>961</td>
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</tr>
<tr>
<td>16</td>
<td>Kokrajhar</td>
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<td>886,999</td>
<td>66.63</td>
<td>958</td>
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<tr>
<td>17</td>
<td><strong>Lakhimpur</strong></td>
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<td>78.39</td>
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<tr>
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<tr>
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<td>711</td>
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<td>44</td>
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<tr>
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<td>Sivasagar</td>
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<td>81.36</td>
<td>951</td>
<td>431</td>
</tr>
<tr>
<td>23</td>
<td><strong>Sonitpur</strong></td>
<td>Tejpur</td>
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<td>69.96</td>
<td>946</td>
<td>365</td>
</tr>
<tr>
<td>24</td>
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<td>Tinsukia</td>
<td>1,316,948</td>
<td>70.92</td>
<td>948</td>
<td>347</td>
</tr>
<tr>
<td>25</td>
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<td>Musalpur</td>
<td>953,773</td>
<td>70.53</td>
<td>967</td>
<td>475</td>
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<tr>
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<td>966</td>
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<tr>
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<tr>
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<td>Assam</td>
<td>Dispur</td>
<td>3,11,69,272</td>
<td>73.18</td>
<td>954</td>
<td>397</td>
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<td></td>
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<td>1,21,01,93,422</td>
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### Table – 4
Administrative Units, Area and Population of Different Districts of Assam

<table>
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<tr>
<th>Code</th>
<th>District</th>
<th>Capital</th>
<th>Area (sq. km.)</th>
<th>Population 1991-03-01 census</th>
<th>Population 2001-03-01 census</th>
<th>Population 2011-03-01 census</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Kokrajhar</td>
<td>Kokrajhar</td>
<td>3,169</td>
<td>801,000</td>
<td>905,764</td>
<td>886,999</td>
</tr>
<tr>
<td>02</td>
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<td>Dhubri</td>
<td>2,798</td>
<td>1,332,000</td>
<td>1,637,344</td>
<td>1,948,632</td>
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<tr>
<td>03</td>
<td>Goalpara</td>
<td>Goalpara</td>
<td>1,824</td>
<td>668,000</td>
<td>822,035</td>
<td>1,008,959</td>
</tr>
<tr>
<td>04</td>
<td>Barpeta</td>
<td>Barpeta</td>
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<td>1,386,000</td>
<td>1,647,201</td>
<td>1,693,190</td>
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<tr>
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<td>Marigaon</td>
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<td>640,000</td>
<td>776,256</td>
<td>957,853</td>
</tr>
<tr>
<td>06</td>
<td>Nagaon</td>
<td>Nagaon</td>
<td>3,831</td>
<td>1,893,000</td>
<td>2,314,629</td>
<td>2,826,006</td>
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<tr>
<td>07</td>
<td>Sonitpur</td>
<td>Tezpur</td>
<td>5,324</td>
<td>1,424,000</td>
<td>1,681,513</td>
<td>1,925,975</td>
</tr>
<tr>
<td>08</td>
<td>Lakhimpur</td>
<td>North Lakhimpur</td>
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<td>752,000</td>
<td>889,010</td>
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</tr>
<tr>
<td>09</td>
<td>Dhemaji</td>
<td>Dhemaji</td>
<td>3,237</td>
<td>479,000</td>
<td>571,944</td>
<td>688,077</td>
</tr>
<tr>
<td>10</td>
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<td>Tinsukia</td>
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<td>962,000</td>
<td>1,150,062</td>
<td>1,316,948</td>
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<tr>
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<td>Dibrugarh</td>
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<td>1,327,748</td>
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<tr>
<td>12</td>
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<td>Sivasagar</td>
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<td>908,000</td>
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<tr>
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<td>Jorhat</td>
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<td>Golaghat</td>
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<td>828,000</td>
<td>946,279</td>
<td>1,058,674</td>
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<td>15</td>
<td>KarbiAnglong</td>
<td>Diphu</td>
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<td>965,280</td>
</tr>
<tr>
<td>16</td>
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<td>Haflong</td>
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<td>151,000</td>
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<td>213,529</td>
</tr>
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<td>Silchar</td>
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<tr>
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<td>Karimganj</td>
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<td>827,000</td>
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<td>1,217,002</td>
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<tr>
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<td>Hailakandi</td>
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<td>659,260</td>
</tr>
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<td>Bongaigaon</td>
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<td>81,000</td>
</tr>
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<td>Guwahati</td>
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<td>Guwahati</td>
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<tr>
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<td>Nalbari</td>
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<td>Udalguri</td>
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<td>Total</td>
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Source: The Office of Registrar General & Census Commissioner of India.

**Note**: pt = part; spt = small part; bpt = big part.
Table-5
Population, Literacy Rate, Sex Ratio and Population Density of North East India (As Per 2001 and 2011 Census)

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<thead>
<tr>
<th>State</th>
<th>Area/sq.km</th>
<th>Year</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
<th>M</th>
<th>F</th>
<th>Persons</th>
<th>SR</th>
<th>PD</th>
<th>DGR (01-11)</th>
</tr>
</thead>
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<tr>
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<td>15214345</td>
<td>3,11,69,272</td>
<td>78.81</td>
<td>67.27</td>
<td>73.18</td>
<td>954</td>
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<td>662379</td>
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<td>73.69</td>
<td>59.57</td>
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<td>978</td>
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<td>538675</td>
<td>1091014</td>
<td>93.72</td>
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<td>76.43</td>
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<td>65.46</td>
<td>74.04</td>
<td>940</td>
<td>382</td>
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</tr>
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</table>

Sources: Census Report, Govt. of India, 2001-2011.
1.30 Rationale of the Study

The present study has been designed to study the Academic Achievement, Emotional Maturity and Intelligence of Secondary School Students of Assam. Here, the Academic Achievement refers to educational performance of examinees in class IX examination taking into account the marks of all subjects obtained by them in their previous examinations. The performance will be analysed qualitatively, and comparison of performance of males and females as well as in their performance in rural and urban situated schools is done. The present study tried to investigate if there exists any relationship between Academic Achievement on the one hand and Emotional Maturity and Intelligence of Secondary School Students on the other hand.

Emotional Maturity is also positively related to academic achievement, because emotionally matured persons are emotionally stable. So, they can perform any task or duty with full concentration. Emotional maturity is a process which the personal is continuously striving for greater sense of emotional health both intra-psychically and intra-personally. Everyone realizes what kind of feelings he experiences when he is grief-stricken, happy, angry or excited. Psychologists have named such experiences as emotions. Emotion is a powerful weapon in the hands of politicians, leaders and teachers. They try to have desired effect by arousing emotions of children and citizens. Under the influence of an emotional fit, a person may commit murder, get angry with others, run away out of fear or get senseless or become so happy that he may even dance. Emotion not only impels and creates activity but also inspires other attitudes. The experiences of peace, happiness and love are also counted as emotional experiences. In the present circumstances, youth as well as children are facing many difficulties in life. These difficulties are giving rise to many psycho-somatic problems such as anxiety, tension, frustration and emotional troubles in day-to-day life. So, the study of emotional life is now emerging as a descriptive science, comparable with anatomy. It deals with an interplay of forces with intensities and quantities. Therefore, the emotionally mature is not the one who necessarily has all conditions that arouse anxiety and hostility but it is continuously seeing himself involved in a struggle of healthy integration of feeling and thinking action.

Intelligence is a vital factor in related to academic achievement. It may be explained as the capacity for knowledge and understanding especially as applied
to the handling of novel situation; the power of meeting novel situation successfully by adjusting behaviour to the total situation. It is an organization comprising of the abilities to readily, correctly, understand the complicated and abstract things. It is an inborn natural power that makes a man capable of overcoming difficulties and problems of life. Intelligence is a variable that contributes towards academic achievement, and the evidence of the same is presented by a large number of researches. The researcher had gone through the studies that are related to the variables included in the present study.

Diseth (2002) in the study on the relationship between intelligence approaches to learning and academic achievement found that there is lack of relationship between general intelligence and achievement. Aggarwal (2007) found significant correlation between emotional stability, overall adjustment, and academic achievement, intelligence measures of mental health and social maturity of adolescents. Findings indicated no significant correlation between autonomy, security-insecurity, self-concept measure of mental health and social maturity of adolescents. Boruah, Jahnabee Lahkar (2010) did a study on academic achievement, achievement motivation and modernity attitude: a study on the tribal secondary students in Assam. The study indicated that academic achievement, academic motivation and modernity attitude were related each other and positive relationship had been found. It was found that there was significant difference in the above variable of Tribal students belonging in male and female, rural and urban areas. Kumari, Reena (2012) studied the role of emotional maturity and emotional intelligence in learning and achievement in school context. This study was conducted on 300 male Intermediate students of Meerut city. Findings revealed that emotional maturity had insignificant effect on learning but significant effect on academic achievement. Emotional intelligence had insignificant effect on learning but significant effect on academic achievement. The findings of the present study were as follows: 1. Learning scores did not differentiate significantly between the high emotional maturity subjects and low emotional maturity subjects. 2. Academic achievement scores differentiated significantly between the high emotional maturity subjects and the low emotional maturity subjects. High emotional maturity subjects scored significantly higher on academic achievement than low emotional maturity subjects. 3. Learning scores did not differentiate significantly between the high emotional intelligence subjects
and low emotional intelligence subjects. 4. Academic achievement scores
differentiated significantly between the high emotional intelligence subjects and
low emotional intelligence subjects. The following general conclusions could be
drawn from the study: 1. Emotional maturity did not influence the level of
learning of the subjects. 2. Emotional maturity was substantial to the level of
academic achievement of the subjects. 3. Emotional intelligence did not influence
the level of learning of the subjects. 4. Emotional Intelligence was substantial
significantly in affecting the level of academic achievement of the subjects, etc.
From the survey of related studies, it is evident that very few studies are
conducted in North Eastern part of India in general and Assam in particular. At
the same time, hardly any study is conducted in relation to these variables on
secondary school students in the area of Lakhimpur and Sonitpur districts of
Assam. So, the investigator is motivated to take up a comparative study and to
investigate the relationship between these variables on the secondary school
students of districts of Assam.

1.40 Statement of the Problem

The problem under study is stated as “**Academic Achievement, Emotional Maturity and Intelligence of Secondary School Students in Assam**”.

1.50 Objectives of the Study

The study was designed to achieve the following objectives:

1. To Study the overall Academic Achievement, Emotional Maturity and Intelligence of Secondary school students in total sample of both the districts.

2. To compare the overall Academic Achievement, Emotional Maturity and Intelligence of Secondary school students of Lakhimpur and Sonitpur districts of Assam.

3. To compare the overall Academic Achievement, Emotional Maturity and Intelligence between male and female Secondary School Students of Lakhimpur and Sonitpur districts of Assam.

4. To compare the overall Academic Achievement, Emotional Maturity and Intelligence between rural and urban Secondary School Students of Lakhimpur and Sonitpur districts of Assam.
5. To compare the overall Academic Achievement, Emotional Maturity and Intelligence between government and private Secondary School Students of Lakhimpur and Sonitpur districts of Assam.

6. To test the significance of the mean difference on academic achievement of (a) male and female (b) rural and urban (c) government and private secondary school students in total sample of both the districts.

7. To test the significance of the mean difference on academic achievement between (a) male and female (b) rural and urban (c) government and private secondary school students of Lakhimpur district, Assam.

8. To test the significance of the mean difference on academic achievement between (a) male and female (b) rural and urban (c) government and private secondary school students in Sonitpur district of Assam.

9. To test the significance of the mean difference on emotional maturity of (a) male and female (b) rural and urban (c) government and private secondary school students in total sample of both the districts.

10. To test the significance of the mean difference on emotional maturity between (a) male and female (b) rural and urban (c) government and private secondary school students in Lakhimpur district of Assam.

11. To test the significance of the mean difference on emotional maturity between (a) male and female (b) rural and urban (c) government and private secondary school students in Sonitpur district of Assam.

12. To test the significance of the mean difference on intelligence between (a) male and female (b) rural and urban (c) government and private secondary school students in total sample of both districts.

13. To test the significance of the mean difference on intelligence between (a) male and female (b) rural and urban (c) government and private secondary school students in Lakhimpur district of Assam.

14. To test the significance of the mean difference on intelligence between (a) male and female (b) rural and urban (c) government and private secondary school students in Sonitpur district of Assam.

15. To examine the relationship between (a) academic achievement and emotional maturity (b) academic achievement and intelligence (c) emotional maturity and intelligence of secondary school students in total sample of both the districts.
16. To examine the relationship between (a) academic achievement and emotional maturity (b) academic achievement and intelligence (c) intelligence and emotional maturity of secondary school students in Lakhimpur district of Assam.

17. To examine the relationship between (a) academic achievement and emotional maturity (b) academic achievement and intelligence (c) intelligence and emotional maturity of secondary school students in Sonitpur district of Assam.

1.60 Hypotheses of the Study

In view of the objectives of the study the investigator formulated the following null hypotheses:

**H:01** There is no significant difference in the mean scores of academic achievement between (a) male and female (b) urban and rural (c) government and private secondary school students in Lakhimpur and Sonitpur districts of Assam.

**H:02** There is no significant difference in the mean scores of academic achievement between (a) male and female (b) urban and rural (c) government and private secondary school students in Lakhimpur district of Assam.

**H:03** There is no significant difference in the mean scores of academic achievement between (a) male and female (b) urban and rural (c) government and private secondary school students in Sonitpur district of Assam.

**H:04** There is no significant difference in the mean scores of emotional maturity between (a) male and female (b) urban and rural (c) government and private secondary school students in total sample of both the districts.

**H:05** There is no significant difference in the mean scores of emotional maturity between (a) male and female (b) urban and rural (c) government and private secondary school students in Lakhimpur district of Assam.

**H:06** There is no significant difference in the mean scores of emotional maturity between (a) male and female (b) urban and rural (c) government and private secondary school students in Sonitpur district of Assam.

**H:07** There is no significant difference in the mean scores of intelligence between (a) male and female (b) urban and rural (c) government and private secondary school students in total sample of both districts.

**H:08** There is no significant difference in the mean scores of intelligence between (a) male and female (b) urban and rural (c) government and private secondary school students in Lakhimpur district of Assam.
**H:09** There is no significant difference in the mean scores of intelligence between (a) male and female (b) urban and rural (c) government and private secondary school students in Sonitpur district of Assam.

**H:10** There is no relationship between (a) academic achievement and emotional maturity (b) academic achievement and intelligence (c) emotional maturity and intelligence of secondary school students in total sample of both the districts.

**H:11** There is no relationship between (a) academic achievement and emotional maturity (b) academic achievement and intelligence (c) intelligence and emotional maturity of secondary school students in Lakhimpur district of Assam.

**H:12** There is no relationship between (a) academic achievement and emotional maturity (b) academic achievement and intelligence (c) intelligence and emotional maturity of secondary school students in Sonitpur district of Assam.

**1.70 Definition of the terms Used**

In the present study, a few terms have been frequently used and have got specific meaning for the present investigation. Given below are conceptual definitions of the terms used.

1. **Academic Achievement:** It is the level of proficiency attained in academic work or formally acquired knowledge in school subjects which is often represented by total marks obtained by the students in class IX examination.

2. **Emotional Maturity:** Emotional Maturity is a process which the personal is continuously striving for greater sense of emotional health both intra-psychically and intra-personally.

3. **Intelligence:** It is the capacity of an individual to act purposefully, to think rationally and to deal effectively with his environment.

4. **Secondary School Students:** Students admitted to class X and appearing SEBA examination in the year 2014-2015.

**1.71 Delimitations of the Study**

The present study was delimited to:

1. The students of class-X only.
2. Two districts of Assam viz Lakhimpur and Sonitpur.
3. Only 1000 sample was taken from both the districts.
1.80 Chapterization

The whole research work is reported in six chapters. The Chapter-1 describes the theoretical background, genesis of the problems, objectives and hypotheses of the study. The survey of related literature is presented in the second chapter. The methodology of the study finds place in the third chapter. The analysis and interpretation of data are done in the fourth chapter. The finding, discussion of results, conclusions, recommendations and suggestions for further research find place in the fifth chapter. The summary done in the six or last chapter and also followed by bibliography and appendices.

The following chapter is devoted to the survey of related literature.