SUMMARY

Academic achievement is the core of the whole educational growth. It is regarded as an important goal of education. Academic achievement is considered as outcome of the instructions provided to the students in schools which is determined by the grades or marks, obtained by the students in their examinations. It usually indicates students’ learning outcomes which require a series of organised and planned experiences. Academic achievement is the most important and perennial responsibility of a school or any other educational institution established by the society to promote whole scholastic growth and development of a child.

Academic achievement plays major role in the attainment of the harmonious development of the child. The prediction of academic achievement has assumed enormous importance to its practical view. In our community, academic achievement is considered as a key criterion to judge one’s total capacities and potentialities. It forms the main basis of admission and promotion in a class. It is also essential for obtaining a diploma/degree or getting a job.

The universe is reaching to the mounts in competition and the level of achievement has become the main factor for school and personal programme. Parents desire progeny to excel in the field of performance. This desire of reaching to the mounts has created their attitude towards the educational system. In the present system, the concept of providing education is changed from enhancing the achievement in subjects to harmonious development of learner. Now parents want that their kids must get admission in that school which has facilities like smart classrooms, smart boards, computer based learning and hi-tech language laboratories. “Academic achievement is the unique responsibility of educational institution established by the society to promote the development of learners. The development of the learners is possible only if proper individual attention is given to them for enhancing the knowledge attained or skills developed in school subjects usually reflected by test scores or marks assigned by the teachers or by both (Stephen, 1958).”
Thus, there are various aspects of academic achievement which have a great bearing on the personality of students. From an early age, a sense of achievement is a source of good feeling and self esteem and failure as a source of disgrace and self reproach. It is concerned with the quality and quantity of learning in a subject or group of subjects, assessed by examination marks (Pandey, 1992). It is the status or level of a person’s skills, the range and depth of his knowledge or his proficiency in a designated area of learning or behaviour (Horrock, 1969). In fact, it appears that the entire system of education revolves around the students’ academic achievement. Thus, a lot of efforts and dedication by the school is to be done for boosting the students to perform better in their academic attempts.

Factors affecting Academic Achievement

Academic achievement is a multi-faceted and multi-dimensional phenomenon. There are too many factors which directly affect academic achievement, viz. motivation, intelligence, school environment, home environment, personality, heredity, learning experiences at school, aptitudes, interests, socio-economic status of the parents, family background, and many more. Sinha (1970) reported that hard work, intelligence, memory, good health, availability of books, methods of study, financial security and interest in social and practical work affect the academic scores. Dave (1975) reviewed that “intelligence, socio-economic status of the family, physical health, gender, caste, distance of school from home and leisure time activities directly affect academic achievement”. Balasubramanium (1993) reported that locality and medium of instruction also influence academic achievement. Guha et al. (1995) observed that mother’s education had significant impact on academic achievement. Lakshmi (1997) revealed that children belonging to more educated parents were academically more motivated, whereas Taj (1999) found that parent-child interaction, social class and dependency behaviour had significant impact on academic achievement. Dangwal (2000) noted that obstacle dominance affected negatively and ego defense related positively to academic achievement. Avinashilingan et al. (2005) revealed that “classroom factors followed by
environmental and developmental factor play a major role in affecting the students’ academic performance. The competency of teacher, students’ inner urge, absence of physical distracters, like mindedness and colleagues’ contact make students more competent to succeed in life. However, most of the above mentioned factors have been considered and studied for research under the classification of subjective and objective factors. Subjective factors are related to the individual himself, while influencing one’s achievement as learning ability, intelligence, learning style, self-concept, self efficacy, creativity, study habits, level of aspiration, locus of control etc., whereas objective factors are related to the environment of the individual as socio-economic status, family environment, educational system, evaluation system, value system, teachers’ efficiency, school situation and environment”. Aggarwal et al. (1991) reported that main factors affecting academic achievement are affective factors viz. cognitive style, motivation, anxiety, study habits, level of aspiration, stress, value, perseverance, self efficacy, emotional maturity, attitude, adjustment, interest, need and curiosity; cognitive factors viz. ability, intelligence, creativity, problem solving, reasoning ability and learning rate; school related factors viz. type of school, school climate, teacher’s personality, home work, alienation, teachers’ expectation and attitude, training strategies, teachers’ experience, medium of instruction, teachers’ behaviour and competency and class room environment; home related factors viz. family size, birth order, socio economic status of family, gender bias, parental involvement, parental support, deprivation, child rearing practices, working networking parents, parental aptitude and expectations. Thus, we can say that there are so many factors responsible for academic achievement of student as :

- Cognitive factor
- Affective factors
- Psycho-motor factors
- School related factors
- Home related factors
PERSONALITY

Personality may be taken to be an individual’s most striking or dominant characteristic. In that sense a person may be said to be a “shy personality” or a “neurotic personality”, meaning that his/her dominant attribute appears to be shyness or neurosis. In popular usage, personality is often equated with social adroitness and effectiveness. In this usage, personality is the ability to elicit positive reactions from other people in one’s typical dealings with them.

“Personality is the dynamic organization within the individual of those psychophysical systems by which his unique adjustment with environment is determined (Allport, 1937).”

Personality can be defined as the construct of some traits. It is described in the terms of ‘Extraversion’ and ‘Introversion’. The term extraversion and introversion was first used by Carl Jung. Virtually all compressive models of personality include these concepts in various forms. Extraversion and introversion are typically viewed as a single continuum thus to be on one. It is necessary to be low on the other. Jung defined introversion as an “attitude-type characterized by orientation in life through subjective psychic contents” (focus on one’s inner psychic activity) and extraversion as “an attitude-type characterized by concentration of interest on the external object” (outside the world).

An introvert remains more inclined to his internal ideas and experiences. He is not much interested to take part in worldly affairs. In this way we see that an interest is more of a thinker. An extrovert differs from an introvert. He is more active. He wants to work according to social needs. He does not like to remain engaged in solving intellectual problems. An extrovert is comparatively more successful than an introvert in worldly affairs. An extrovert does not pay more attention to other’s criticism. He has less reluctance in his emotional display. Whatever comes to his mind he utters-unhesitatingly. An extrovert does not get discouraged like introvert in phase of failures. He is not so much interested in self-introspection of self criticism as in the case with an introvert. These two qualities are present among everyone up to some extent. But in some, the introvert qualities pre-dominate, while in others extrovert qualities pre-dominate.
Basic dimensions derived by Eysenck through his work are:

1. Introversion – Extroversion
2. Neuroticism
3. Psychoticism

Eysenck (1958) developed his model of personality and temperament with three dimensions: ‘Psychoticism’, ‘Extraversion’, and ‘Neuroticism’. This became known as the "PEN" model of personality. Originally, Eysenck only theorized about neuroticism and extraversion, but later he realized that psychoticism was also a contributing factor of personality. He then added psychoticism into his theory as the third factor of his model giving birth to his BIG-Three model of personality.

Eysenck (1993) poses his argument in relation relevance by saying that “there are individual differences to the definition. By this he means that some people are over inclusive in their thinking, meaning they have a very broad conception of relevance, as opposed to people who have a much more narrow conception of what is relevant (Eysenck, 1993).” He continues by stating that “unusual responses to word association test could be used as a measure of this hypothetical quality (Eysenck, 1993).” He suggested that individuals with an over-inclusive style of thinking have a larger sample of ideas on which a conclusion can be based. He concludes that these people are able to come up with innovative, creative and unusual ideas more easily than people who have a more conventional view of relevance to a problem. Ultimately, he considered that this could be possibly the base of creativity.

On the psychophysiological side, “Eysenck (1993) finds that the over inclusive thinker is more likely to have a personality which relates to that of a schizophrenic or general psychotic disorder.” The difference is that although the psychoticism score of the creative person is high just as that of someone diagnosed with a psychotic disorder, the creative person not necessarily diagnosable as a psychotic.
**Introverts and Extraverts Required Different Learning Environments**

Schmeck (1981) stated that “one issue routinely faced by school administrators is the degree to which a school system should adapt to the needs of individual students and the degree to which the student should be forced to adapt to the needs of the system, which is designed for the average student. Some aspects of students’ learning styles are modifiable”. Thus, teachers can bend a little to meet the needs of a particular students style while simultaneously trying to shape that style into one they believe to be more efficient. However, if the individual difference is not modifiable, then we have a special problem. Schmeck (1983) further say that “if we try to change students in ways they cannot change, then we do them a great disservice. One such individual difference may be the introversion-extraversion personality dimension.”

Introversion-extraversion has been identified as a reliable dimension of personality by at least two of the most famous researchers in the field of personality psychology: Raymond Cattell and Hans Eysenck. Both of these researchers use sophisticated statistical methods to define personality and both have created personality tests that they believe measure personality constructs similar to introversion-extraversion. Eysenck’s test is called the Eysenck Personality Questionnaire; Cattell’s is called the Sixteen Personality Factor Questionnaire (or 16 PF) (Schmeck 1983).

At present, the most commonly accepted theory for explaining individual differences on the dimension of introversion-extraversion is provided by Eysenck (Blass, 1977; Eysenck and Claridge, 1962; Prentsky, 1979). Eysenck’s theory places great emphasis on the assumption that there are inherited differences between people in the ways their nervous systems function. He reported that “Introverts are assumed to have such weak neural inhibition that stimulation of the senses easily prompts activity in the brain, while extraverts have strong neural inhibition, which makes it more difficult for sensory stimulation to activate the brain (Eysenck, 1983).” In other words, because it takes very little stimulation for introverts to perceive a stimulus, their brains become easily over-stimulated. Thus, they tend to seek out an environmental where there is relatively little stimulation. Extraverts, on the other
hand, require strong stimulation to perceive a stimulus and tend to seek out environments that provide relatively large amounts of stimulation. Research with identical twins (Shields, 1976) has supported Eysenck’s assumption that a person’s position on the introversion-extraversion continuum is determined by heredity and thus not very subject to change.

Introverts are more influenced by punishments than by rewards, and they are more sensitive than extraverts to social prohibitions. All of this tends to make the introvert more restrained and inhibited. Furthermore, introverts are more sensitive than extraverts to pain, more prone to fatigue, and their performance suffers more when they are excited. This should not be taken to indicate that introverts can lower grades than extraverts in school; research indicates just the opposite.

Biehler (1978) stated that “it seems likely that many classrooms reward the student who works quietly and alone. This is probably due to the fact that most teachers are more introverted than most of their students. Research has shown that people tend to become more introverted as they grow older. Since teachers are always older than their students, they will also tend, in general, to be more introverted”.

ACHIEVEMENT MOTIVATION

The need and desire to achieve is a basic and natural in human beings as the other biological or socio-psychological needs and desires. The need and desire to achieve is a spring-board of the achievement motivation. However, in the competitive society or set up the desire to excel over society or set up the desire to excel over other or achieve a higher level than one’s peers is intensified, which in turn may lead to a stronger derive or motive to achieve something or everything that is essential to beat the others in the race and consequently experience a sense of pride and pleasure in the achievement.

In recent years achievement motivation is an object of considerable concern. It has great significance in understanding human behaviour. Motivation is considered as a result of the grouped power of will, internal will motives and activity. Motivation is a fundamental part of the psychologist’s efforts to achieve a valid psychology of social and human behaviour.
The present century must be called, ‘the century of motivation’, whether in education or in industry, in general learning or doing a sophisticated job. “Achievement motivation is confined by one’s early training experience, and subsequent learning. In general achievement motivation is expectancy at finding satisfaction in mastery of difficult and challenging performances, whereas, in the field of education it particularly stands for the pursuit of excellence (Dutt and Subharawat, 1998).”

According to Murray (1938), “The motive that concerns with a person to perform a particular task is needed. Whenever a will or wish arises internally and gives us encouragement, energy to do a specific work by which the need can be achieved.” In the list of Murray's psychogenesis needs, achievement is an elementary ego need which may act alone or to be fused with other needs such as superiority, recognition dominance etc, and this ego system is that which controls an individual's deepest motivating force to achieve or excel over others and is termed as achievement motivation or need for achievement.

Psychologists suggest that there is energy beside the initiative ability, which alters the scholastic achievement of students and is referred to as achievement motivation. To understand the term of achievement motivation, study of human behavior is must. Human being is a complex form of behavioral differences. Different people behave differently in the same situation. The explanatory construct of motivation can be used to understand this human behaviour.

Motivation is considered as a result of the grouped power of will, internal motives and activity. Motivation is a fundamental part of the psychologists’ efforts to achieve a valid psychology of social and human behavior. Achievement motivation has been an object of considerable concern and discussion in recent years. It has great significance in understanding human behavior as well as changing it with the application of psychology in the field of education and industry.

Achievement motivation is essentially a type of motivation that is personal in nature. The basis of achievement motivation is achievement motive, i.e., motive to achieve. Those who engage themselves on achievement motive are said
to work under the spirit of achievement motivation. In general, “Achievement motivation is expectancy of finding satisfaction in mastery of difficult and challenging performance, whereas in the field of education, in particular, it stands for the pursuit of excellence. A motive comes into picture when an individual knows that his performance will be evaluated and that the consequences of his actions will be either a success or failure and that good performance will produce a feeling of pride in accomplishment” (Kavyakishore, 2013).

Motivation is a multifaceted characteristic possessed by humans that initiates, directs, and drives persistence on a particular task. Motivation influences what task or project an individual may elect to do, how much time and resources they are willing to put into it and their personal feelings toward that particular task (Urdan & Schoenfelder, 2006). For many decades, teachers at all levels have focused on increasing student motivation with the reasonable assumption that this would enhance academic achievement. Teachers are very aware that one of their main roles is to motivate students to learn. The objective is to expand students' minds and promote independent thinking in preparation for future education and life after school. Over the years, many teachers have wondered why some students were engaged and motivated with respect to their schoolwork while others were not. This chronic problem in education persists to this day (Hidi & Harackiewicz, 2000).

Thus, it can be said that for any human planning a study of human behavior is must. To analyze the complexity of human behaviors, theory of motivation through understanding of achievement motivation is indispensable and the role of achievement motivation cannot be ignored in case of development of individual personality.

**Characteristics of a Person Having High Achievement Motivation:**

1) The aspiration level of an individual with high achievement motivation is found to be higher;

2) The high achievement motivated individual shows greater determination to work related to achievement.
3) The high achievement motivated individuals are found to derive more pleasure form success than an individual who has achievement motivation.
4) The high achievement motivated individuals show more competence of a higher level of accomplishment.
5) The high achievement motivated individuals have strong desire to shine and beat others or to perform the best in material terms among such persons.
6) The high achievement motivated individuals are found to have more anxiety about receiving success in comparison to weak achievement motivated peoples.

The Researchers Concerning Achievement Motivation Have shown That:

(1) Achievement motivation is a drive which can be aroused by including a situation of ego involvement of achievement orientation. This situation produces the same kind of effect or the subject’s projection as is in the case of manipulation of hunger and sex deprivation.
(2) Achievement motive varies from person to person, group to group and is open to cultural influence. Achievement motivation may be acquired through social and cultural malice and trading programmers.
(3) The achievement is acquired by following the same process as the case of reward and punishment.

Thus, it can be said that for any human planning a study of human behavior is must. To analyze the complexity of human behaviors, theory of motivation through understanding of achievement motivation is indispensable and the role of achievement motivation cannot be ignored in case of development of individual personality.

INTELLIGENCE

In our day–today conversation we often comment that a particular child or individual is very intelligent or is not intelligent. All such comments are based on our observation of the performance or behaviour of the individual concerned in
comparison to other of his group? Interest, attitude, the desire for knowledge and similar other attributes contribute towards his performance or behaviour. However, there is something else which is also responsible to a large degree. In psychological this is termed, intelligence in ancient India our great rishies and seers name it Viveka. An individual is said to be intelligent in proportion as he is successful in meeting general life situations.

“Intelligence derives from the Latin verb intelligere, to comprehend or perceive. A form of this verb, intellectus, became the medieval technical term for understanding, and a translation for the Greek philosophical term ‘nous’. This term was however strongly linked to the metaphysical and cosmological theories of teleological scholasticism, including theories of the immortality of the soul, and the concept of the Active Intellect (also known as the Active Intelligence). This entire approach to the study of nature was strongly rejected by the early modern philosophers such as Francis Bacon, Thomas Hobbes, John Locke, and David Hume, all of whom preferred the word ‘understanding’ in their English philosophical works (Neisser, Boodoo, Bouchard, Boykin, et al., 1996).

Gottfredson (1997) stated that “A very general mental capability that, among other things, involves the ability to reason, plan, solve problems, think abstractly, comprehend complex ideas, learn quickly and learn from experience. It is not merely book learning, a narrow academic skill, or test-taking smarts. Rather, it reflects a broader and deeper capability for comprehending our surroundings—‘catching on’, ‘making sense’ of things, or ‘figuring out’ what to do (Gottfredson, 1997).”

During last 60 years, more researches have been done in the various field of subject of intelligence including the meaning and nature of intelligence. A lot of literature has been produced by the psychologists of fame on this topic. In psychological literature, intelligence has been treated as a construct, no one knows what intelligence is. In this regard E. Hine says “Intelligence is that which cannot be defined.” There is no end to the definition of intelligence just as there is no end to the definition of education, life, love and God. Many questions like, is intelligence a single ability or a combination of several different abilities. Can a
person be highly intelligent is some respect but below average in others? It is, therefore, clear how a complex and inexact concept of intelligence is due to its vagueness. In recent years concept of intelligence has become less acceptable and more expose to criticism by psychologists. Several definitions have been advanced by the psychologists but they do not agree among themselves. There are different opinions. Ross, Burt, Stern, Woodworth, Alfred Binet. MC Dougall, Godard, William James and many other psychologists have emphasized adjustment, others like Buckingham, Dearon, Thorndike have taken ability to learn as the criterion, while the other psychologists Spearman, Terman etc. have emphasized the abstract thinking in defining intelligence. There are few names, which are known for giving comprehensive definition of intelligence.

**Intelligence and Academic Achievement**

Intelligence has been regarded as an essential factor in the academic achievement of the students. It has been recognised as an inherent quality with unified and stable characteristics, distributed normally among individuals.

Intelligence may be interpreted as the ability for knowledge and understanding, especially as applied to the handling of novel situations and successfully adjusting to the total situation. Intelligence can be defined as an ability to learn a wide variety of intellectual skills and use this learning in its way. Intelligence also gives insight and direction to the human potential for achieving the goal.

Intelligence is considered the most important factor for higher chances of success out of a large number of factors affecting academic achievement. Studies revealed that intelligence relates more strongly to students’ achievement than any other characteristic. Intelligence is directly related to the mental mechanism of the person. The process of mental mechanism is the best way to increase the academic achievement of the person. Thus, the importance of intelligence has been regarded as an essential factor influencing the academic achievement of the student. Its importance is prominently related with academic in all professional domains which is well established for the achievement of the students.
The performance of the students is largely influenced by intelligence. Hence, the correlation between intelligence and academic achievement of students cannot be ignored. In case of school students, intelligence is the ability to learn and succeed in school education. A teacher should therefore teach his lesson in consonance with intellectual abilities of all kind of children in the classroom. With the recognition of intelligence as an inherent, unified and a stable characteristic distributed equally among individuals, it was supposed that the differences in the academic achievement of students could be easily accounted for. Therefore, there is reason to believe that more intelligent students could learn more quickly, retain for longer period of time, perform better in all academic affairs and so could obtain high positions in their classes compared to the less intelligent students.

Test of general mental ability have widely been used as the predictor of academic achievement of students. Chauncey (1929), Edds and McCall (1933), Durflinger (1943) and Harper (1967) has reported significant correlation ranging from .315 to .600 between intelligence and scholastic success. Showing the relationship between the scores of intelligence tests and high school marks, Pinter arrived with the correlation of 0.28 and 0.60, with few below 0.409. For evaluating the predictive value of cumulative test Aaron summarised the results of 24 studies where correlation ranged from 0.25 to 0.65 with a median of 0.48. While, Binet-Simon and Terman (1916) in their findings revealed that co-efficient of correlation commonly fall in the range of 0.40 and 0.50.

**RATIONALE OF THE STUDY**

Adolescent is a decisive age and a difficult period in young person’s life they face many challenges in this period like physical, developmental, psychological need, attitudes, parental behaviour, career, conflict, frustration, anxiety and stress. When adolescents are physically and mentally fit, they perform better in their academic achievement

Personality traits also play an important role in academic achievement of students. Personality traits are the consistent traits of an individual which make
him/her different from other individuals. “Correlations between academic performance and personality measures would mirror corresponding correlations of intelligence with personality. The measures of personality based on the Five Factor Model should be correlated with academic performance relate to the evidence supporting the importance of personality factors for predicting socially valued behaviors and on the recognition of personality as a component of an individual’s willingness to perform. At the same time, intelligence should be considered in order to adequately assess these relationships (Chamorro-Premuzic and Furnham (2006)).”

According to Binet (1905) and Zenderland (1998), “intelligence is a concept which has affected the life of every individual in all spheres of life. It is responsible for the academic outcome and finally the success in life. It helps us in combating the challenges of life and be a winner. There are individual differences in educational outcomes and to predict these differences, the first broad test of cognitive ability was developed”. Many studies revealed the major impact of intelligence on academic achievement of students. Ian, Strand, Smith and Fernandes (2007) found a strong and positive relationship between intelligence and academic achievement”.

Academic achievement is strongly linked with achievement motivation. The highly achievement motivated students have insight into what constitutes competency and are more likely to look for academic assistance if they have academic problems, because they see the seeking behaviour as being a competent action, implying a problem-solving approach to learning. There is even less research on how achievement motivation compare with academic achievement.

So, personality, intelligence and achievement motivation play a significant role in academic achievement of the students. Hence, the researcher will make humble attempt to study the factors – personality, intelligence and achievement motivation which effect the academic achievement of senior secondary school students.

**STATEMENT OF THE PROBLEM**

**ACADEMIC ACHIEVEMENT OF SENIOR SECONDARY SCHOOL STUDENTS IN RELATION TO THEIR PERSONALITY, INTELLIGENCE AND ACHIEVEMENT MOTIVATION.**
DEFINITIONS OF THE TERMS USED

Personality

“Personality is the dynamic organization within the individual of those psychophysical systems by which his unique adjustment with environment is determined. Personality, in the present study, can be defined as a construct of some traits as measured by Aziz and Gupta. Two personality factors are – introvert and extrovert”.

Intelligence:

“Intelligence means the ability to learn or understand or to deal with new or trying situations”.

Achievement Motivation

“Achievement motivation typically refers to the level of one’s motivation to engage in achievement behaviors, based on the interaction of such parameters as need for achievement, expectancy of success, and the incentive value of success”.

Academic Achievement

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

OBJECTIVES OF THE STUDY

1. To compare the academic achievements of male and female the senior secondary school students.
2. To compare the academic achievements of government and private senior secondary school students.
3. To compare the academic achievements of male and female students of government schools.
4. To compare the academic achievements of male and female students of private schools.
5. To compare the academic achievements of male students of government and private schools.
6. To compare the academic achievements of female students of government and private schools.
7. To compare the academic achievement of senior secondary school students having introvert and extrovert type of personality traits.

8. To compare the academic achievement of senior secondary school students having high and low level of intelligence.

9. To compare the academic achievement of senior secondary school students having high and average level of intelligence.

10. To compare the academic achievement of senior secondary school students having low and average level of intelligence.

11. To compare the academic achievement of senior secondary school students having high and low level of achievement motivation.

12. To compare the academic achievement of senior secondary school students having high and average level of achievement motivation.

13. To compare the academic achievement of senior secondary school students having low and average level of achievement motivation.

14. To know the relationship between academic achievements and personality factors:
   (a) To know the relationship between academic achievement and personality factor (introvert type) of senior secondary school students.
   (b) To know the relationship between academic achievement and personality factor (extrovert type) of senior secondary school students.

15. To know the relationship between academic achievements and intelligence of senior secondary school students.

16. To know the relationship between academic achievements and achievement motivation of senior secondary school students.

17. To study the combined interaction effect of gender and type of school, of senior secondary school students on their academic achievement.
HYPOTHESES OF THE STUDY

1. There is no significant difference in academic achievements of male and female the senior secondary school students.
2. There is no significant difference in academic achievements of government and private senior secondary school students.
3. There is no significant difference in academic achievements of male and female students of government schools.
4. There is no significant difference in academic achievements of male and female students of private schools.
5. There is no significant difference in academic achievements of male students of government and private schools.
6. There is no significant difference in academic achievements of female students of government and private schools.
7. There is no significant difference in academic achievement of senior secondary school students having introvert and extrovert type of personality traits.
8. There is no significant difference in academic achievement of senior secondary school students having high and low level of intelligence.
9. There is no significant difference in academic achievement of senior secondary school students having high and average level of intelligence.
10. There is no significant difference in academic achievement of senior secondary school students having low and average level of intelligence.
11. There is no significant difference in academic achievement of senior secondary school students having high and low level of achievement motivation.
12. There is no significant difference in academic achievement of senior secondary school students having high and average level of achievement motivation.
13. There is no significant difference in academic achievement of senior secondary school students having low and average level of achievement motivation.

14. There is no significant relationship between academic achievements and personality factors:
   (a) There is no significant relationship between academic achievement and personality factor (introvert type) of senior secondary school students.
   (b) There is no significant relationship between academic achievement and personality factor (extrovert type) of senior secondary school students.

15. There is no significant relationship between academic achievements and intelligence of senior secondary school students.

16. There is no significant relationship between academic achievements and achievement motivation of senior secondary school students.

17. There is no significant combined interaction effect of gender and type of school, of senior secondary school students on their academic achievement.

DELIMITATIONS:

1. The study is delimited to the XIIth class only.
2. The study is delimited to the sample of 400 students only.
3. The study is delimited to academic achievements, personality, intelligence, and achievement motivation only.
4. The study is delimited to Gurgaon and Rohtak districts of Haryana only.

PROCEDURE OF THE STUDY
The study was conducted on 400 senior secondary school students studying in government and private school of Gurgaon and Rohtak districts of Haryana. The investigator visited the different senior secondary schools and requested the principals to allow her to collect the data. After seeking approval from the principals and teachers the investigator visited the schools and established a
rapport with the students. She told the students about the objectives of administering these tests. It was explained that these tests are for research purpose only and these have nothing to do with their examination. They were informed that no answer is right or wrong. So they may feel free to write the answers. It was made clear that the data so obtained would be kept secret and will be used for research purpose only. Then necessary instructions regarding the tests were read with clarity and loudness. Afterwards. Introversion-Extroversion Inventory by Aziz and Gupta (2005), Intelligence Test by Mehrotra (2012) and Achievement Motivation Scale (n-Ache) by Deo and Mohan (2011) were administered to the subjects. The investigator remained in the classroom to supervise the students while they completed the tests. Their answer sheets were collected and scoring was done strictly according to the procedures mentioned in the manuals. Academic achievement of the students was determined on the basis of marks obtained in XI class conducted by Board of School Education Haryana and CBSE New Delhi.

Population

The population consisted of all senior secondary school students who are studying in various schools of districts Gurgaon and Rohtak of Haryana.

Sampling

Measuring the entire population is impracticable though not entirely impossible. Therefore, a sample from the concerned population may be drawn for the purpose of data collection. The state Haryana has four divisions namely Ambala, Gurgaon, Hisar and Rohtak. Out of these four divisions, Gurgaon and Rohtak division was chosen randomly by using lottery method. At the second stage, all the districts of Gurgaona and Rohtak division were written on the separate chits and two districts Gurgaona and Rohtak was randomly picked. From these districts, the list of schools prepared by the Directorate of Education was procured. Thereafter, twenty schools were selected randomly study. In the present study, multi-stage stratified random sampling technique was used to select the sample of 400 sennior secondary school students from government and private schools of Gurgaon and Rohtak districts.
VARIABLES OF THE STUDY:

Independent Variables

- Personality
- Intelligence
- Achievement Motivation

Dependent Variable

- Academic Achievement

TOOLS USED

1. Introversion-Extroversion Inventory by Aziz and Gupta (2005);
2. Intelligence Test by Dr. P.N. Mehrotra (2012);
3. Achievement Motivation Scale (n-Ache) by Deo and Mohan (2011); and
4. Academic achievement scores was taken from the performance in 11th class of the subjects.

STATISTICAL TECHNIQUES USED

Completion of any scientific analysis is possible only with the use of some of statistical processing. The acceptance or rejection of hypothesis will ultimately determine the contribution of the investigation in the scientific development of a particular area. This is especially true for statistical techniques in the analysis for interpretation of data.

The following statistical techniques were used for analysis of data:

- Descriptive Statistics such as Mean, Standard Deviation were calculated to describe the nature of data.
- ‘t’ test was used to compare the different groups under consideration.
- Karl Pearson’s Product Moment Correlation was used to see the relationships between variables under study.
Analysis of Variance (ANOVA) was used to see the interaction effect.

The following levels were established for comparison.

C. 0.05 level
D. 0.01 level

MAIN FINDINGS OF THE STUDY

1. It was found that there is a significant difference in academic achievements of male and female the senior secondary school students. Female students were found to have more academic achievement in comparison to their counterpart male students.

2. It was found that there is a significant difference in academic achievements of government and private senior secondary school students. Private school students were found to have more academic achievement in comparison to their counterpart government school students.

3. It was found that there is a significant difference in academic achievements of male and female students of government schools. Female government school students were found to have more academic achievement in comparison to their counterpart male government school students.

4. It was found that there is a significant difference in academic achievements of male and female students of private schools. Female private school students were found to have more academic achievement in comparison to their counterpart male private school students.

5. It was found that there is a significant difference in academic achievements of male students of government and private schools. Male private school students were found to have more academic achievement in comparison to their counterpart male government school students.

6. It was found that there is a significant difference in academic achievements of female students of government and private schools. Female private
school students were found to have more academic achievement in comparison to their counterpart female government school students.

7. It was found that there is no significant difference in academic achievement of senior secondary school students having introvert and extrovert type of personality traits. Hence, it was concluded that type of personality has no impact on academic achievement on students.

8. It was found that there is a significant difference in academic achievement of senior secondary school students having high and low level of intelligence. Students having high level of intelligence were found to have more academic achievement in comparison to their counterpart students having low level of intelligence.

9. It was found that there is a significant difference in academic achievement of senior secondary school students having high and average level of intelligence. Students having high level of intelligence were found to have more academic achievement in comparison to their counterpart students having average level of intelligence.

10. It was found that there is a significant difference in academic achievement of senior secondary school students having low and average level of intelligence. Students having average level of intelligence were found to have more academic achievement in comparison to their counterpart students having low level of intelligence.

11. It was found that there is a significant difference in academic achievement of senior secondary school students having high and low level of achievement motivation. Students having high level of achievement motivation were found to have more academic achievement in comparison to their counterpart students having low level of achievement motivation.

12. It was found that there is a significant difference in academic achievement of senior secondary school students having high and average level of achievement motivation. Students having high level of achievement motivation were found to have more academic achievement in comparison
to their counterpart students having average level of achievement motivation.

13. It was found that there is a significant difference in academic achievement of senior secondary school students having low and average level of achievement motivation. Students having average level of achievement motivation were found to have more academic achievement in comparison to their counterpart students having low level of achievement motivation.

14. It was found that there is no significant relationship between academic achievement and personality factor (introvert type) of senior secondary school students. So it could be concluded that personality (introvert type) have no impact on academic achievement of senior secondary school students.

15. It was found that there is no significant relationship between academic achievement and personality factor (extrovert type) of senior secondary school students. So it could be concluded that personality (introvert type) have no impact on academic achievement of senior secondary school students.

16. It was found that there is a significant relationship between academic achievements and intelligence of senior secondary school students. So it could be concluded that students have more academic achievement if they are more intelligent. It can be interpreted that higher the intelligence, higher the academic achievement of senior secondary school students and vice-versa.

17. It was found that there is a significant relationship between academic achievements and achievement motivation of senior secondary school students. So it could be concluded that senior secondary school students have more academic achievement if they have more achievement motivation score. It can be interpreted that higher the achievement motivation score, higher the academic achievement of adolescent students and vice-versa.
18. It was found that there is no significant combined interaction effect of gender and type of school of senior secondary school students on their academic achievement.

**DISCUSSION OF THE RESULTS**

The present study was conducted on adolescent students with respect to academic achievement in relation to their type of personality, intelligence and achievement motivation. The finding of the present study is in consonance with the finding of Mishra (1997), Dhall et al. (2009), Jenaabadi, Shahidi, Alhamifar and Khademi (2015), Kakkar (2016) who stated that female students have good academic achievement in comparison to male students. The other findings of the present study revealed that private school students have better academic achievement than government school students. This findings of the present study is supported by John and Ademola (2014), Kumar and Yadav (2015) and Chetri (2014) who found that students of private schools were better in academic achievement in relation to their counterpart. There could be many possible reasons for their lower performance of government schools as compared to students from private schools. Some of these could be inadequate public expenditure on their education, poor infrastructure in the school including shabby buildings, ineffective school and classroom climate, teacher efficacy, poor teachers’ additional involvement in jobs unrelated to teaching such as clerical duties, election duties, census duties and so on the poor facilities at home of such students, lack of parental guidance, lack of intrinsic motivation and poor attitude towards education. However, more qualitative research is needed in this area to identify the precise causes of this. The present study also found that female students of government and private school are superior than male students of government and private schools respectively. As most previous studies have shown, parents are more attentive to girls’ education, possibly because the current male dominance in job placement compels them to prepare their girls to deal with the unavoidably more rigorous/more competitive labor market in the future.
Furthermore, girl students seem to have a more cooperative attitude toward schooling and devote greater effort to their studying than boys do; as well, their behaviors comply more with a test-oriented education system. For example, girl students accepted more responsibilities in school and student committees than boys do during both primary and middle school, had fewer complaints about tedious lectures in class, spent more time studying, and reportedly liked school more than boy students. On the other hand the teachers in private schools may be thinking that if their results are not good they will be expelled out or they may be thinking that their schools may not work or may not exist if their results are not good. The other reason might be that the maximum posts are vacant in government schools where para-teachers are being engaged on academic arrangement, getting low salary as compared to their counterparts who are permanent. This might be compelling the para-teachers to carry their jobs easily and may result in poor academic achievements of students.

Another findings of the study revealed that type of personality has no any impact on academic achievement of senior secondary school students. Many studies revealed a significant impact of personality traits on academic achievement. In the present study, only two aspects of personality traits viz. extrovert and introvert type of personality were taken. The finding of the present study is in consonance with the findings of Ghazi, Shahzada and Ullah (2013), Nehra (2014), Shokrpour and Moslehi (2015) who reported that there is no significant difference between the academic achievement score of introvert and extrovert type of students. But some studies (Hakimi, Hejazi, & Lavasani, 2011; Sangeetha, Pachaiyappan & Raj, 2014; Nawabi, 2014) revealed a significant influence of personality traits on academic achievement particularly consciousness (type of personality trait) has a major impact on academic achievement.

The study also revealed a significant difference in academic achievement of senior secondary students having low, average and high level of intelligence. Students having high level of intelligence were found to have more academic achievement in comparison to their counterpart students having average and low level of intelligence. The finding of the present investigation is in consonance with

Students having high level of achievement motivation were found to have more academic achievement in comparison to their counterpart students having average and low level of achievement motivation. The finding of the present investigation is supported by, Kumra (2013), Siddiqui and Fatima (2014) and Rather (2016) who have reported that students having high achievement motivation have better academic achievement scores in comparison to their counterpart.

The study further revealed no significant relationship between personality traits and academic achievement of senior secondary school students. The results of the present study are supported by the findings of Ghazi, Shahzada and Ullah (2013), Nehra (2014), Shokrpour and Moslehi (2015) they reported that there is no significant relationship between the academic achievement score of introvert and extrovert type of students. But results of the present study in contradiction with some studies (Hakimi, Hejazi, & Lavasani, 2011; Sangeetha, Pachaiyappan & Raj, 2014) who revealed a significant relationship between personality traits on academic achievement particularly consciousness (type of personality trait) has a major impact on academic achievement.

The study also revealed a significant difference in academic achievement of senior secondary students having low and high level of intelligence. Students having high level of intelligence were found to have more academic achievement in comparison to their counterpart students having low level of intelligence. The finding of the present investigation is in consonance with Mishra (1997), Kumari (1998), Diseth (2003), Saxena (2004), Dhall et al. (2009) Anees (2013), Chandra and Azimmudin (2013), Ghosh (2014), Jenaabadi, Shahidi, Alhamifar and Khademi (2015) who found high intelligence leads to better academic success. The study further revealed a significant and positive relationship between academic achievement and achievement motivation of
students. The findings are supported by Kumra (2013), Chetri (2014), Dhall (2014), Siddiqui and Fatima (2014) who reported a significant positive relationship between these two variables.

IMPLICATIONS OF THE STUDY

The purpose of educational research is not only to contribute new facts to the field of education for the sake of knowledge alone but it should yield some recommendations for the improvement in educational process and practices. The results of the present investigation reaffirmed the importance of the variables viz. personality traits, intelligence and achievement motivation on academic achievement of senior secondary students.

Thus, the present study has certain implications of major importance. This study may be of immense use for the prediction of academic achievement of students. The knowledge of the variables and factors which promote academic achievement and which are hindering. It is of great importance in developing curriculum and designing educational programmes to suit the needs of the students with varied backgrounds. The study of these variables assumes special significance in view of their implications on the part of the classroom teachers. In light of the above, the findings of the present investigation were examined and the following implications are traced out:

The study has established that the female and private school students were found to have more academic achievement as compared to their counterparts male and government school students. The findings of the study have implications for the teachers who can develop a proper teaching learning environment especially for boys. It is suggested that all stakeholders in education should continue to encourage both male and female students about the importance of academic achievement, which has a great importance in their career building. The findings of the present research have a strong bearing on the learning process and academic achievement of the senior secondary students and will help the educational authorities and teachers in solving the problems confronted by the adolescent children.
Other findings of the study showed that students with high intelligence, high level of achievement motivation have good academic achievement, whereas the students with low intelligence, low level of achievement motivation have low academic achievement. While academic achievement has been found significantly and positively related with intelligence and achievement motivation. This linking can give practical contribution to educational practices. However, this requires quite an extensive explanation. This input would gradually help students to develop some awareness of their potentials to enhance their academic achievement.

Personality of the students also plays an important role in academic achievement of the students. While in the present study no impact of personality was found on academic achievement of the students, but few studies show significant impact of personality traits on academic achievement of the students. Parents and teacher should encourage their children/wards or students to set clear goals, and ensure that they are disciplined and careful to consistently achieve them. Incentives should be arranged to accompany success to encourage continuous positive performance. This will serve as positive reinforcement. Teacher should endeavor to be close to their students through interaction outside the classroom. Government too can encourage more sponsorship programs to encourage the indigent but conscientious students further their education. Also Neurotic tendencies such as anger, depression, anxiety, and a low self esteem should be discouraged in students at all levels both at home and in the school. Student achievement motivation is an essential element that is necessary for quality education.

The five key factors impacting student motivation are: student, teacher, content, method/process, and environment. For example, the student must have access, ability, interest, and value education. The teacher must be well trained, must focus and monitor the educational process, be dedicated and responsive to his or her students, and be inspirational. The content must be accurate, timely, stimulating, and pertinent to the student’s current and future needs. The method or process must be inventive, encouraging, interesting, beneficial, and provide
tools that can be applied to the student’s real life. The environment needs to be accessible, safe, positive, personalized as much as possible, and empowering. Motivation is optimized when students are exposed to a large number of these motivating experiences and variables on a regular basis. That is, students ideally should have many sources of motivation in their learning experience in each class. Parent should motivate their children by affirming them whenever they do the right thing whenever they do wrong. Teachers and counseling psychologists should help them have an achievement motivation through affirmation. This is why guidance and counseling units must be encouraged in all school where this is not the case, especially in the government schools.

**SUGGESTIONS FOR FURTHER RESEARCH**

The present study has thrown some light and insight into the relationship of academic achievements with personality traits, intelligence, achievement motivation. Some broad suggestions on the lines on which further research studies can be conducted are given below:

(i) The present investigation was carried out on 400 students, studying in class 10+1 of the senior secondary schools. Similar study can be carried out on a larger sample to get better and more authentic results.

(ii) A similar study can be carried out upon the students of different age groups and different educational levels.

(iii) A comparative study of similar type may be carried out in different states to study certain regional variations.

(iv) The variables used in this study academic achievement in relation to personality traits, intelligence and achievement motivation can be studied in relation to other variables like home environment, school environment, self-confidence, creativity, self-concept, etc.

(v) Apart from personality traits, intelligence, achievement motivation other variables like creativity, study habits, socioeconomic status, mental health, emotional intelligence, school environment, etc. which affects academic achievement can be explored in further research.
(vi) Similar study can be carried out stream-wise and different socio-economic status.

(vii) Different schools as Navodaya Vidyalayas, Kendriya Vidyalayas can be taken for comparative study with same variables.