The problems with which our country is faced today are poverty, population, pollution, illiteracy and ignorance. The eradication of illiteracy from the country can change the destiny of the nation, because the investment on human beings to educate them makes them the human capital. Investment on human beings is the highest investment, which can bring rich dividends after a long time. We invest today and get the benefits after a long time. Moreover, UNESCO has declared Education as a human right, which means, Education is the right of the people living in a particular country and it is the duty of the Government to make provisions for imparting education to the people living in that country. In order to achieve this aim of Education as a human right, the education has been made free, compulsory and Universal: at the primary level as a first step in this direction. Moreover the primary education is also being made as a fundamental right. At present, the education comes under the directive principles, but after a bill is passed in the Parliament, the primary education will became the fundamental right, where it will be the right of the children to receive education between the age 6-14 years at the primary level and the Government has to make the provisions for the same. Formal system of education has not been able to provide education to all, who come within the age group of 6-14 years, because of the explosion of population. Therefore, we have to think of alternatives to provide education to all the children, who came within this age group. The alternative to formal education appears to be non-formal mode of education, where we can impart education to the children of this age group from a distance. That is why distance education is gaining momentum. So we can say that Distance Education, non formal education, correspondence education all have emerged as alternatives to the formal system of education, which can help in achieving the aims of education as a fundamental right and also education for all, who come within this age group. Aristotle once said, the difference between educated and illiterate persons is the same as we find between the living and non-living. Aristotle here compared
illiterate persons as non-living beings because they do not contribute anything useful for the progress of the society.

Valuable results of scientific pursuits constantly surround us. These results, include understandings of the harmful effects of smoking, the ability to use antibiotics to cure some diseases, and the ability to launch and use satellites for world-wide communications, are more than simply accumulations of facts about the world. Instead, these ideas and concepts have great explanatory and, often, predictive power. By having a scientific understanding of the world in which we live, we have some power to predict and control our environment.

A scientifically literate person has acquired the ability to hold a scientific worldview, engage in scientific inquiry, and appreciate the scientific enterprise. A scientific worldview involves perceiving a largely understandable world, seeing scientific knowledge as durable but subject to change, and knowing when scientific inquiry is appropriate – and knowing that science does not claim to have all the answers.

Scientific inquiry is a process of making sense of the world and developing explanations of the natural world often through the use of models. It is a scaffolded endeavor, integrating scientific content and disciplinary procedures; as such, inquiry will look different in a biology class, or an earth sciences class, or in a physics class because scientific methodology itself is different in those disciplines. The methodologies reflect the needs and structure of the discipline; someone who is scientifically literate should be able to understand and identify the roles of differing methods. Residents in these times run the risk of being powerless if they fail to understand science as a complex social activity, run by humans. Scientists are not isolated; they exhibit the same biases and social tendencies as other humans.

Knowledge plays a very dominant role in achieving the aims of Education. “The comparative study of the achievement in science of the students in Government and private schools in relation to their intelligence, Academic Anxiety, and Reading Interest are of great significance for the Educationists, planners and administrators.” Therefore, the researcher has thought to establish the relationship between Government and private Schools in relation to Academic Anxiety, intelligence and
**Reading Interest** of the students, which appear to be yet an unexplored territory in the area of research. The study establishes the relationship between the achievement in science and intelligence, adjustment and interest. This fact is yet to be established by, the researcher. Moreover, the knowledge of science is dependent or independent in relation to the knowledge of the other area, which requires the research to prove the same.

Hardly any significant research has been done in this area. The investigator consulted the surveys of Educational research by Dr. M.B. Buch and N.C.E.R.T, New Delhi and has found that almost negligible study has been done ill the area related to these variables. Therefore, the researcher thought it better to investigate in this unexplored territory of research and to find out the relationship between the Academic Achievement in the science Academic anxiety, intelligence and Reading Interest between the students of Government and private Schools.

Achievement refers to the level of success and of proficiency attained in some specific area concerning academic work. In the present study, the term academic achievement has been used interchangeably. The world is becoming more and more cooperative. Quality of performance has become the key factor for personal progress. Achievement is a very important variable.

The outcome of education determines the level of life, progress and status of the people living anywhere in the world and it is the vital force for the development of human life and society at large. In India, with the march of democracy and the proposals for the compulsory free education at the elementary level a different view of the scope and responsibility of educators has emerged. This goal is envisaged in maximizing the achievement of all children. Early research on the prediction of academic performance focused primarily on intelligence and ability factors as predictors.

Moreover, achievement during the past and the present has been the main objective of the students. The parents and the teachers expect and try that the achievement of the students should be the highest. On the basis 0; the achievement, the child is graded and evaluated as high achieve or low achiever. The achievement of the child depends upon the main factors namely upon the child’s interest, motivation,
adjustment and Reading Interest. An achievement test used to measure the students' knowledge in a particular subject. How much a student has been benefited from the learning experiences given to him, this can be evaluated with the help of the achievement test.

The development of human resources and maximum utilization of the resources are necessary for the growth and prosperity of any society. More so for a developing nation like ours. The institutions of learning especially the schools are the principal means of socialization to develop children into useful citizens so that they fit into adult roles and also different occupational roles. It is only children who are high in their scholastic achievement who can be molded to occupy strategic position in society and thereby determine the destiny of society (Manocha, 1993). Hence scholastic achievement occupies a very important place in education as well as in the learning process. High achievement in school creates self-esteem and self-confidence in the child. Grade placement whether in a ‘slow’ or ‘fast’ section - promotion and marks are the criteria by which children assess their academic achievement. Success is ego-inflating and failure is ego-deflating. Failure not only damages the self-concept but it encourages the development of patterns of behaviour that are harmful to personal and social adjustments. By contrast, success leads to favorable self concepts which in turn, lead to good personal adjustments and favorable social evaluations. These contribute heavily to good future adjustments.

The trend in the scholastic achievement, rate of drop outs, failures and low percentage of 10th and 12th standard students in the examinations was a question for the researcher to probe into the psychological factors that leads to poor achievement. Children who are high achievers are not necessarily more intelligent than the low achievers (Hurlock, 1978). Intelligence provides insight and direction to the human potential for achieving the goal. Intelligence is related to the process of mental mechanism which is the best way to increase scholastic achievement of the children. Every child in the classroom has within himself a considerable range of talents, it is most important that the school offer a variety of avenues to success. A student’s deficiency in academic subject is no reason to assume that he is completely lacking in talent. Every individual can be encouraged to identify and develop his talents to the
highest level. The failure of the school to do this deprives the individuals’ talents. (Dutt, 1998) Some of the factors may play a pivotal role in determining the success or failure of the students in their academic performance.

Family and school environment has a predominant and governing influence on the development of the child. The family is the first social group with which the child is identified; he/she spends more time with the family group than with any other social group. Family members are most significant people in the child’s life during the years when the foundations of personality are being laid and familial influences are broader, which influences the academic achievement of the children. The schools should also help the children to develop short range goals. The classroom tends to be an achievement oriented settings in which children are urged to do well to meet the high standards of performance (Sud and Prabha, 2003). The school age child feels a necessity to develop intellectual skills as a part of a whole network of competencies which contribute to his sense of industry. His response to the experience of the moment, taking account of several aspects of the situation, weighing them, bringing in past experience, and even considering the future. If the child is not encouraged to develop his cognitive abilities and talents to the fullest extent his academic activities will be hindered.

Anxiety is a prolonged state of fear. It is an emotion that is difficult to define and even more difficult to reliably detect in performance. “Nervousness” is often used to synonymously with anxiety. Anxiety plays an important role in the acquiring of motor skill as well as in athletic performance. Anxiety can either enhance or inhibit performance. Whether its effect is positive or negative depends on how an individual athlete perceives the situation. People with low and high levels of anxiety have been known to perform poor and there is also a positive relationship between high and low level of anxiety. But moderate level of anxiety seems best for the acquisition and performance of motor skills.

Anxiety plays a very dominant role in human life. There is always a desire of a student to be on the top in the class, which puts a lot of pressure on the student to cause tension and Anxiety. Anxiety is a way, which can be said the most intimate experience to a man. The word Anxiety has been taken from the Latin word
‘Anxietus’, which means experience of varying blends of uncertainty, agitation and threat.

The word academic anxiety comes from Latin word ‘Anxients’ which means experience of varying blends of uncertainly, agitation and threat. The desire to achieve high puts a lot of pressure on students which causes tension and examination anxiety. Academic anxiety in a way, is the most intimate experience to man. It enters into man’s life with the first breath and ends with the last. It is the main cause of all mental disorders. Tomb and Hunter (2004).

In Mandle’s (1966) analysis of academic anxiety, the interruption of organized plans or sequences of behaviour is a fundamental condition that leads to states of disbars and arousal. When no alternate behaviour is available as an alternate for the original plan, helplessness is defined, not by objective situation, but by the individual and his repertory of behaviour, Epstein (1967), defines academic anxiety as “a state of undirected arousal following perception of danger”. Dutt (1974) defines examination anxiety as “Examination anxiety constitutes particular unpleasant psychological, and physiological reactions of an organism to extrinsic or/and intrinsic threat which amounts to disintegration or extinction of the organism.”

Types of Academic Anxiety:

Freud identified three kinds of academic anxiety viz. objective examination anxiety, neurotic examination anxiety and normal examination anxiety, depending on whether the source of danger was from external world or from internal impulses or conflicts.

Objective academic anxiety which was synonymous with fear was evoked by real dangers in external world. The intensity of objective examination anxiety was proportional to the actual danger. Neurotic Examination anxiety was evoked by unaccepted sexual and aggressive impulses that had been severely and consistently punished in childhood. A study of research reveals four bases of classification of examination anxiety which are listed below or are briefly described in the section to follow:-

(i) Normal academic anxiety and Neurotic academic anxiety
(ii) Situational academic anxiety and Characterological academic anxiety
(iii) Conscious academic anxiety and Unconscious academic anxiety

(iv) State academic anxiety and Trait academic anxiety

(i) **Normal Academic Anxiety:**

In normal academic anxiety, one may face certain kind an degree of threat. He faces limitation of his powers, the degrees of his vulnerability. Limitation and Vulnerability are not expressions of illness but are inherent in the nature of man.

Neurotic academic Anxiety: In neurotic examination anxiety, the individual faces a host of threats which endanger of the neurotic character structure. He must maintain these out of strongest inner necessity to protect his feelings of safety and unity. These have acquired enormous subjective value for him so that he must protect them in order to maintain his sense of identity and his feeling of worth. At the core of examination anxiety, is a feeling of better helpless and lack of feeling of wholeness.

(ii) **Situational Academic Anxiety:**

When an individual feels Academic anxiety because of situation in which he finds himself, no sooner he is out of situation or gain control of it, then the examination anxiety subsides.

**Characterological Academic Anxiety:**

When examination anxiety becomes a component of psychic makeup of the individual, in such instance, the individual will worry about things that have happened and also about things that have not happened.

(iii) **Conscious Academic Anxiety:**

Where the individual is conscious of what he is anxious about. Here the cause is mostly known and the individual knows that he is anxious.

**Unconscious Academic Anxiety:**

When an individual experience enduring spells of tension and restlessness without knowing what makes him so, the examination anxiety is called unconscious examination anxiety. The manifestation of unconscious examination anxiety may be at the physiological level, usually in the form of psychosomatic reactions, e.g. asthama, migraine, urticaria, duodenal-ulcers, high and low blood pressure, general dyspepsia, anorexia nervosa ETC.
(iv) **Trait Academic Anxiety:**

Trait Examination anxiety is defined as a personality trait describing the extent to which individuals are prone to manifest ‘State’ examination anxiety under condition of stress. This corresponds to characterological examination anxiety.

**State Academic Anxiety:**

State examination anxiety is defined as a transitional state of apprehension and tension which is reaction of stress. This corresponds to situational examination anxiety.

**Academic Anxiety as a Motivator:**

There are many positive aspects of academic anxiety, but usually the negative aspects are highlighted. A little academic anxiety from time to time can be beneficial to task performance. This is illustrated by the *Yerker-Dodson law (1908)* which postulates that the relationship between examination anxiety and learning is curvilinear. Neither lower nor higher level of academic anxiety improves performance. Optional positive effect is obtained in the middle range. There is research evidence which supports it and indicates a curvilinear relationship between test academic anxiety and performance. Application of *Yerker-Dodson Law* to human learning seems eminently sensible.

Intelligence is 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. Rather than exploring very general formal definitions of intelligence, here we will instead take the opportunity to present the many informal definitions that we have collected over the years. Naturally, compiling a complete list would be impossible as many definitions of intelligence are buried deep inside articles and books. Nevertheless, the 70 odd definitions presented below are, to the best of our knowledge, the largest and most well referenced collection there is. We continue to add to this collect as we discover further definitions, and keep the most up to date version of the collection available online. If you know of additional definitions that we could add, please send us an email.
The ability to use memory, knowledge, experience, understanding, reasoning, imagination and judgement in order to solve problems and adapt to new situations (All Words Dictionary, 2006).

The ability to learn, understand and make judgments or have opinions that are based on reason (Cambridge Advance Learner’s Dictionary, 2006)

In matters of definition, it is difficult to argue that there is an objective sense in which one definition could be considered to be the correct one. Nevertheless, some definitions are clearly more concise, precise and general than others. Furthermore, it is clear that many of the definitions listed above are strongly related to each other and share many common features. If we scan through the definitions pulling out commonly occurring features we find that intelligence is:

A property that an individual agent has as it interacts with its environment or environments is related to the agent’s ability to succeed or profit with respect to some goal or objective.

Depends on how able to agent is to adapt to different objectives and environments. Putting these key attributes together produces the informal definition of intelligence that we have adopted, “Intelligence measures an agent’s ability to achieve goals in a wide range of environments.” S. Legg and M. Hutter

Features such as the ability to learn and adapt, or to understand, are implicit in the above definition as these capacities enable an agent to succeed in a wide range of environments.

In Latin, the word "Interest" means it matters or it concerns. A thing which interests us is just something that concerns us or matters to us. Interest means making a difference. We are interested to know about the new things, new objects because they concern us and they make a difference to us. It is also said that interest is the central force, which drives the whole setting or the teaching learning process. Crow and Crow (1986) says, "Interest may refer to the motivating force that impels us to attend to a person, a thing or an activity, or it may be the effective experience that has been stimulated by the activity itself. In other words interest can be the course of an activity and the result of participation in very particular activity. Interest is an inner
force within an individual which attracts or detract him from the person's, activities and objectives within the environment.

Reading interests play an important role in human performance in academic field. It is obvious that those who have better study habits they may have a good academic success. Reading interest is a confirmed way of doing things. Good reading interests are central factor in learning happiness, efficiency and profession life depends upon the cultivation of good habits. Interest occupies a very important place in the development of personality. Reading interest formation dominates the way of learning and doing things. Good reading interest provides effective motivation to the learner. Childhood is the best time for habit formation because child’s mind is most elastic and impressionable to every thing that occurs around him.

Reading interest or study skills can be defined as those habits or skills with the help of which the progress of student academic activities can be accelerated by planning and organization of his work, how much time he needs to devote to his studies which subjects he will study and when what he intends to achieve during each study sessions and how to organize those activities to accomplish his goals.

The term reading interest has been used to mean various methods and practices adopted by the student in their school and college studies. Poor reading interest is one of the biggest and most persistent problems among the school and college students. Effective study consists of more than merely memorizing facts. It calls for knowing where and how to obtain facts and the ability to make intelligent use of time. It means that the student must be able to organize, classify and arrange facts in their proper relationship to the subject being studied.

According to Smith (1961), “Reading interest includes student’s habit of concentration, note taking, time budgeting and study methods.

One's interest is of measure of what one will do or what one can do. It is a driving force. It helps students to acquire certain learning experiences and also colors and fashions their attitude, aptitude and other personality traits. It is said that reading is the quick association of the eye movement with the words while understanding them.
All reading without understanding is useless. A person, who reads always remains well informed about the national and international problems. Reading also helps to solve the socio-economic problems especially of the poverty, population explosion, pollution etc. It is only through reading that one can know about these problems which are a direct global threat to the international peace, prosperity and progress. Reading also widens the range of information and broadens the outlook of life. Reading is also a source of great recreation and pleasure. One can spend one's leisure by reading and can enjoy reading by transporting oneself through imagination to fairyland. One can Unfold the mysteries of knowledge through the ability to read an (I understand the ideas and ideals.

The need of the hour demands that all the students should have interest in reading the text books and to inculcate habits of effective learning. Practice in good reading interests will prevent maladjustment and serious behavioural problems like truancy, day-dreaming, withdrawal and juvenile delinquency. Therefore effective reading interests attachment essential in the teaching and learning situation. So it is evident that reading interests play an eminent role in the academic success of students.

The inculcation of creating interest among the students for reading rests upon the abilities of the teacher. Teacher can inspire the students for reading. The ideas of teachers on various aspects of life directly influence the ability of interest among the students. If we want to achieve the aim of literacy, we have use reading is the effective tool. It is said reading is the key towards world peace, prosperity and progress.

RATIONALE OF THE STUDY

As a society becomes increasingly complex owing to rapid scientific and technological progress, it needs high capacity manpower to sustain and maintain the pace of progress of the society. For reasons such as this, the concept of intelligence is becoming increasingly important in modern societies. No sphere of life, whether it is education or social and physical science, literature or art etc. has remained uninfluenced by the intelligence. The working force behind the success and attainments of world’s greatest laureate, scientists, psychologists and politicians etc.
has been one and only, and that is intelligence. Intelligence not only enables an individual to attain great heights of success in life but also develops in him the ability by which he is well adjusted in his environment and saves himself from becoming its victim. Life is full of challenges and surprises and it is intelligence and self-confidence which prepares us for facing these challenges and accepting these surprises as successfully as possible. There is no gainsaying the fact that a person’s intellectual development at a particular stage is the sum of what he inherited from his parents and his experiences as a result of interaction with the environmental situations. Since we can not control or modify the hereditary factors we need to provide the most conducive environmental situations for the proper intellectual development of the children in our charge.

The investigator consulted the surveys of Educational research by Dr. M.B. Buch, and the 4th Survey of Educational Research by N.C.E.R.T. The researcher also consulted a bibliography, Educational Research and innovations 1988-92 by P.N. Dave and C.G. Venketesha Murthy published by N.C.E.R.T. and also Indian Educational Abstracts published by N.C.E.R.T. and found hardly any significant study related to these variables has been done. Therefore, the researcher intended to study the effect of achievement upon the public school students of X Class in relation to Intelligence, Academic Anxiety, and Reading Interest and to compare the same with the Government and private Schools. Intelligence, Academic Anxiety, Reading Interest, which the researcher has taken to conduct the research proposal are Academic Anxiety, Intelligence and Reading Interest of the students of the X class. Nobody can predict about the achievement of the students in science in the Government and Private Schools. It is yet an unexplored territory. The researcher has to dive deep into the ocean of knowledge to bring to light the new vistas of research findings. It is just like as the diver brings the pearls and diamonds from the bottom of the sea. In the same way, the researcher brings the light new facts and new relationship among these variables upon which the research is conducted.
STATEMENT OF THE PROBLEM

“A COMPARATIVE STUDY OF THE ACHIEVEMENT IN SCIENCE IN RELATION TO INTELLIGENCE, ACADEMIC ANXIETY AND READING INTEREST OF THE X CLASS STUDENTS IN GOVERNMENT AND PRIVATE SCHOOLS OF HARYANA”.

VARIABLE USED IN THE STUDY

Independent Variables

- Academic Anxiety
- Intelligence
- Reading Interest

Dependent Variable

- Achievement test in Science

OPERATIONAL DEFINITIONS OF THE TERMS USED IN THE STUDY

(i) **Achievement:**

The term achievement refers to the marks obtained by the candidate in the achievement test. In the present study, it is used in relation to the achievement in science.

(ii) **Reading Interest:**

Reading Interest implies the interest of the person to read more reading material other than curriculum and to make reading as a pleasure pursuit.

(iii) **Academic Anxiety:**

It is a state of mind while concentrating on the studies. It varies from person to person in different situations.

(iv) **Intelligence:**

The ability to use memory, knowledge, experience, understanding, reasoning, imagination and judgment in order to solve problems and adapt to new situations.
OBJECTIVES OF THE STUDY

1. Academic Anxiety

1.1. To compare the Academic Anxiety of the students of Xth class in Government and Private Schools.

1.2. To compare the Academic Anxiety of the male and female students of Xth class in Government Schools.

1.3. To compare the Academic Anxiety of the male and female students of Xth class in Private Schools.

1.4. To compare the Academic Anxiety of the male students of Xth class in Government and Private Schools.

1.5. To compare the Academic Anxiety of the female students of Xth class in Government and Private Schools.

2. Intelligence

2.1. To compare the intelligence of the students of Xth class in Government and Private Schools.

2.2. To compare the intelligence of the male and female students of Xth class in Government Schools.

2.3. To compare the intelligence of the male and female students of Xth class in Private Schools.

2.4. To compare the intelligence of the male students of Xth class in Government and Private Schools.

2.5. To compare the intelligence of the female students of Xth class in Government and Private Schools.

3. Reading interest

3.1. To compare the Reading interest of the students of Xth class in Government and Private Schools.

3.2. To compare the Reading interest of the male and female students of Xth class in Government Schools.

3.3. To compare the Reading interest of the male and female students of Xth class in Private Schools.
3.4. To compare the Reading interest of the male students of Xth class in Government and Private Schools.
3.5. To compare the Reading interest of the female students of Xth class in Government and Private Schools.

4. **Achievement in Science**
4.1 To compare the Achievement in Science of the students of Xth class in Government and Private Schools.
4.2. To compare the Achievement in Science of the male and female students of Xth class in Government Schools.
4.3. To compare the Achievement in Science of the male and female students of Xth class in Private Schools.
4.4. To compare the Achievement in Science of the male students of Xth class in Government and Private Schools.
4.5. To compare the Achievement in Science of the female students of Xth class in Government and Private Schools.

5. **Relationship between independent variables upon science scores**
5.1 To find the relationship between Academic Anxiety and Academic Achievement in Science of the X Class students.
5.2 To find the relationship between Intelligence and Academic Achievement in Science of the X Class students.
5.3 To find the relationship between Reading Interest and Academic Achievement in Science of the X Class students.

**HYPOTHESES**

1. **Academic Anxiety**
   1.1 There is no significant difference between Academic Anxiety of the students of Xth class in Government and Private Schools.
   1.2 There is no significant difference between Academic Anxiety of the male and female students of Xth class in Government Schools.
   1.3 There is no significant difference between Academic Anxiety of the male and female students of Xth class in Private Schools.
1.4 There is no significant difference between Academic Anxiety of the male students of Xth class in Government and Private Schools.

1.5 There is no significant difference between Academic Anxiety of the female students of Xth class in Government and Private Schools.

2. Intelligence

2.1 There is no significant difference between intelligence of the students of Xth class in Government and Private Schools.

2.2 There is no significant difference between intelligence of the male and female students of Xth class in Government Schools.

2.3 There is no significant difference between intelligence of the male and female students of Xth class in Private Schools.

2.4 There is no significant difference between intelligence of the male students of Xth class in Government and Private Schools.

2.5 There is no significant difference between intelligence of the female students of Xth class in Government and Private Schools

3. Reading interest

3.1 There is no significant difference between Reading interest of the students of Xth class in Government and Private Schools.

3.2 There is no significant difference between Reading interest of the male and female students of Xth class in Government Schools.

3.3 There is no significant difference between Reading interest of the male and female students of Xth class in Private Schools.

3.4 There is no significant difference between Reading interest of the male students of Xth class in Government and Private Schools.

3.5 There is no significant difference between Reading interest of the female students of Xth class in Government and Private Schools

4. Achievement in Science

4.1 There is no significant difference between Achievement in Science of the students of Xth class in Government and Private Schools.

4.2 There is no significant difference between Achievement in Science of the male and female students of Xth class in Government Schools.
4.3 There is no significant difference between Achievement in Science of the male and female students of Xth class in Private Schools.

4.4 There is no significant difference between Achievement in Science of the male students of Xth class in Government and Private Schools.

4.5 There is no significant difference between Achievement in Science of the female students of Xth class in Government and Private Schools.

5. **Relationship between the independent variables upon science scores**

5.1 There is no significant relationship between Academic Anxiety and Academic Achievement in Science of the X Class students.

5.2 There is no significant relationship between Intelligence and Academic Achievement in Science of the X Class students.

5.3 There is no significant relationship between Reading Interest and Academic Achievement in Science of the X Class students.

**DELIMITATIONS OF THE STUDY**

Present study is delimited to:

- The study will be delimit to twenty schools of Rohtak and Sonepat city
- The present study will be confined to 400 students of government and private school students.
- The present study will be confined to academic achievement in science of senior secondary school students.
- The study will be delimit to comparing and finding relationship of academic achievement in science with academic anxiety, intelligence and reading interest of students.
- The study will be confined to gender of the teacher educators and nature of the institution as demographic variables.

**METHODOLOGY**

In this study a comparison of the achievement of the X Class students in Government and Private Schools in relation to Anxiety, Adjustment and Reading Interest have been made. The relevant tools for measuring the achievement in
Science, Reading Interest Inventory have been designed for measuring the Reading Interest of the X Grade Students. Achievement Test in Science of the X Class students has been designed and constructed by the Researcher herself. Only Academic Anxiety test by Dr. A.K. Singh & Dr. A. Sen Gupta, Intelligence test for children by S. M. Mohsin for school children have been used for the collection of the relevant data. These tools have been administered upon 400 X Grade students. The results were complied and statistically analyzed for further conclusions.

THE RESEARCH DESIGN

Normative Survey Method has been used for the collection of the data of the present study. All the four tools were administered upon the sample because the nature of the study is very helpful for the collection of data through the Normative Survey Method. The data thus was collected by the investigator for analysis, interpretation and for drawing out the conclusions etc.

The Population

In this study, the population comprised of 400 X Grade students of Rohtak belonging to the formal/regular stream of Education, out which 200 from Government Schools and 200 from private schools and 200 male students i.e. 100 each from government and private schools. 200 female students i.e. 100 each from government and private schools have been taken.

The Sample

The sample consists of 400 students of Rohtak and Sonepat District’s Private and Government schools.

TOOLS USED IN THE PRESENT STUDY

The following tools have been used in this research study for the collection of

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<thead>
<tr>
<th>S.No.</th>
<th>Variables Used</th>
<th>Tools Used</th>
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<tbody>
<tr>
<td>1</td>
<td>Academic Anxiety Scale</td>
<td>Dr. A.K.P. Sinha and Dr. I. N. K. Sinha</td>
</tr>
<tr>
<td>2</td>
<td>General Intelligence Test</td>
<td>Dr. S.M. Mohsin</td>
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<tr>
<td>3</td>
<td>Achievement Test in Science</td>
<td>Constructed by the Researcher himself</td>
</tr>
<tr>
<td>4</td>
<td>Reading Interest Inventory</td>
<td>Constructed by the Researcher himself</td>
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STATISTICAL TECHNIQUES USED

In order to measure the significance of difference between the means and analyzing the data different statistical Techniques such as mean standard deviations and “t”- ratio were employed. To measure the correlation between the various variables of the study, Karl’s Pearson’s Product Moment ‘r’ was calculated using the SPSS Software.

MAJOR FINDINGS

Academic Anxiety of the students of Xth class in Government and Private Schools:

It has been found that the mean score of academic anxiety of government school students (11.22) is less than private school students (13.00). So there is a significant difference in the mean scores of academic anxiety of government and private schools students. It may therefore be concluded that government school students have less academic anxiety in comparison to private school students.

Academic Anxiety of the male and female students of Xth class in Government Schools:

It has been found that the mean score of academic anxiety of male government school students (10.81) is less than government female school students (11.64). So there is a significant difference in the mean scores of academic anxiety of government school male and female students. It may therefore be concluded that male government school students have less academic anxiety in comparison to government female schools students.

Academic Anxiety of the male and female students of Xth class in Private Schools:

It has been found that the mean score of academic anxiety of male private school students (12.50) is less than government female school students (13.50). So there is a significant difference in the mean scores of academic anxiety of private school male and female students. It may therefore be concluded that male private school students have less academic anxiety in comparison to private female schools students.
Academic Anxiety of the male students of Xth class in Government and Private Schools:

It has been found that the mean score of academic anxiety of male government school students (10.81) is less than private male school students (12.50). So there is a significant difference in the mean scores of academic anxiety of government school male and private school male students. It may therefore be concluded that male government school students have less academic anxiety in comparison to private male schools students.

Academic Anxiety of the female students of Xth class in Government and Private Schools:

It has been found that the mean score of academic anxiety of female government school students (11.64) is less than private female school students (13.50). So there is a significant difference in the mean scores of academic anxiety of government school female and private school female students. It may therefore be concluded that female government school students have less academic anxiety in comparison to private female schools students.

Comparison the Intelligence of the students of Xth class in Government and Private Schools:

It has been found that the mean score of intelligence of government school students (111.81) is less than private school students (118.14). So there is a significant difference in the mean scores of intelligence of government school and private school students. It may therefore be concluded that government school students have less intelligence in comparison to private schools students.

Comparison the Intelligence of the male and female students of Xth class in Government Schools:

It has been found that the mean score of intelligence of male government school students (108.25) is less than female government school students (115.37). So there is a significant difference in the mean scores of intelligence of male government school and female government school students. It may therefore be concluded that male government school students have less intelligence in comparison to female government schools students.
Comparison of Intelligence of the male and female students of Xth class in Private Schools:

It has been found that the mean score of intelligence of male students of private school (116.64) is less than female students of private school students (119.65). But there is no significant difference in the mean scores of intelligence of male students of private school and female students of private schools.

Comparison of Intelligence of the male students of Xth class in Government and Private Schools:

It has been found that the mean score of intelligence of male students of government school (108.25) is less than male students of private school (116.64). So there is a significant difference in the mean scores of intelligence of male students of government school and male students of private school. It may therefore be concluded that male students of government school students have less intelligence in comparison to male students of private schools.

Comparison of Intelligence of the female students of Xth class in Government and Private Schools:

It has been found that the mean score of intelligence of female students of government school (115.37) is less than female students of government school (119.65). So there is a significant difference in the mean scores of intelligence of female students of government school and female students of private school. It may therefore be concluded that female students of government school students have less intelligence in comparison to female students of private schools.

Comparison of Reading Interests of the students of Xth class in Government and Private Schools:

It has been found that the mean score of reading interest of government school students (106.84) is less than private school students (114.29). So there is a significant difference in the mean scores of reading interest of government school and private school students. It may therefore be concluded that government school students have less reading interest in comparison to private schools students.

Comparison of Reading Interests of the male and female students of Xth class in Government Schools:

It has been found that the mean score of reading interest of male government school students (102.59) is less than female government school students (111.10). So there is a
significant difference in the mean scores of reading interest of male government school and female government school students. It may therefore be concluded that male government school students have less reading interest in comparison to female government schools students.

Comparison of Reading Interests of the male and female students of Xth class in Private Schools:

It has been found that the mean score of reading interest of male students of private school (110.99) is less than female students of private school students (117.59). So there is a significant difference in the mean scores of reading interest of male students of private school and female students of private schools. Female students of private schools have good reading interests in comparison to their male counterparts.

Comparison of Reading Interests of the male students of Xth class in Government and Private Schools:

It has been found that the mean score of reading interest of male students of government school (102.59) is less than male students of private school (110.99). So there is a significant difference in the mean scores of reading interest of male students of government school and male students of private school. It may therefore be concluded that male students of government school students have less reading interest in comparison to male students of private schools.

Comparison of Reading Interests of the female students of Xth class in Government and Private Schools:

It has been found that the mean score of reading interest of female students of government school (111.10) is less than female students of government school (117.59). So there is a significant difference in the mean scores of reading interest of female students of government school and female students of private school. It may therefore be concluded that female students of government school students have less reading interest in comparison to female students of private schools.

Comparison of Academic Achievement of the students of Xth class in Government and Private Schools:

It has been found that the mean score of academic achievement of government school students (32.11) is less than private school students (36.12). So there is a significant
difference in the mean scores of academic achievement of government school and private school students. It may therefore be concluded that government school students have less academic achievement in comparison to private schools students.

**Comparison of Academic Achievement of the male and female students of Xth class in Government Schools:**

It has been found that the mean score of academic achievement of male students of government school (27.71) is less than female students of government schools (36.91). So there is a significant difference in the mean scores of academic achievement of male students of government schools and female students of government schools. It may therefore be concluded that male students of government schools have less academic achievement in comparison to female students of government schools.

**Comparison of Academic Achievement of the male and female students of Xth class in Private Schools:**

It has been found that the mean score of academic achievement of male students of private school (33.99) is less than female students of private school (39.45). So there is a significant difference in the mean scores of academic achievement of male students of private school and female students of private schools. Female students of private schools have much academic achievement in comparison to their male counterparts.

**Comparison of Academic Achievement of the male students of Xth class in Government and Private Schools:**

It has been found that the mean score of academic achievement of male students of government school (27.31) is less than male students of private school (36.91). So there is a significant difference in the mean scores of academic achievement of male students of government school and male students of private school. It may therefore be concluded that male students of government school students have less academic achievement in comparison to male students of private schools.

**Comparison of Academic Achievement of the female students of Xth class in Government and Private Schools:**

It has been found that the mean score of academic achievement of female students of government school (33.99) is less than female students of government school (39.45). So there is a significant difference in the mean scores of academic achievement of female
students of government school and female students of private school. It may therefore be concluded that female students of government school students have less academic achievement in comparison to female students of private schools.

**Relationship between Academic Anxiety and Academic Achievement in Science of the X Class students.**

It was found that co-efficient of correlation between Academic Anxiety and Academic Achievement in Science of Secondary School students is 0.246 which is significant at 0.01 level of significance. Hence, there exists correlation. It indicates that academic anxiety and Academic Achievement in Science of secondary school students are positively correlated with each other.

**Relationship between Intelligence and Academic Achievement in Science of the X Class students.**

It was found that co-efficient of correlation between Intelligence and Academic Achievement in Science of Secondary School students is 0.570 which is significant at 0.01 level of significance. Hence, there exists correlation. It indicates that Intelligence and Academic Achievement in Science of secondary school students are positively correlated with each other.

**Relationship between Reading Interest and Academic Achievement in Science of the X Class students.**

It was found that co-efficient of correlation between Reading Interest and Academic Achievement in Science of Secondary School students is 0.552 which is significant at 0.01 level of significance. Hence, there exists correlation. It indicates that Reading Interest and Academic Achievement in Science of secondary school students are positively correlated with each other.

**CONCLUSION:**

Witfully analysis and interpretation of the results discussed above has revealed following conclusion:

There is no significant difference between Academic Anxiety of the students of Xth class in Government and Private Schools. It may also be concluded that
government school students have less academic anxiety in comparison to private school students. It may because of better guidance provided in the private school increase more academic anxiety in students of private schools also there is busier academic schedule in private school which will put relevant effect on academic anxiety of private school students. On the other hand Govt. school students may not be found high quality guidance from their school and parents so they have low level of academic anxiety than students of private schools. It has been found that there is no significant difference between Academic Anxiety of the male and female students of Xth class in both Private and Government Schools and from the score it may therefore be concluded that in both case male school students have less academic anxiety in comparison to female school students. Main reason is that male students may involve themselves in many physical activities with peer male group which decrease their academic anxiety while female students have not such freedom like male due to orthodox thoughts of society.

It has been found that there is significant difference between Intelligence of the students of Xth class in Government and Private Schools. It may therefore be concluded that government school students have less intelligence in comparison to private school students. Reason may be that the cream of students of country is studying in private schools. We found in both case, private and Govt. that female students are found more intelligent than male which reflect the modern approach of society means equality of opportunities among children in which girl students found more aggregate development of mind and adjustment with conditions and society. It has been found that there is significant difference between Reading Interests of the students of Xth class in Government and Private Schools. Reason may be that students of private schools put in such an environment so that they may be habitual in reading so there score is more than students of Govt. schools.

Male students have more freedom of enjoy in society. Even parents show partiality in living style among male and female students. Male students spent lot of time with their friend in sports ground. On the other hand girls have no interest in such adventures outdoor things like boys so they spent lots of time with books. So female students have high reading interest than that of male students in both cases.
It is found for the study that achievement in science is highly correlated with reading…… Academic Anxiety and Intelligence Highly Intelligent Student achieve high score is achievement test. If a student has high score in science then he should be highly intelligent. Similarly increasing in Academic Anxiety also increases achievement score and vice versa. Reading Interests have also significant relationship with achievement in science. Reading helps in understanding of concepts and this helps in high achievement in achievement tests. So, it is found several forms study that achievement in science is highly correlated with science and vice versa.

DISCUSSION OF THE RESULTS

The present study was conducted with the respect to intelligence, reading interest, academic anxiety of the students of Govt. schools and private schools. The findings of the present study are in consonance or in contrast with the findings of the following studies in the area and hence are supported by the empirical evidence also.

The findings of the present study that the achievement in science in relation to academic anxiety, intelligence and reading interest of Xth class students of Govt. schools and private schools moderate and hence consonance with the findings of Mithlesh Dixit (1985) who designed a comparative study of the academic achievement and intelligence of adolescent boys and girls studying in classes IX and X in which he conclude that at all other intellectual levels the academic achievement of the girls was superior to that of boys. The present study also reveals that female students are superior to boys in both private and Govt. schools

Saxena (2004) conducted a study to investigate the relationship between intelligence and academic achievement in English. This study is an attempt to study that how far intelligence is related to students’ academic achievement in English. After investigation, researcher concluded that Intelligence of students positively influenced their academic achievement in English and also Students preferred school of different types of management irrespective of their level of intelligence. The findings of the present study are in consonance. The academic anxiety, and reading interest of private school specially of urban area are higher than of Govt. school.

The finding of this study also consonance with J.H. Shah (1999) who conducted a study of relationship among intelligence, self concept and academic achievement of pupils of
tenth standard of semi urban and rural areas. He concluded after the study that there was significant relationship of intelligence with academic achievement than self concept.

EDUCATIONAL IMPLICATIONS

The achievement in science is highly related to students Academic Anxiety, intelligence and reading interest. The students having high level of intelligence, academic anxiety and reading interest has achieved more score in achievement test in science.

As this study reveals that government school students have less academic anxiety in comparison to private school students. It may be due to lack of guidance provided from parent or school staff to Govt. school students compare to private school students. So Govt. school teacher should be paid enough attention on their students and parents also should guide their child for better future.

As this study reveals that male school students have less academic anxiety in comparison to female school students in both Govt. and private schools due to orthodox and biased approach from parents regarding social freedom and extra involvement in games and adventure of boys. Parents should be taken more attention towards boys.

As this study reveals that government school students have less intelligence in comparison to private school students. Main reason is that cream of students of society is approaching towards private school due to better discipline, infrastructure and excellent academic results. Contradiction is that Govt. school teacher has higher academic qualification than private school teachers. Govt. should take some strict steps on teachers regarding student’s annual academic performance.

As this study reveals that male school students have less intelligence in comparison to female school students in both types of schools. But fact is not true in all cases. Female school students are keener toward parental desire and carrier. Conclusion may vary if study is conducted on large scale.

It is found that government school students have less reading interests in comparison to private school students. It may be concluded that more or less reading interest is related to habit formation. Private schools has very busy annual academic calendar. Students are indulged in various academic activities like unit examinations, semester exemptions, Olympiad etc. So private school students need to create reading interest for all above said
activities. On the other side Govt. schools does not take such pain. Govt. school should have conduct private schools like activities to create reading interest among their students.

It is found that male school students have less Reading Interests in comparison to female school students. Orthodox approach of both parents and society makes girl to restrict themselves in home. So they use the leisure time in reading. Boys spent more time outside home than to stay home. So level of reading interest is high in female than male in both private and Govt. school. Male school Students should be encourged to spend more time among books than peer group.

This study helps to the parents, teachers, educators, administrators and law makers to know the level of intelligence, reading habits, anxiety, and scholastic achievement and their relationship. The result also signifies that there is a need to develop inclination of the students towards art, music and sports. These results also guide personnel’s of residential schools to create favorable atmosphere to nullify the factors responsible for anxiety and encourage the facilities and factors promoting academic excellence.

The results clearly justifies that there are differences between boys and girls and within the boys in their academic performance. Therefore there is a need to take care of minimizing the differences in order to develop the potentialities in order to develop the potentialities more or less in similar ways.

SUGGESTIONS FOR FURTHER RESEARCH-

Some suggestions for further research can be given keeping in view its limitations and findings.

(1) Large study may be conducted on comparison bases of different states.
(2) This study can also be done on primary school students.
(3) Similar studies can be carried out at secondary and other fields of higher level of education
(4) A study of relationship of academic anxiety and social climate can be made.
(5) A study of achievement in other subjects can also in relation to academic anxiety, intelligence and reading interest can be made.
(6) A study of the influence of anxiety on scholastic achievement in different age groups can be made.
DELIMITATIONS OF THE STUDY

Present study is delimited to:

- The study will be delimited to twenty schools of Rohtak and Sonepat city.
- The present study will be confined to 400 students of government and private school students.
- The present study will be confined to academic achievement in science of senior secondary school students.
- The study will be delimited to comparing and finding relationship of academic achievement in science with academic anxiety, intelligence and reading interest of students.
- The study will be confined to gender of the teacher educators and nature of the institution as demographic variables.