CHAPTER - I

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1.1 OVERVIEW

In the present world educational capability is interconnected with the growth of society. Education has become broad and electric, subjecting itself for a continuous adaptation and evaluation. The educational sense over the century shows how human potentiality has been channelized and utilized for the betterment of the human race. Education serves as knowledge inputs, for the individual to use his potentialities as a vital resource, in the direction of progress to meet the expectations of the society.

Educational focus has been expanded over a decade with, state wide high stakes testing and nationwide school accountability programs. In an exertion to enhance the academic success of students, it has become forced to examine all elements of the educational process inorder to maximize the performance of students.

To enhance the learning process and academic outcomes, the area of research has become a significant phase of every society. The cycle of learning begins with the birth of a child and continues till the death. As soon as the child comes in contact with the environment, he/she initiates reacting and in the process of interaction between the individual and the environment, and thus the foundation of learning is laid down.

The learning of concepts is the most significant are for human beings as they think, learn and connect with the help of concepts. The present age is the age of computerised industry and research. The growth of population in some areas of the world force us grow under high economic conditions.
Generally students desire to achieve in their attempt. But each student is affected in different levels. Such as lack of adequate resources, lack of timely exposure and support, lack of skills, lack of experience, lack of ability or lack of time.

Education plays a vital role in influencing an individual’s economic and social grounds. Formal schooling is an important role in the enhancement of overall growth of individuals and the society. Education is considered as a basic need that supports the fulfillment of other basic needs such as food, clothing and shelter.

Learning is a process not only of formal schooling, but also of families, communities and peers. Social, economic and cultural forces affect learning and the school achievement. A great deal of research on the determinants of school achievement has centered on the relative effects of home- and school-related factors.

It is suggested that family background is an important determinant of school outcomes, whereas school outputs are inadequate effects. However, debates continue regarding the relative importance of family and school outputs.

Various studies have shown that individual, home and school environments have a strong influence on the performance of children, especially at the primary and secondary school levels. In addition, home, school and academic achievement is also affected by students preexisting human capital, which includes their unique way of interacting with educational institution, family, community, school, peer group, the economy and the culture. Individual characteristics such as intelligence, perceptions of the school environment, involvement in scholastic activities and level of motivation have also been found to influence academic achievement.
The studies investigated determinants of school achievement have focused on the relative importance of individual, home-and school-related factors, whereas scholastic activities, student well-being in school, attitude toward school, family characteristics and school characteristics are rarely examined in the same study.

The present study differs from earlier studies, in that it focuses simultaneously rather than separately on how student, individual, home and school related factors affect the school achievement of students. Therefore, the purpose of this study is to examine the relative importance of individual, school and home related factors in accounting for academic achievement of students.

This chapter deals with the conceptual framework for the present research, briefly states the background of the present study and explains the need for the research undertaken.

1.2 THE IMPORTANCE OF RESEARCH IN ACADEMIC ACHIEVEMENT OF STUDENTS

In the zone education has become a significant facet of every society. The vision of education has many approaches and applied. These approaches have been totally fostering human potential channelized and utilized for growth and development. The education researchers have been always updating and enriching knowledge and application, to suit the contest of the society. Formal education, appears an omnipotent force thrust into the individual at several stages, in appropriate proportions to his/her age and level of development and maturity.

It could be noted that over the world, formless knowledge has been amassed and have been, to great extent, classified and appropriately linked with relevant
disciplines. The “knowledge explosion” in education research has a definite and assured progress both for individuals and the whole society.

What are the ways and means of achieving such mastery in education? It is an important question for realizing the ultimate linkage between education, progress and better quality of life. Needless, though to describe the relative linkages and contributions, people understand and realize the need for education and improve oneself in education.

Education has to be effective, then we need to evaluate the level and quality of such education attitude at every level. Nothing is more revealing the effectiveness and efficiency of a course of study than an examination of how well a student has performed. The abstract of how well the students have assimilated the formal education, through a course of study is made possible only through the time-tested scholastic performance. The assessment of this performance has double advantage, one for the student as a feedback to know his level of comprehension and other to understand the weaknesses, correct and modify towards better performance.

In present day, such stress has become inevitable in order to be fit for survival. The complexities and technical marvels of the society depend on the quality of scholastic performance alone. Students and parents show abundant enthusiasm and motivation for better school performance.

The society is thus demanding the students for more and more knowledge and effective performance. This has resulted in performance of our students getting negatively skewed, to put it in statistical terms. In common parlance, negative
skewness indicate that the average performance is going higher and higher empowering even the least score in school is probably abnormal distribution.

Though indicative of better and best performance especially in schools, there are certain parts of school students, still being unable to reach expected heights in scholastic performance or academic achievements. It is commonly known in the education literature, forms a vital source for education researchers, since it is required for acquiring skills, accomplishing appropriate jobs and in turn settling in adult life in the effective manner.

Teachers and educational psychologists have been attempting to test the features of academic achievement, an ultimate outcome of education inputs. The role played by some of the personal or psychological variables as pressure disposed and the social and educational variables as precipitating variables either facilitating or weakens the academic achievement. Thus, it is felt most important to investigate in the area of academic achievement of students in the Indian context, as the relevant correlates were not properly interlinked.

1.3 NEED FOR THE CURRENT RESEARCH

Education brings out the inner talents among the students. Through education, the students are able to realize their talents skills and their abilities.

The education plays a major role in the development of the society. The society recognized the student’s community on the basis of their academic achievement, extra- curricular achievements and their involvement in social activities.
The students are flourished on the basis of their intelligence, motivation by their parents, peer group, teachers and society. In the same way the climate for learning to the students in his classroom as well as home is playing a major role in the development of knowledge, wisdom and establishing a right path for his future.

Moreover the economic status of the family is very important in the present society to bring a student with multifaceted talents. Gardner (1983) suggested the multiple intelligence is more important for the development of a child. Mahatma Gandhi is also quoted that children should develop skills as much as possible.

From the above discussions the investigators found that the academic achievement of the children encountered by many factors from the various directions. Out of which the investigator analyse the factor which are more responsible for the academic achievement.

There are two categories of factors which are responsible for academic achievement. The investigator, has grouped the factors into two categories namely Personal factor and Environmental factor. In the personal factor the investigator has chosen two variables which are intrinsic among the students. They are Intelligence and Achievement Motivation. The environmental factor is equally responsible like personal variables for enrichment of the knowledge, wisdom, skills and abilities. Therefore the investigator has chosen two variables. One is Classroom Climate and other is Home and family based variable that is Socio-economic Status.

Finally the investigator tries to get the impact of Personal variable (Intelligence and Achievement Motivation) and Environment variables (Classroom
Climate and Socio-economic Status) on academic achievement of Secondary level students.

1.4 THEORETICAL BACKGROUND OF THE PRESENT STUDY

Academic achievement could be expressed as the display of knowledge attained or skills developed in school subjects designated by test and examination scores or marks assigned by the subjects’ teachers. It could also be said to be an expression used to represent students’ scholastic performance.

Most of the researchers, psychologist and educationists have identified some of the variables that have effects on student’s academic performances. Theoretical background that supports the factors contributing to the academic performances of students is discussed as mentioned below.

1.4.1 Student Characteristics

Characteristics of individual student is well-being, intelligence, attitudes, motivation, involvement in scholastic activities and student’s perception of parental support. Well-being model in school is a four-dimensional phenomenon: school conditions, social relationships, self-fulfillment and health status. Many researchers have shown that well-being of students in school, affects both their behaviour and their examination results.

Well-being of students in school depends on many factors, including their views about school rules and their relations with teachers and schoolmates. Student well-being may also affect other student-related characteristics, such as achievement, motivation, attitude toward study and effort.
School children who perceive their teachers to be fair and caring are more likely to have positive attitude towards the school and increased motivation to achieve. Student’s perceptions of teacher support and teacher expectations have also been found to be positively related to achievement. Moreover, students who are accepted by their peers have been found to be more likely to enjoy school.

Student’s insights of parental support and involvement are also considered as powerful factors on their achievement motivation. Students perceptions that their parents are involved and interested in school and encourage them to do well are positively related to academic achievement.

1.4.2 School Characteristics

Disparities in school characteristics are associated with variations in students performance. A significant positive effect on schooling outcomes associated with student–teacher ratio, instructional materials, size of the class, school infrastructure and teacher’s training, qualification & experiences

Contribution of teacher quality has great impact on student’s academic achievement. The components of teacher’s quality are verbal ability, subject knowledge, teaching-learning skills and strategies adapted to student needs. Teacher education levels are positively related to student performance.

Class size has been broadly researched to determine its effect on student achievement. Few researches found that smaller class size was significantly related to inferior student performance. In contradictory, few research also found that some students are benefited from smaller classes. Nevertheless, no conclusive result has shown that class size have no statistically significant effect on student achievement.
Teacher–student ratio is another variable extensively used as an index of school quality. However, results of studies looking at the effects of teacher–student ratio on school achievement are also ambiguous. Many researches have failed to show significant improvements in academic achievement as a result of smaller teacher–student ratio.

Student behaviour is also an additional concern on academic achievement. The transition into high school brings with it many additional problems like high levels of competition, extra ordinary stress and low self-esteem which in turn could result in low academic achievement.

1.4.3 Family Characteristics

Research are shown that family background characteristics such as socio-economic status as measured by parental education level, parental occupation and family income have an influence on school achievement. Among socio-economic status indicators, parental level of education has been found to be the most significant source of disparities in student performance.

Students whose mothers had completed their upper-secondary education achieved higher levels of performance in reading than other students. Family background exerts a very strong effect on student’s performance. Specifically, students from disadvantaged families and families whose parents had less education have systematically performed low in academics.

An achievement of students depends upon parent’s education, economic conditions and social resources (i.e. parent–child interaction family structure, home environment).
The existence of opportunities for learning, the warmth of mother–child interactions, the physical conditions of the home and family income affects the cognitive outcomes of children.

Increased numbers of children in the family leads to less favourable child outcomes, through the mechanism of resource dilution. Resource dilution refers to the quantity of time and material resources that parents are able to invest in their children. When the number of children increases, parents can offer fewer resources per child.

Under such conditions, all forms of family capital—financial, human and social are spread across the children in a good manner. Again, empirical evidence supports the claims: children from larger families have been found to have less favourable home environments and lower levels of verbal facility as well as higher rates of behaviour problems and lower levels of educational achievement.

A diagrammatic representation of factors contributing to academic achievement is presented hereunder in Figure-1

**Diagrammatic Representation of Factors Contributing to Academic Achievement**

![Diagram of Factors Contributing to Academic Achievement](image)
1.5 EVOLUTION OF THE STUDY

Education is to awake and develop physical, intellectual and moral states. It is a vital aspect of every society. Without education all accumulated knowledge and all standards of conduct would be lost. Moreover, education is the inculcation in each generation of certain knowledge, skills and attitudes by means of institutions, such as schools, deliberately created for this end.

Most of the research in recent years have revealed on identifying the crucial factors that promote academic success among students whose demographic characteristics and school circumstances place them at high risk of failure.

Research also suggests that, earlier the schools and teachers begin to build students’ confidence in their ability to do well, the better off students will be. In this research, students’ academic achievement was analyzed in terms of two kinds of factors, Personal (Individual factors) and Environment Factors (Family and school factors). These two factors were selected based on previous researches.

Some researchers debated as to which one of two factors, family factors or school factors, more strongly impacts on student’s academic achievement. The reports concluded that family factors have a stronger impact on students’ academic achievement than school factors.

But, nowadays empirical research on developed countries has generally agreed that school factors are more importantly associated with students’ academic achievement. Further researches on this topic were conducted in developing countries.
concluded that school factors are more important for students’ academic achievement than family factors.

Moreover, apart from these factors, some researchers have expressed that individual factors take a significant role on student’s academic achievement. This argument about the subject in developing countries is still going on and a final conclusion is yet to be derived.

Figure-1 shows a framework of multiple factors (individual factors, family factors and school factors) with a direct impact upon student’s academic achievement studied in this research.

1.6 CONCEPTUAL FRAME WORK OF THE STUDY

Academic achievement is the demonstration of knowledge attained or skills developed in school subjects through test and examination scores or marks assigned by the subjects’ teachers. Many educationalist, psychologist and researchers, have identified some of the variables that have effects on students’ academic achievements.

The close inspection of the above mentioned studies and the findings, seems that Individual factor, School factor and Home factor play a significant role determining the academic achievement of student.

For the conceptual framework of the present study, the investigator selects only two major factors (i.e. Personal and Environmental).

Though there are many variables in each factor, the investigator select only four variable in this study. They are Intelligence, Achievement Motivation grouped
as Personal Factor and Classroom Climate, Socio-economic Status grouped as Environmental Factor.

The diagram presented below (Figure-2) is a schematic diagram of the conceptual framework for the present study.

Figure – 2

Conceptual Framework of the Present Research
Detailed discussion for the above mentioned topics are as follows:

1.6.1 **Academic Achievement**

“Academic achievement is the outcome of education to the extent of which a student, teacher or institution has achieved their educational goals.”

Academic achievement is the demonstration of knowledge attained or skills developed in school subjects through test and examination scores or marks assigned by the subjects’ teachers. However the term ‘achievement’ has a extensive meaning and refers to the amalgamation of all behavioral changes in the cognitive, affective and psychomotor domains. Achievement influences strongly to one’s own self-esteem, and is also important in gaining the admiration of others.

Achievement is the final product of Human. The main concern of all educational efforts is to see the learner achievement. The whole educational system aims at the academic achievement of students though many other outcomes are also expected from the system.

Academic achievement is the quantum of knowledge extracted from learning. A student gains knowledge by instructions he receives at classrooms and are organized around a set of core activities in which a teacher assigns tasks to student and evaluates and compares the quality of their work. Generally school provides a wide variety of achievement experiences than the family.

The perception of achievement has several orientations. It usually denotes activity and mastery, making an impression on the environment rather than philosophically accepting it and competing against some standard of excellence.
According to the dictionary of education, academic achievement means the knowledge attained or skills developed in the school subjects usually designed by teachers or both teachers and educationalists.

Below average student is one whose actual attainment, is indicated by his scholastic accomplishment in school, do not measure up to his potential achievement as indicated by his abilities.

The above average achievers whose school accomplishment is much above the expectations formed on the basis of their activities. The concept of above and below achievements do suggest that there are variables in ability which has positive effects on performance and that there is no perfect positive correlation between intelligence and accomplishment.

Classification of some school performance in above average achievers or below average achievers inclines to suggest that intelligence is not the sole basis of predicting achievement and agrees that there are other variables influencing achievement. This leads us to the question of discovering other variables predicting achievement.

1.6.2 Personal factors

There are many variables in Personal Factors

Intelligence

Achievement Motivation

Work Habits
Attitude

Well Being

Adjusting ability and so on.

From the above variables the investigator has selected two variables for this study. They are Intelligence and Achievement Motivation.

### 1.6.2.1 Intelligence

“Capacity for learning, reasoning, understanding, and similar forms of mental activity; aptitude in grasping truths, relationships, facts, meanings, etc.”

Till this century, the word *intelligence* has been used primarily by ordinary individuals in an effort to describe their own mental powers as well as those of other persons. Consistent with ordinary language usage, *intelligence* has been deployed in anything but an accurate manner.

Forgetting about homonyms which denote the gathering of information, individuals living in the West were called ‘intelligent’ if they were quick or eloquent or scientifically astute or wise. In other cultures, the individual who was obedient, or well behaved, or quiet, or equipped with magical powers, may well have been referred to by terms which have been translated as *intelligent*.

Intelligence was primarily observed as a predominant concept, which could be captured by a single number, a debate soon arose about whether the concept could legitimately be broken into components. Some researchers argued that intelligence was better conceived of as a set of possibly independent factors.
In recent years, buoyed by findings from fields as disparate as artificial intelligence, developmental psychology, and neurology, a number of investigators have put forth the view that the mind consists of several independent modules or intelligences.

Theories of Intelligence

Theories of intelligence can be divided into those based on a unilinear construct of general intelligence and those based on multiple intelligences. The Stanford-Binet Intelligence Test has been used by both theorists of general intelligence and multiple intelligences and it is, however, the basis for the development of various theories of Multiple Intelligences.

The most widely accepted theory of intelligence is based on psychometrics testing or intelligence quotient (IQ) tests. However, dissatisfaction with traditional IQ tests have led to the development of a number of different theories, all of which suggest that intelligence is the result of a number of independent abilities that contribute to human performance.

UNI Factor Theory:

It reduces all abilities to a single capacity of common intelligence or ‘common sense’. This would indicate that they are all perfectly correlated, and would make no share for the inequality of people i.e. abilities along different ways. Since it goes against the general opinion that “an individual does possess various levels of different abilities and does not shine equally in all directions” - it has no ground to stand.
Spearman’s Two-Factor Theory:

It was established in 1904 by an English Psychologist, Charles Spearman, who said that intellectual abilities were consisted of two factors: One is general or common ability known as ‘G’ factor and the second is group of specific abilities known as ‘S’ factor. ‘G’ factor is universal inborn ability. Greater ‘G’ in an individual leads to huge success in life. ‘S’ factor is acquired from the surroundings. It differs from activity to activity in the same person.

Thorndike’s Multifactor Theory:

Thorndike said that there was nothing like Common Ability. Every mental activity requires a collective of different abilities. He mentioned that there are four attributes of intelligence:

(a) Level—refers to the level of difficulty of a task that can be resolved.

(b) Range—refers to a number of tasks at any given degree of difficulty.

(c) Area—means the total number of situations at each level to which the person is able to respond.

(d) Speed—is the rapidity with which, a individual can respond to the task.

Thurstone’s Group Factor Theory:

Thurstone states that Intelligent Activities are not an expression of countless highly specific factors, as Thorndike appealed. Nor is it the expression primarily of a common factor that percolates all mental events.

It is the principle of intelligence, as Spearman held. The analysis of interpretation of Spearman and others led to the inference that ‘certain’ mental operations have in common a ‘primary’ factor that provides psychological and
functional unity and that distinguish them from other mental operations. These mental operations then form a group.

A second group of mental operation has its own primary factor, and so on. Otherwise there are various mental abilities and each has its own primary factor, providing the group a functional unity and cohesiveness. Each of these primary factors is said to be independent of each others.

He suggested six primary factors, they are

(i) The Number Factor (N) - Ability to do Numerical Calculations rapidly and precisely.
(ii) The Verbal Factor (V) - Found in tests involving Verbal Comprehension.
(iii) The Space Factor (S) - Involved in any work in which the subject manipulates the imaginary object in space.
(iv) Memory (M) - Ability to memorize rapidly.
(v) The Word Fluency Factor (W) — Involved whenever the person is asked to think of isolated words at a quick rate.
(vi) The Reasoning Factor (R) — Found in tasks that require an individual to find a rule or principle involved in a series or groups of letters.

Based on the above mentioned factors Thurstone formed a new test of intelligence known as “Test of Primary Mental Abilities (PMA).”

**Guilford’s Model of Structure of Intellect**

Guilford (1967, 1985, 1988) suggested a three dimensional structure of intellect model. According to him, every intellectual task can be divided according to its (1) content, (2) the mental operation involved and (3) the product resulting from the operation. Further he divided content into five categories as below
• Visual
• Auditory
• Symbolic
• Semantic
• Behavioral.

Guilford distinguished operations into five categories namely
• Cognition
• Memory retention
• Memory recording
• Divergent production
• Convergent production

He distinguished products into six categories namely,
• Units
• Classes
• Relations
• Systems
• Transformations
• Implications.

**Vernon’s Hierarchical Theory:**

Vernon’s explanation various levels of intelligence might fill the gaps between two extreme theories. Spearman’s two-factor theory which did not allow for the
existence of group factors, and the multiple-factor theory of Turstone, which did not allow a ‘‘g’’ factor.

Intelligence can be described as comprising abilities at different levels of generality:

1. The highest level: ‘‘g’’ (general intelligence) factor with the largest source of variance between individuals. (Spearman)

2. The next level: major group factors such as verbal-numerical-educational (v.ed) and practical-mechanical-spatial-physical (k.m.) ability.

3. The next level: minor group factors are divided from major group factors.

4. The bottom level: ‘‘s’’(specific) factor.

In 1969, Vernon involved in studying the contributions of environmental and genetic factors to intellectual growth. Vernon studied the impact of genes and the environment on both individual and group difference in intelligence.

Vernon finalized that individual difference in intelligence are attributes to 60 percent of genetic factors, and that there is some proof for implicating genes in racial group differences in average levels of mental ability.

**Cattell’s Fluid and Crystallized Theory**

The theory says that intelligence is a basic capacity due to genetic potentiality. While this is impacted by the past and new experiences, the crystallized theory is a capacity resultant of experiences, learning and environment.

**Gardener’s Multiple Intelligence Theory:**

Howard Gardner proposed a new and unique view of human intellectual competencies. He mentioned that human were all born with potential to establish a
multiplicity of Intelligence, most of which have been not recognized the society, and which make all humans to competent individuals.

The multiple intelligence theory proposes that people possess eight types of intelligence:

- Linguistic
- Logical
- Spatial
- Musical
- Motor ability
- Interpersonal
- Intrapersonal
- Naturalistic intelligence.

**Sternberg’s Triarchic Theory:**

Psychologist Robert Sternberg (1985) has designed a three-pronged, or triarchic theory of intelligence. The Three types are:

**Analytical Intelligence**

It is what we normally think of as academic ability. It helps us to solve problems and to gain new knowledge. Problem-solving skill includes encoding information, combining and comparing all of information and creating a solution.

**Creative Intelligence**

It is defined by the abilities to cope with innovative situations and to profit from experience. The ability to quickly relate novel situations to familiar situations
(that is, to perceive similarities and differences) fosters adaptation. As a result of experience problems are solved easily.

**Practical Intelligence**

Practical Intelligence or ‘‘street smarts’’, helps people to accustoms to the requirements of the environment. For example, keeping a job by modifying one’s behavior to the employer’s requirements is adaptive. But if the employer is making unreasonable demands, changing the environment (by changing the employer’s attitudes) or selecting an alternate environment is also adaptive.

**Anderson’s Theory:**

Anderson states that human cognitive architectures will have adapted flawlessly to the problems posed in environment. Therefore identifying the correct solution to the problem posed by the environment, independent of the architecture, is similar to discovering the mechanism used by the architecture.

A ‘Rational Analysis’, as it is called, takes into account the assessable information in the environment, the goals of the agent, some fundamental assumptions about computational cost (in terms of a ‘general’ architecture mechanism), and produces the best behavioral function. This function then of course can be analysed empirically and assumptions modified if it proves imprecise.

A different point of view to this is adopted by Simon, and is centered on the claim that, in a rational analysis, the assumptions about the architecture actually do most of the work.
Eysenck’s Theory

Eysenck identified the neurological correlates of intelligence. He described three correlates of intelligence i.e. reaction time, inspection time and average evoked potential. First two are observed behavior. Third behavior, is brief of mental waves.

Brighter human takes less time in responding. They show less difference in reaction time. The inspection time is also less as compared to less intelligent. Average evoked potential is often measured by the wavelength in electroencephalogram and complexities of waveform. He discovered that the waves of intelligent individuals are complex.

Ceci’s Theory

In the year 1990, Professor Ceci recommends that there are multiple cognitive potentials. These multiple intelligence’s are biologically based and place limits on mental processes. These are closely linked to the challenges and opportunities in the individual’s environment. According to him, context is vital to the demonstration of cognitive abilities. He means domain of knowledge and other factors such as personalities, motivation and education. Context can be mental, social or physical.

Goleman’s Theory

According to Goleman (1995), Emotional Intelligence consists of ‘‘abilities such as being able to motivate oneself and endure in the face of frustrations; to control impulse and delay gratification; to manage one’s moods and keep distress from the ability to think, to empathize, and to hope’’.

The vital areas are knowing one’s emotions, managing emotions, motivating oneself, recognizing emotions in others, and handling relationships.
Factors Affecting Intelligence

The following factors affect the intelligence.

Hereditary and Environment

Hereditary factors are established on the genetic make-up of the individual influences growth and development throughout life. The offspring inherits genetic features from his parents. The environmental factors includes the effect of parents, family, friends, schooling, society, culture, and all other experiences to which the child is exposed right from the moment of conception.

The nature-nurture question has been passionately debated for decades. At present, psychologists agree that both nature and nurture interact to pro specific developmental patterns and competence. The question has changed from which (heredity or environment) influences behavior to how and to what extent heredity and environment shape the progressive procedure. Nobody is born without a genetic make-up, or no one grows up free environmental influences.

Both heredity and environment are important, it is unwise to determine their relative influence. Even then, the de concerning their relative influence remains still active with different thee emphasizing either the role of heredity or the role of environment.

Parent-Child Interaction

Parents are the first teachers for the child. The nature of mental behavioral interaction between the parents and the child has a critical influence on his intellectual competence. Children's intellectual development is faster when parents provide emotional security, make the family environment more supportive, praise the child's
achievement, allow independence, support the intellectual achievement of children. On the contrary, with stressful family conditions and protective parents encouraging dependence in child the child's intellectual development suffers.

The mother is more important than the father in determining the intellectual level of the home environment, because she spends more time with children. When the mother is better-educated, the intellectual competence of the college-going and university students is higher than those of having father as the better-educated.

In a study, it was found that high achievement in boys was associated with high maternal reinforcement and encouragement during the first three years of life. It should, however, be kept in mind that although parent-child interaction is an important determinant of achievement in children, other factors such as social class, education, and social opportunities set important limits on children's attainment.

**Social and Environmental Deprivation**

Studies conducted by Dash and Das (1984, 1989) reveal that an opportunity for education such as schooling significantly influences children's cognitive capacities. If the environmental opportunities and stimulations are low, children show poor cognitive performance.

In a study in rural India, they have shown that schooled children show superior performance on a variety of intellectual tasks compared to their unschooled age-groups. Schooling improves children's abilities to memorize, reason, and classify using a variety of principles.

Many of the intellectual processes either develop slowly or do not develop at all in children, who do not attend schools. School provides an enriched social
environment for children, and allows their thought processes to grow free from the concrete physical and social contexts.

**Race and Culture**

Many studies have found that racial membership significantly influenced both the pattern and level of intellectual sentence. In fact, racial differences were more prominent than the SES differences. Culture refers to a system of beliefs, attitudes, and values that assed from one generation to the next.

It may be unfair to compare the performance level of children from different cultures, as the skills required for successful adaptation in different cultures great deal. The skills tapped by the standard cognitive tests are those that are demanded in more technologically advanced cultures and higher SES groups.

As a result the tests are biased in favour of their competence, and it is no wonder that we find inferior performance of unprivileged children on these. The appropriateness of the test items has to be considered in any investigation comparing the performance of children from various cultural and groups.

**Gender Differences**

The overall IQ scores of boys and girls are very similar. There is some evidence that gender differences exist for particular kinds of cognitive abilities. Review of a number of studies have shown that girls are superior in language skills, verbal fluency, and reading, while boys are superior in mathematical reasoning and spatial abilities. While neither sex is sup the two sexes show different patterns of intellectual abilities.

These have been supported by several researchers. Some argue that intellectual differences between sexes reflect different child-rearing practice; socio-
cultural training. The parents and the society train boys and girls differently in terms of what to expect from them. It is known that intelligence related to personality characteristics.

Boys are socialized in a way to promote self-reliance and competence, which are positively correlate intelligence. On the other hand, the traits are discouraged in girls so that high intelligence is often considered a masculine quality.

The gender differences also partly result from the fact that many items standardized intelligence tests are biased in favour of the male population. Hence sex differences are the products of the test itself. Researchers differ in their convictions regarding sex differences.

A group of researchers that sex differences are reflections of constitutional and genetic difference between boys and girls. The most reasonable conclusion is that differential abilities are the products of some combination of genetic and environmental factors.

**Physiological Conditions**

The physiological conditions such as nutrition, health, drugs, disease, and physical injury affect the cognitive competence of the child. Healthy body gives a healthy mind. The mental development is associated with biochemical processes and hormones within the body. The biological processes within the body provide a necessary but not sufficient condition for intellectual development.

Poor health and susceptibility to diseases would retard the growth of brain cells, and consequently the intellectual skills. Physical injury to the brain during early childhood years is likely to result in minimal brain damage thus seriously restricting the development of intellectual faculty. Similarly, intoxicating drugs and alcohol
consumption would adversely affect the biological processes and the development of brain cells.

The internal physiological conditions are critical for the expression of intelligent behavior.

Thus intelligence is a term used to define a property of the mind that incorporates many related abilities, such as the capacities to reason, to plan, to solve problems, to think abstractly, to comprehend ideas, to use language, and to learn. Intelligence may include qualities such as creativity, personality, character, knowledge, or wisdom. Intelligence has been found to be a very important variable in determining the academic achievement of students. Hence, it is included in the present study.

1.6.2.2. Achievement Motivation

“Achievement motivation can be defined as the need for success or the attainment of excellence. Individuals will satisfy their needs through different means, and are driven to succeed for varying reasons both internal and external.”

Motivation is generally regarded as the drive to achieve targets and the process to maintain the drive. Motivation provides an important foundation to complete cognitive behavior, such as planning, organization, decision-making, learning, and assessments. Spence and Helmreich (1983) defined achievements as task-oriented behavior.

Achievement motivation is a combination of two personality variables: tendency to approach success and tendency to avoid failure. Achievement Motivation as the drive to work with diligence and vitality, to constantly steer toward targets, to
obtain dominance in challenging and difficult tasks and create sense of achievement as a result. Some research reveals that achievement motivation consists of three elements: the stimulation of personal capabilities, drive with constant efforts and attaining of sense of satisfaction.

Another research conducted a factor analysis and argued that achievement motivation consists of four elements, i.e. mastery of needs, work orientation, competition, and personal unconcern. After further studies, they found that the interaction of the first three elements is the key reason that contributes to excellent performance of individuals. It is highly related to personal achievements

Mastery of Needs:

An individual prefers jobs that are challenging, intellectually demanding, and thought-oriented. He or she enjoys playing a leadership role in groups and is able to complete tasks already started.

Work Orientation:

An individual takes a proactive attitude towards work and loves what he or she does. He or she obtains sense of satisfaction from work and pursues self-realization and growth.

Competition:

An individual hopes for victory and has the desire to win over others.
**Personal Unconcern:**

An individual does not consider success or stellar performance to be the cause of being rejected by others. In other words, there is no fear of success.

According to the above explanation, achievement motivation is a subjective and internal psychological drive, enabling individuals to pursue work they perceive to be valuable and prompting them to reach their goals. Meanwhile, achievement motivation is also a mentality to compete and compare with others.

As per definitions, as proposed by the previously mentioned scholars, achievement motivation is a subjective, internal, and psychological drive, enabling individuals to pursue work they perceive to be valuable and eventually achieve their goals.

It is found that motivations have influence on the formation of psychological contracts. Motivations include meaningful work, job security, and a sense of achievement, promotional channels, and opportunities.

Behavioral psychologists have noticed that some people have an intense desire to achieve something, while others may not seem that concerned about their achievements. This phenomenon has attracted a lot of discussions and debates. Psychologist have observed that people with a high level of achievement motivation exhibit certain characteristics. Achievement motivation is the tendency to endeavor for success and to choose goal oriented success or failure activities.

Theory of Achievement Motion attempts to account for the determinants of the direction, magnitude and persistence of behaviour, in limited but very important
domain of human activities. Achievement motivation is a desire to do well relative to some standard of excellence.

Achievement motivation as a social form of motivation involving a competitive desire to meet standards of excellence. Thus the basis of achievement motivation is achievement motive, i.e. motive to achieve.

Those who engage themselves in a task account of an achievement motivation. Achievement Motivation is expectancy of finding satisfaction in mastery of difficult and challenging performances where as in the field of education in particular it stands for the pursuit of excellence.

Since need for achievement vary from one student to another, it may help in planning activities to know where students stands which students, for instance, have high achievement needs which are low in achievement and which seems primarily motivated by a need to avoid failure.

Those who are more highly motivated to achieve are likely to respond well to challenging assignments, strict grading corrective feedback, new or unusual problems and the chance to try again.

But, less challenging assignments, simple reinforcement for success, small steps for each task, lenient grading and protections from embarrassment are probably more successful strategies for those students who are very eager to avoid failure. Since knowledge of achievement motivation of students is very important in determining the academic achievement of students, it is included in the present investigation.
1.6.3 Environmental Factors

There are many variables in environmental factor:

- Classroom Climate
- Socio Economic Status
- School Atmosphere
- Teacher Quality
- Home Environment and etc.,

From the above variables the investigator has selected two variables for this study. They are Classroom Climate and Socio-economic Status.

1.6.3.1. Classroom Climate

“A classroom climate refers to a composite of variables working together to promote learning in a comfortable environment in a classroom.”

Classroom climate is the type of environment that is created for students by the school, teachers, and peers. It is described that classroom climate is including all the socio-psychological dimensions of classroom life. This comprised of common interest and the pursuit of common goal achieved through focused, organized and well planned lessons.

The physical arrangement of the classroom furniture, the availability of resource materials, length of the class period and pace of instruction were also considered to influence the climate of the classroom. In sum, all events and influences within the classroom, including classroom management, comprised the construct of classroom climate.
Teachers are persistently looking to create a "positive" classroom climate in which student learning is maximized. A positive classroom climate permits the students to meet their basic needs of physical and mental. While there is no specific definition of what creates a negative classroom climate, it is considered to be one in which students feel uncomfortable, whether physically, emotionally, or academically, for any reason.

As the result of contrary teaching styles and behaviors of teachers, the way the positive classroom climate is implemented will change. Some teachers may see the open forum between teachers and students approach as disrespectful to the teacher, and so they would prefer the peaceful classroom approach.

Also, the students are vary in what will make them feel comfortable within the classroom and so their needs will require being met in different ways. As long as all needs of students are met the classroom climate will be positive, but the way in which all these needs will be met which need to be changed to address the wide variety of student and teacher personalities.

Misconduct of students results from the failure of teachers and schools to fulfill their needs. Before we can expect a child to learn, the physical needs such as food, clothing, shelter, and safety must be met.

While some of these needs are beyond a teacher’s circle of influence, one can work with guidance counselors, social workers, and community service agencies in identifying those in need beyond the teacher’s help. In addition to these physical needs, humans have mental needs that must be met in order for them to be happy, emotionally healthy, successful people.
These needs must be met in a way that does not harm anyone else. There are four basic mental needs: love, or the need for belonging, power to be in control of our own lives, fun, and freedom. Freedom in terms of the classroom is giving students the chance to make choices about assignments and other lesson planning as well as to help make decisions about the classroom.

Thus, by working to fulfill these needs, the teacher is applying the idea of a positive classroom climate because it is helping the students meet their full learning potential. To leave any need unmet would be making the classroom experience a negative one for students.

When interacting with students it is important to recognize individual differences, learn names, and arrange the seating where all students are angled to receive instruction, establish expectations immediately, make yourself (as the teacher) available to your student and encourage students positively to achieve.

Positive classroom climate enhances deeper rather than surface learning approaches. A surface approach for learning or reproductive learning has been described as reliance on the routine, memorization of materials. These more traditional approaches for learning allows students to recite facts and figures, with little interpretation.

Deeper approaches for learning are those in which the teacher prompts the student to make connections of the new material with previous knowledge or with different aspects of that knowledge. Dart suggested teachers could promote deep approaches for learning by creating classroom climates that are safe and supportive, with ample opportunities for exploration experimentation.
Positive classroom climate is not only enhances learning approaches, but also consistently correlated with higher achievement in a variety of educational outcomes. Thus, the factors that facilitate positive classroom climate are:

**Student-Teacher Ratio**

Student-Teacher ratio is one of the vital features which influence various educational aspects. Limited Student-Teacher ratio can improve the working and teaching condition in schools. Higher values of this ratio may or may not have detrimental effect in the colleges and in the higher secondary schools where students are general grown up. But school education is very sensitive to this ratio as the younger students require more personal attention.

The teacher can maintain proper and close relationship with the children and their parents. It enhances the involvement of the children in the learning process and in the curricular activities. Limited, students, teachers ration motivates the teacher to attract students to school and it ensures regular checking and completion of home work. Thus, the teacher would be able to reduce stagnation among students.

Students cannot perform experiments in limited space, in school laboratories and performance of students worsen if supervision is not adequate. Limited Student-Teacher ratio is necessary condition for proper supervision of the Student in Science practicals.

**Students Behavior in the Classroom**

Learning environment in the classroom is influenced by the behaviour of the students. When the behaviour of the students is free from problems, the classroom is
conducive for effective teaching and learning purposes. For example, the student’s behaviour could either be enabling or disturbing others.

Students who are creative, constructive, showing enthusiasm toward learning activities, cooperative with teachers and are hard working become the facilitating agents in the classroom. On the contrary, students who are either quarrelsome or unhappy and depressed become the agents of disorganization in the classroom.

**Teacher’s Behaviour in Classroom**

Teacher’s behaviour is an act of the teacher which occurs in the context of classroom interaction. Teachers behave in different ways in different classes and therefore there are different types of classroom interactions. Some teachers are very strict, some are very kind and soft, some are witty and humorous and some are dull.

There are some who are very stern and serious all the time. Certainly the teacher behaviour pattern sets the pattern of pupil behaviour in a classroom. The teacher behaviour tends to create an atmosphere which is described as classroom climate.

**Classroom Environment**

Many schools do not have adequate furniture and equipments for students. There are schools both government and private which do not provide even mats or benches for the children to sit on, not even to provide tables and chairs. The less said about other amenities the better.

It is highly necessary to provide pleasant work conditions to create favourable classroom climate for both students and staff. If the principal is too preoccupied with
other responsibilities to pay attention to the school campus, teachers should do whatever is possible to make the surroundings beautiful and attractive. Special attention should be paid to the furniture and other infrastructure facilities.

A good seating pattern is not only affords satisfaction to the students, but also helps the teacher for effective supervision. Every effort should be made to keep the classrooms neat and tidy. The walls may be decorated with pictures, charts, maps etc. Much stress should always be given aesthetic appearance, simplicity and harmony.

The elements of climate have been complex, ranging from the quality of interactions to the physical comfort levels of the individuals. No single factor has determined climate; however, the interaction of various factors have created a fabric of support that may have affected learning at optimum levels. Making even small changes in the classroom has been thought to lead to significant improvements in climate. But determining the specific changes impacting climate and resulting in improved student achievement has been difficult to determine.

As Classroom Climate status plays a very important role in academic achievement of students, it is included in the present study.

1.6.3.2. Socio-economic Status

“Socioeconomic status (SES) is an economic and sociological combined total measure of a person's work experience and of an individual's or family's economic and social position in relation to others, based on income, education, and occupation.”
The word socio-economic status is used by educationalist to denote an individual or family's overall rank in the social and economic hierarchy. Socio-economic status has been seen as a strong predictor of student achievement.

Coleman asserted that the influence of student background was greater than anything that goes on within schools. In most research, including national studies, socio-economic status has been measured as a combination of parents’ education, parents’ occupational prestige, and family income.

Students from middle or high socio-economic status families constantly see, in their parents and neighbors, social and economic payoffs that good education could provide, while many minority children in high-poverty areas have few—if any—role models who have succeeded in school or who have translated school success into economic gain.

The relationship between socio-economic status and student achievement has been discussed for years. In studies of academic achievement, family income and parent socio-economic status are frequently incorporated into a composite defined as socio-economic status, but when income is examined as a separate variable, it tends to be positively related to student achievement scores, although the relationships tend to be small in magnitude when controlling for other factors.

Some studies suggested that socio-economic status is the strongest predictor of student achievement. Socio-economic status may be a proxy for a variety of family processes (ability, culture, tastes, stimulating environments, parenting styles, and parents’ involvement in child’s education).
The findings on socio-economic status are consistent in the few studies that examine the relationship between achievement and family income net of other family factors, such as parents’ educational attainment, single-parent household, and family size: students in higher-income families tend to have higher achievement scores.

Parents’ educational qualification is a measure of socio-economic status and may be a proxy for several underlying family processes. Higher parent educational attainment is strongly related to higher student achievement scores.

The previous studies have shown that both student and socio-economic status are strongly associated with student outcomes, but less is known about how these relationships may vary for different students, schools and nations.

As socio-economic status plays a very important role in academic achievement of students, it is included in the present study.

1.7 OBJECTIVES OF THE STUDY

- To find the level of Personal Factors, (Intelligence and Achievement Motivation) Environmental Factors (Classroom Climate and Socio-economic Status) and Academic Achievement of students at Secondary Level.
- To find the extent of Personal Factors, (Intelligence and Achievement Motivation) Environmental Factors (Classroom Climate and Socio-economic Status) and Academic Achievement of students at Secondary Level.
- To compare the students on the selected variable of studies using classification of categories of schools and Gender.
- To develop appropriate scales and inventories to assess, selected variable of the study.
1.8 MAJOR ASSUMPTIONS

- The investigator assumes that there will be a complex networking relationship between Personal factor (intelligence and achievement motivation) and Environmental Factor (classroom climate, socio-economic status) on academic achievement.

- There will be a direct relationship between Personal factor (intelligence and achievement motivation) and Environmental Factor (classroom climate, socio-economic status) on academic achievement.

1.9 STATEMENT OF THE PROBLEM

According to the review done from the available relevant literature, relating to the present research area, led the investigator to conceptualize the problem as under:

\textit{Influence of Personal and Environmental Factors on Academic Achievement of Students at the Secondary Level}

1.10 OPERATIONAL DEFINITIONS OF THE KEY TERMS

\textbf{Influence}:

In this study, the investigator refers it as \textit{“The Influence described as a power, affecting person, thing, or course of events, especially one that operates without any direct effort”}. 
Personal Factors:

There are so many components present in the personal factors of an individual students which influence their academic achievement. But in this study the investigator selected only two variables i.e., Intelligence and Achievement Motivation.

Intelligence:

In this study, the investigator refers it as “The capacity of students at study level in abstract thinking, reasoning, planning, problem solving, communicating and learning”.

Achievement Motivation:

In this study, the investigator refers it as “The level of one’s motivation to engage in achievement behaviours, based on the interaction of such parameters as need for achievement, expectancy of success, and the incentive value of success”.

Environmental Factor:

There are many components present in the environment factors of individual students which influence their academic achievement. But, in this study the investigator selected only two variables. i.e., Classroom climate and Socio-economic status.
Classroom Climate:

In this study, the investigator refers it as “The classroom environment involving the shared perceptions of the students and the teachers”.

Socio-economic Status:

In this study, the investigator refers it as “The individual's or family’s economic and social position relative to others, based on income, education, and occupation”.

Academic Achievement:

In this study, the investigator refers it as “The level of knowledge attained or skills developed in the schools subjects. Academic achievement refers to the level success or proficiency attained in academic work. It indicates the knowledge, understanding and skills, acquired after instruction in school subjects”.

Students at the Secondary Level:

In this study, the investigator refers it as the Students studying in IX Standard in Chennai district only, irrespective of the schools manage and maintained by Government, Government Aided and Private Sector

Category of School:

In this study, the investigator refers it as, though the Students studying in Indian schools belongs to several categories, the investigator, selected three categories of school students in which students are studying in Chennai district of Tamilnadu they are.
1. Government schools

2. Government Aided schools

3. Private schools

Government schools are governed by the State Government, following Samacheer syllabus framed by the State Government, the government-aided schools, though follows the same syllabus as the government schools are governed by a private management but get aid from the State Government to pay the teaching and non-teaching staff. The private schools totally governed by a private management do not get any sort of a support or aid from the State Government, but follow the same samacheer syllabus like the Government and Government - aided schools.

1.11 METHOD OF INVESTIGATION

The method of investigation is designed on the basis of the problem, assumptions and hypotheses formulated along with psychometrically sound design, procedure, research instruments and execution. Here the investigator planning to find the relationship between the dependent and independent variables. Thus in the study the investigator has used survey method.

The following is a brief description of how such methodology is evolved. The investigation is planned to verify hypotheses with suitable instruments and appropriate statistics for data processing.

1.11.1 Research Design

The present study proposes a multivariate research design 3 x 2 factorial design presented below.
1.11.2 Population and Sample Characteristics

The study is aimed at the population of students at the secondary level, belonging to different systems of education, namely, Government, Government Aided and Private schools. Stratified Random Sampling method is intended for obtaining the sample.

1.11.3 Research Instruments

Appropriate research instruments were selected and constructed in order to assess the independent and dependent variables of the study.
1.11.4 Procedure of Data Collection

The scientific procedure adopted for data collection includes a pilot study and a main study. The purpose of the pilot study is to examine and confirm the authenticity of the research instruments were selected or developed.

1.11.5 Analyses

Statistical analyses will be based on the hypotheses formulated for the present study. It envisages Mean, Standard Deviation, Percentage, Correlation, T-test, Anova and Multivariate Statistical Analyses as the study includes multiple variables.

1.11.6 Outcome

Learning with understanding has increasingly received attention from educators and psychologists, and has progressively been elevated to one of the most important goals for all students in all subjects.

The outcome of the present research will be contributing to knowledge building in the area of academic achievement of students.

Researchers believed that psychological and environmental factors will contribute very effectively towards the performance of students. In the same lines it is also believed that the findings of the present research would enable parents, teachers, policy makers and society at large to check the factors contributing significantly to the academic performance of students and also to pave way to enhance their performance.
1.12 **SCOPE OF THE STUDY**

This study is designed to form a broad scope enfolding multiple variables attributing to academic achievement of students at the secondary level and its relation to some of the personal and environmental factors. The investigation is restricted to secondary level students in the district of Chennai only.

1.13 **CONCLUSION**

Many studies (Boxus, 1993; Parmentier, 1994; Gallagher, 1996; Furnham and others, 1999; Minnaert and Janssen, 1999; Busato and others, 1999, 2000; King, 2000; Ardila, 2001; Garton and others, 2002) were undertaken in order to try to explain the academic performance or to predict the success or failure of students. These studies highlighted a series of explanatory factors associated to students. Parmentier (1994) showed that the academic performance of students is influenced by three sets of factors.

The first set of factors groups the personal variables, like students’ perceptions (the way in which he perceives the academic context, his profession, courses, etc.) and the involvement of the student in his studies or of his behaviour in relation to his studies (participation in optional activities, attitude toward studies, etc.), intelligence, level of motivation and so on. Next the school environment and the classroom climate and the third set, to the personal history of the student (identity, socio-family past etc.) that contribute toward the academic achievement of students.

The above studies contributed that the Personal Factor (Intelligence and Achievement Motivation) and Environmental Factors (Classroom Climate and Socio economic Status) influence the Student’s Academic Achievement.
The present chapter introduction is followed, by a review of related literature on the dependent variable with reference to Personal and Environmental Factors compiled orderly in chapter II.

The research design, hypotheses and method of investigation were presented in the Chapter III.

Results of the data analysis, interpretation of data were presented in the Chapter IV.

Finally, findings, implications, suggestions and conclusion were presented in Chapter V.