

Chapter-1

CONCEPTUAL FRAMEWORK

Academic achievement has always been considered to be a very important factor in the educational life of an individual, because good academic record over years predicts future success of a person. Education is unique asset and academic achievement is an essential aspect of it. The educational status of an individual in a society is greatly depicted through the academic achievement. Since time immemorial academic achievement of students has been a great concern to educationist. This trend has been now intensively felt by the academicians, parents and students. Strikingly, academic achievement has become a destructive index in determining a child's future. The prediction of academic achievement has been given greater importance during recent years because of various reasons. One of the reasons is the mushroom growth in student population which has created a lot of problems. The second is that child education has not been found to be commensurable with the efforts and huge expenditure made in this field. The third is concerned with the wastage of great human potentials because it is often found that student perform much below their capacities. Nevertheless, both students and teachers share the same goal i.e. to reach optimal learning. Educational programs and courses that are responsive to diverse student populations and their individual differences are essential. The question is why? The psychology of human differences is fundamental to learning and it opposes a one-size-fits-all approach to education. Therefore, for a learning environment to be optimally effective, it should capitalize not only on contextual but also the learner's characteristics. It is good practice to recognize and accommodate individual differences as well as to present information in a variety of ways through more than one modality. Educational institutions in order to capitalize the maximum intellectual resources of our youth; it is time for us to be the champion of individual differences. Educationalists looking for excellently competent professionals has to recognize the variances in how their pupils learn and identify their critical thinking abilities (**Gabel, Krueger & Curry, 2007**) and then consider how best to optimize the learning process. Unfortunately, educators teach the students as the differences between them do not exist and on the other hand they study the effect of learning process (**Bojanczyk, & Lanphear and Paul 1994**). Learners, in response, generally feel disappointed with the strategies and processes of learning and mostly perceive as

lacking relevance in the study material. **(Cohen and Eyal 2006)**. Accordingly, performance often differs, from individual to individual and educators get puzzled with these variations. Rejecting these variation in thinking and learning process does not promote adjustment in the overall process of learning. However promoting these differences in students can increase deeper thought of knowledge **(Mighten & Johnson 2005)**.

Therefore, knowledge of student's learning style preferences and identification of their possible strengths and weaknesses will help educators to structure course content appropriately, thereby improving student learning and engagement in the education process. It will also improve students' self-awareness of how they learn best and what they can do to maximize learning opportunities. In order to gain basic understanding of academic achievement, different students are using different learning styles. Some may learn through touch, and some through direct participation in any activity. It means that every child has a unique type of learning style which suits him the best.

1.1 LEARNING STYLE

Learning style may be defined as the individual's natural, routine and favored way of gripping, handling and remembering new knowledge and skills **(Reid, 1987)**. The theories of learning style started with the theory of Carl Jung in 1927 who stated the main variations in the method through which the people perceived (intuition vs sensation), and the ways through which they make decisions (rational thinking vs creative feelings), and how energetic or considerate they were while interacting with others (extrovert vs introvert). Therefore, learning style may be defined as the affinity of person towards a particular technique of learning. According to **Keefe (1979)** learning style may be defined as "mixture of physiological, cognitive and affective dimensions which serves as the as a relatively strong indicators of how the student interacts, perceives and responds with the environment of learning." **Stewart and Felicetti (1992)** define learning styles as those "type of environmental conditions in the class room in which a student learns the most". Every one of us can obtain benefit from a diversity of learning experiences. However, it is true that some ways of performing a task are more competent for one individual and not for the others and when the learners are given an opportunity to choose their best ways of learning and

they will learn best than those who are compelled to learn by a style which does not suit them.

Having the knowledge of one's styles of learning can be used to increase self-awareness about their strengths and weaknesses as learners. Keeping onto consideration the learning styles of the students a teacher can organize a class in , cool and warm temperatures, noisy and calm environments, soft and bright illuminations, arrangement of seats, preferences for making groups. We can recognize the patterns in which people tend to concentrate best - alone, with others, with certain types of teachers, or in a combination thereof. We become aware of the senses through which people remember difficult information most easily—by hearing, speaking, seeing, manipulating, writing or note taking, experiencing, or, again, a combination of these. Learning style also encompasses motivation, on-task persistence versus the need for multiple assignments simultaneously, the kind and amount of structure required, and conformity versus nonconformity. **Merill (2000)** argues that most of students are unaware of their learning styles. All the advantages claimed for meta-cognition can be gained by encouraging learners to become knowledgeable about their own learning styles and that of others (**coffield, 2004**). Once students have brought this knowledge into their level of awareness, they are better suited to choose learning strategies that match their learning styles. This initiates student ownership of the educational process. One of the most significant issues in learning is an individual is taking the responsibility for his/her own learning. The individuals should know what their own learning styles are and what characteristics this style has and they should thereby behave according to this style. In this way, the individual can acquire the constantly changing and increasing amount of information without need for the assistance of others. When the learner takes the responsibility of his/her own learning, s/he then attributes meaning to the process of learning.

1.2 MODELS OF STYLES OF LEARNING

There are various models of learning style, some of the learning styles which are used in the areas of education are discussed as under.

1.2.1 The Myers-Briggs Type Indicator (MBTI)

The model follows the scales which is developed by psychologist namely Carl Jung, which has divided the learners as.

Extrovert learners/ Introvert learners

- * Extrovert learners: These are the interactive type of learners.
- * Introverts learners: These type of learners go deep into the inner world of thinking and make hesitation while interacting with others.

• Sensor type of learners/Intuitior type of learners

- * Sensor type of learners: They are pragmatic, need detailed explanations and there centre of attention is on realities and processes; and
- * Intuitior type of learners: They are creative, thoughtful and their centre of attention are the ways and the means of doing some work.

• Thinkers/ Feelers

- * Thinkers: They are cynical and tend to make decisions based on reason and a set of laws.
- * Feelers: They are capable of taking decisions which are based on judgements of humanistic perspective.

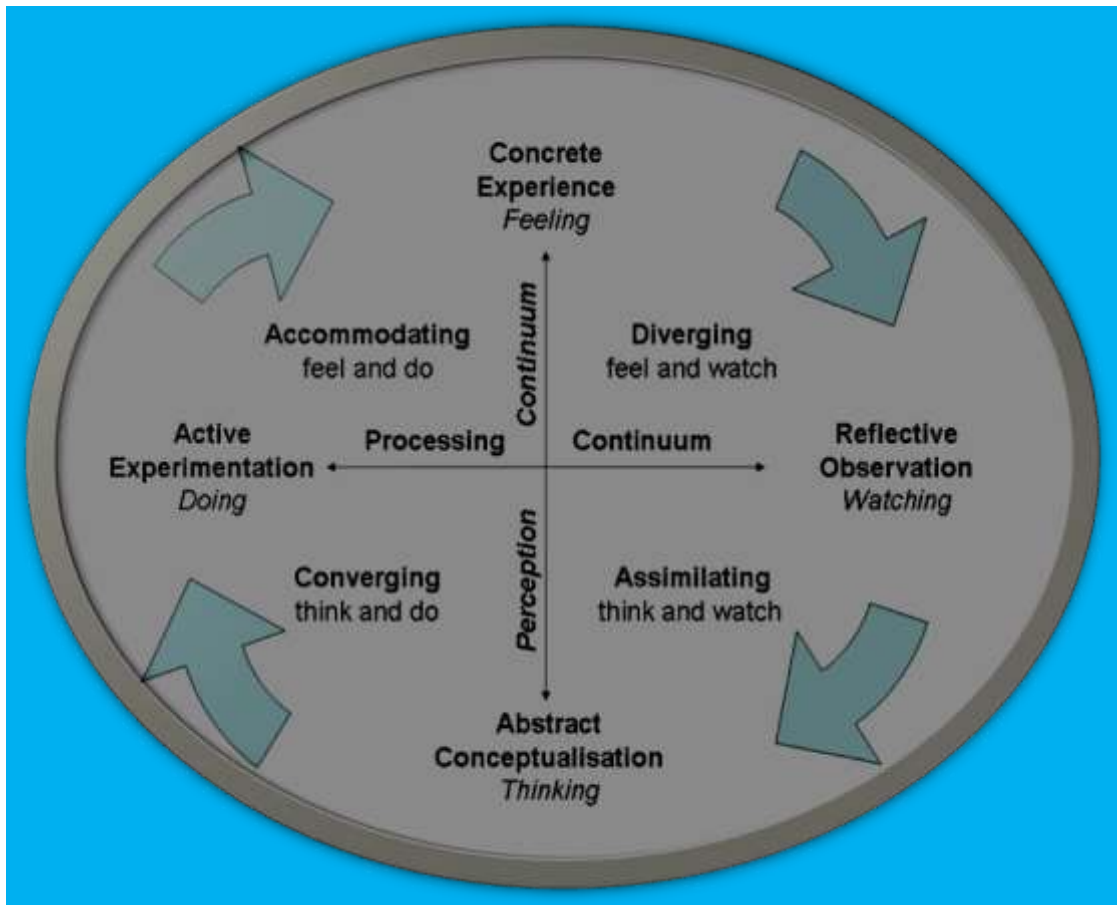
• Judgers/ Perceivers

- * Judgers: They set and follow agendas, look for closure even with imperfect data.
- * Perceivers: Those learners possessing this type of capability helps them to adjust according to the changing situations.

1.2.2 Learning Style Model by David Kolb

According to this model the preferences of students are classified on the basis of various parameters such as how a student grasp and internalize the information while learning. The styles of learning given by him are discussed as under.

FIGURE A: KOLB'S MODEL OF LEARNING STYLE



Source: Research into style of learning by David Kolb 2011 - N M Slater

- **Type 1 (concrete and reflective type of learners):** The most important feature of this learning style is “why”. In this type the learners respond well to how the study material is related to their interests, knowledge and the upcoming experiences. The instructor should act as motivator with these types of learners.
- **Type 2 (abstract/ reflective type of learners):** The most important attribute of this type of learning style is “What?” In this type of style the information is presented to the learner in systematic and rational way. The instructor should act as an expert in this type of learning style.
- **Type 3 (abstract/ active type of learners):** The most valuable quality of this type of learning type is “How?” In this type of style the learners act in response to having opportunities to seek by the process of trial –error method it helps the learner to allow them in the environment to work on the planned objectives. The teacher should act as a coach by giving giving guidance and providing feedback to the students.

- **Type 4 (concrete/ active):** The most important feature of this learning style is the question of *what if*. In this type the learners like using the course content in new situations to resolve real and practical problems. The teacher should give maximum freedom to the students to construct and discover things for themselves.

1.2.3 Learning Style Model by Felder-Silverman

According to this model the learners may be classified as under:-

- **Sensing learners** (realistic and actual concerned with evidences and processes) or **intuitive learners** (theoretical, inventive and are concerned with principles and significances).
- **Visual learners** (these type of learners prefer the presentation of material in the form of figures, diagrams and charts prefer visual representations) *or* **verbal learners** (these type of learners should have the learning material in the form of oral and written descriptions).
- **Inductive learners** (They prefer presentations that will follow the procedure from the specific to the general) or **deductive learners** (They prefer presentations that follow the procedure of going from the general to the specific).
- **Active learners** (They type of learners learn by discovering things out, and are interested in working with others) or **reflective learners** (They learn by thinking on things deeply and are interested in working lonely).
- **Sequential learners** (They follow the linear systematic approach and learn in small incremental steps) or **global learners** (They use the holistic approach and learn through the large dives).

1.2.4 Types of Styles of Learning According to the Learning Style Inventory Used in the Study

1. **Enactive Reproducing style:-** in this type of learning style emphasis is on the concrete experiences and is based on imitation and practice. It is based on the reproductive orientation.
2. **Enactive Constructive style: -** in this type of style main emphasis is given on the processing of enactive information.

3. **Figural Reproducing style:** - This type of learning style indicates that the learning occurs mainly through maps, charts, pictures, models, diagrams and photographs. It is reproduction oriented and is based on imitation and practice.
4. **Figural Constructive style:** - it emphasis on the figural experiences which will take to the conceptualization.
5. **Verbal Reproducing style:** - it is based on the information which is mainly given through written or spoken modes.
6. **Verbal Constructive style:** -The main emphasis is given to conceptualization which is based on reflective, abstractive and accommodative thinking.

Type first and second can be grouped together to form enactive style of learning and third and fourth may be clubbed together to form figural style of learning. First, third and fifth style are grouped together to form reproducing style of learning. While as second, fourth and sixth are grouped to make the constructive style of learning.

1.3 ACADEMIC ACHIEVEMENT

Academic achievement is playing a very significant role for determining the learning and the whole educational carrier of an individual. It has become one of the best goals which an individual has to achieve in the educational career of his life. In this present competitive era academic achievement has become a key for determining the future of a child. It is also a major goal, which every individual is expected to achieve in his field of life. Academic achievement is a key index by which an individual learns about his strengths and weakness, abilities and competencies which play an important role for developing career objectives. One of the most important outcomes of any educational set up is achievement of the students. Depending on the level of achievement, individuals are characterized as high achievers, average and low achievers. Taylor (1964) states that the value the student places depends upon his own sound effects of his academic achievement. In an educational institution the academic achievement is taken as any type of learning that is seen in the student's life. Academic achievement means the knowledge gained and the techniques developed by the pupils in the subjects taught in the schools. Hence academic achievement refers the achievement of students in the academic subjects. Academic achievement is a dynamic process. It plays a very significant and vital role in the attainment of harmonious development of child in all walks of life. Academic Achievement in

general refers to the degree of proficiency attained in some specific area, concerning some scholastic and academic work.

Academic achievement which is an important dimension of education and is considered output of education to which the students and teachers or the educational institution trying to reach towards the goals of learning. Academic achievement is most commonly assessed by taking examinations or continuous assessment but there is no general accord on how it is best tested or which aspect is more important — practical knowledge such as skills or declarative knowledge such as facts.

When the students find themselves secure, busy, and appreciated, they can focus on their academic goals of their life. Every good chartered educator makes sure that these needs are met. Character education is the base through which students can reach the academic achievement. It is not teaching the children to be good. It is teaching them to be their best of their level possible.

When a person gets very high grades in any course of his academic carrier, this is an example of academic achievement.

When a person gets admitted in a college or a university, this is also an example of academic achievement.

Crow and Crow (1956) achievement refers to the level by which student is getting benefit from the instructions received in the field of learning.

Academic Achievement is the result of learning, the extent to which the learners, teachers and the whole institution has achieved their goals of learning. This is evaluated either by examinations or continuous assessments and the goals may, vary from individual to individual.

According to **Webster's Dictionary (1990)** academic achievement of students is the performance of students in a course based on the plan studied in an organization of learning.

According to **Steinberg (1993)** academic achievement encompasses learner's talent and performance. It is a multidimensional and related to human growth and development such as cognitive, emotional, social and physical development.

Torres (1994) stated that academic achievement may be defined as the ability or the level of competence expressed in grades or marks based on wide sampling of pupils performance is usually measured by standardized tests.

Kerlinger (1995) Stated that academic achievement is a complicated process. It is the observation of those behaviors of the children which are connected with the

Mastery of learning of school task, reading Tests, reading words, doing arithmetic problems, drawing of diagrams etc.

According to **Oxford Dictionary of Advanced Learner (2000)** the meaning of Academic achievement is the output of the learning of students in a particular subject or in a group of several subjects combined by using his/her efforts and skills in a well-planned manner. Hence academic achievements may be defined as the quality and quantity of learning gained in a subject or group of various subjects after attending a group of institutions.

1.4 SIGNIFICANCE OF THE STUDY

Today the world is undergoing a change at every second. Along with the scientific and technological development, complexities of life are increasing every day. In order to meet one's psychological and physiological needs, one has to strive hard to adjust himself in the present competitive world. Academic achievement is the key instrument which helps the students in making better adjustments in life. Good academic achievement is the key to success in personal and professional life. It brings economic security and social respect. It makes a person globally competent individual. Academic Achievement depends on various cognitive and non-cognitive factors like, aptitude, achievement motivation, socio-economic conditions, attendance, personality traits and teaching learning methods. The way of learning is one of the factors that may influence the academic achievement of the learners. Every student has a unique type of learning style by which he or she learns the best. Some may learn best through lectures, some may learn by showing figures, some may learn by writing the learning material while as some may learn best by doing some work in any activity. The teacher should have the knowledge of all the learning styles and while teaching teacher has to take into consideration the learning styles of all the students in the class room.

Having the knowledge of different learning styles of the students and their strengths and weaknesses in these learning styles helps the educational planners to frame the course content accordingly and therefore helping the students in their learning and their active involvement in their learning process. Learning style is important because of various reasons; however, there are three fundamental ones. First of all, students learning styles will vary because every person in this world

differs from others naturally. Secondly, it provides the chance to teach by applying a variety of methods in an efficient way. Teaching by just one method unthinkingly will create a boring environment in the classroom; accordingly students will not get benefitted from the lesson taught in the classroom. Meanwhile, the learning and teaching will be just in terms and not in the world of reality. Thirdly, we can handle many things in learning process if we really recognize the groups we are called to, although, we may not be aware of every detail; however, being aware of our students learning styles, mental characters, emotional qualities and motivational differences will help us to have control on our lessons appropriately and according to the changing circumstances (McCarthy, 1982; Felder, Silverman, 1988; Coffield et al., 2004). Learning style plays an important role in the life of an individual. A person educated in an area having no relationship to his/her learning style may lack confidence and she/he may be less successful; s/he may as a result become frustrated. Knowledge of learning style also provides information to the student as to why she/he has learnt in a different way than others. It helps to control the process of learning. It is vital because one of the most important signals in learning is to learn to be autonomous, that is, for the individual to take responsibility for his/her own learning. Briefly, confidence in learning will consistently enhance when learners know how to learn.

Numerous studies have been conducted on student's individual differences in terms of learning styles and other variables. It is evident from the facts the research has been done in this field on the relationship between academic achievement and learning style but little research has been done on learning styles and academic achievement of secondary school students of Jammu district. Hence, it is noteworthy to apply the learning styles (Enactive, Figural Verbal, Reproducing and Constructive learning styles) effect on the academic achievement among secondary school students of Jammu district.

1.5 STATEMENT OF THE PROBLEM

On the basis of the above discussion the problem can be stated as under:

Understanding impact of learning style on academic achievement: An exploration in context of secondary school students.

1.6 DEFINITIONS OF THE KEY TERMS:

1.6.1 LEARNING STYLE:

It is the way in which one represents internally his experiences and processes and recalls knowledge or information. This style of learning can be measured through the scores obtained by the learners on the inventory of learning style which is developed by K.S Misra. This inventory attempts to measure six main learning styles namely-Enactive Reproducing, Enactive Constructive, Figural Reproducing, Figural Constructive, Verbal Reproducing and Verbal Constructive.

1.6.2 Academic achievement:

It can be defined as accomplishment or gain of a performance carried out successfully by an individual or group on the completion of an academic task. In the present study it refers to the percentage of aggregate marks obtained by a particular student of 9th class in first term examination respectively.

1.6.3 Secondary School

A secondary school is a school which provides secondary education, typically between the ages of 11-16, after primary school and before higher education.

1.7 OBJECTIVES OF THE STUDY:

The objectives of the study were written as under:

- 1). To study the impact of learning style on the academic achievement of the secondary school students.
- 2). To study the impact of learning style on the academic achievement of the secondary school students with reference to their.
 - 2.1. Enactive reproducing learning style.
 - 2.2. Enactive Constructive learning style.
 - 2.3. Figural reproducing learning style.
 - 2.4. Figural Constructive learning style.
 - 2.5. Verbal reproducing learning style.
 - 2.6. Verbal Constructive learning style.

- 3) To study the impact of learning style on the academic achievement of the secondary school students with reference to their
 - 3.1. Enactive learning style
 - 3.2. Figural learning style
 - 3.3. Verbal learning style
 - 3.4 Reproducing learning style
 - 3.5 Constructive learning style
- 4). To study the impact of learning style on the academic achievement of secondary school male students
- 5). To study the impact of learning style on the academic achievement of the secondary school male students with reference to their.
 - 5.1. Enactive reproducing learning style.
 - 5.2. Enactive Constructive learning style.
 - 5.3. Figural reproducing learning style.
 - 5.4. Figural Constructive learning style.
 - 5.5. Verbal reproducing learning style.
 - 5.6. Verbal Constructive learning style.
- 6) To study the impact of learning style on the academic achievement of the secondary school male students with reference to their
 - 6.1. Enactive learning style
 - 6.2. Figural learning style
 - 6.3. Verbal learning style
 - 6.4 Reproducing learning style
 - 6.5 Constructive learning style
- 7). To study the impact of learning style on the academic achievement of secondary school female students
- 8). To study the impact of learning style on the academic achievement of the secondary school female students with reference to their.
 - 8.1. Enactive reproducing learning style.
 - 8.2. Enactive Constructive learning style.
 - 8.3. Figural reproducing learning style.
 - 8.4 Figural Constructive learning style.
 - 8.5. Verbal reproducing learning style.
 - 8.6 Verbal Constructive learning style.

- 9) To study the impact of learning style on the academic achievement of the secondary school female students with reference to their
 - 9.1. Enactive learning style
 - 9.2. Figural learning style
 - 9.3. Verbal learning style
 - 9.4 Reproducing learning style
 - 9.5 Constructive learning style
- 10). To study the impact of learning style on the academic achievement of rural secondary school students
- 11). To study the impact of learning style on the academic achievement of the rural secondary school students with reference to their.
 - 11.1. Enactive reproducing learning style.
 - 11.2. Enactive Constructive learning style.
 - 11.3. Figural reproducing learning style.
 - 11.4. Figural Constructive learning style.
 - 11.5. Verbal reproducing learning style.
 - 11.6. Verbal Constructive learning style.
- 12) To study the impact of learning style on the academic achievement of the rural secondary school students with reference to their
 - 12.1. Enactive learning style
 - 12.2. Figural learning style
 - 12.3. Verbal learning style
 - 12.4 Reproducing learning style
 - 12.5 Constructive learning style
- 13). To study the impact of learning style on the academic achievement of urban secondary school students
- 14). To study the impact of learning style on the academic achievement of the urban secondary school students with reference to their.
 - 14.1. Enactive reproducing learning style.
 - 14.2. Enactive Constructive learning style.
 - 14.3. Figural reproducing learning style.
 - 14.4. Figural Constructive learning style.
 - 14.5. Verbal reproducing learning style.
 - 14.6. Verbal Constructive learning style.

- 15) To study the impact of learning style on the academic achievement of the urban secondary school male students with reference to their
- 15.1. Enactive learning style
 - 15.2. Figural learning style
 - 15.3. Verbal learning style
 - 15.4 Reproducing learning style
 - 15.5 Constructive learning style

1.8 HYPOTHESES OF THE STUDY:

In the light of the above objectives the hypotheses of the study can be formulated as under

- 1). There will be no significant impact of learning style on the academic achievement of the secondary school students.
- 2). There will no significant impact of learning style on the academic achievement of the secondary students with reference to their.
 - I. Enactive reproducing learning style.
 - II. Enactive Constructive learning style.
 - III. Figural reproducing learning style.
 - IV. Figural Constructive learning style.
 - V. Verbal reproducing learning style.
 - VI. Verbal Constructive learning style.
- 3). There will no significant impact of learning style on the academic achievement of the secondary school students with reference to their
 - I. Enactive style of learning
 - II. Figural style of learning
 - III. Verbal style of learning
 - IV. Reproducing style of learning
 - V. Constructive style of learning
- 4). There will be no significant impact of learning style on the academic achievement of the secondary school male students
- 5). There will no significant impact of learning style on the academic achievement of the secondary school male students with reference to their.
 - I. Enactive reproducing learning style.
 - II. Enactive Constructive learning style.

- III. Figural reproducing learning style.
 - IV. Figural Constructive learning style.
 - V. Verbal reproducing learning style.
 - VI. Verbal Constructive learning style.
- 6). There will no significant impact of learning style on the academic achievement of the secondary school male students with reference to their
- I. Enactive learning style
 - II. Figural learning style
 - III. Verbal learning style
 - IV. Reproducing learning style
 - V. Constructive learning style
- 7). There will be no significant impact of learning style on the academic achievement of the secondary school female students
- 8). There will no significant impact of learning style on the academic achievement of the secondary school female students with reference to their.
- I. Enactive reproducing learning style.
 - II. Enactive Constructive learning style.
 - III. Figural reproducing learning style.
 - IV. Figural Constructive learning style.
 - V. Verbal reproducing learning style.
 - VI. Verbal Constructive learning style.
- 9). There will no significant impact of learning style on the academic achievement of the secondary school female students with reference to their
- I. Enactive learning style
 - II. Figural learning style
 - III. Verbal learning style
 - IV. Reproducing learning style
 - V. Constructive learning style
- 10). There will be no significant impact of learning style on the academic achievement of the rural secondary school students
- 11). There will no significant impact of learning style on the academic achievement of the rural secondary school students with reference to their.
- I. Enactive reproducing learning style.
 - II. Enactive Constructive learning style.

III. Figural reproducing learning style.

IV. Figural Constructive learning style.

V. Verbal reproducing learning style.

VI. Verbal Constructive learning style.

12). There will no significant impact of learning style on the academic achievement of the rural secondary school students with reference to their

I. Enactive learning style

II. Figural learning style

III. Verbal learning style

IV. Reproducing learning style

V. Constructive learning style

13). There will be no significant impact of learning style on the academic achievement of the urban secondary school students

14). There will no significant impact of learning style on the academic achievement of the urban secondary school students with reference to their.

I. Enactive reproducing learning style.

II. Enactive Constructive learning style.

III. Figural reproducing learning style.

IV. Figural Constructive learning style.

V. Verbal reproducing learning style.

VI. Verbal Constructive learning style.

15). There will no significant impact of learning style on the academic achievement of the urban secondary school students with reference to their

I. Enactive learning style

II. Figural learning style

III. Verbal learning style

IV. Reproducing learning style

V Constructive learning style

1.9 DELIMITATIONS OF THE STUDY

The study is delimited in the following manner:

1. The study is delimited to only district Jammu.
2. The study is delimited to the IX class students only.
3. The present study is delimited to government schools only.
4. The sample for the present study consists of 245 students only
5. The investigation has been confined to 9 secondary schools of Jammu district