

Study of Learning and Thinking Styles In Relation To Their Anxiety Among Secondary School Students

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ABSTRACT

The concept of learning and thinking styles have been advocating that every learner or trainee has his unique style of thinking and learning which enables him to learn best. Therefore for making improvement in teaching learning process teacher needs to diagnose the styles of learning of his students and to prescribe those instructional treatments matching thinking and learning styles of students. Thinking Styles look at the way a candidate prefers to receive information via their senses, the way they interact with people and the way that they prefer to solve problems and handle tasks at work. Thinking Styles is a study of how and why Homo sapiens think and could be classified as interactive and reciprocal mental self government psychology. Thinking styles might provide a basis for tailoring the mode of presentation as well as the nature and degree of substantive structure to functional characteristics of learners, so as to develop, compensate for, or capitalize upon student characteristics for the optimization of subject matter learning. The students at Secondary level have different Learning Styles and Hemispheric Preferences. This should come to the mind of the teacher while teaching. Teachers should design their instructional methods to connect with all four learning styles, using various combinations of experience, reflection, conceptualization, and experimentation. It is hoped that the results of the present study will give teachers and trainers a template for designing more effective instruction. Research finding reveals that majority of the students have right hemispheric dominant style of learning and thinking. Significant difference was found in right hemispheric and whole hemispheric dominant learning & thinking style of urban and rural

students. To conclude it is essential to identify the styles of learning and thinking of children in order to facilitate the process of learning and teaching.

Keywords: Anxiety, Learning and Thinking Styles.

INTRODUCTION

Learning Style

The style is most pervasive phenomenon of the contemporary society. It may be observed to describe the grace of a gymnast or the game of a football team, the manner and cut of new fashion on the modeling catwalk, the approach used by a commercial company to organize itself, or even the way a person may think, learn, talk or teach. Learning styles are qualities in the behavior of individual learners that persist regardless of the teaching methods or content experienced. According to some it has specific implications and is different from cognitive style, personality style and affective style and to some others it is the umbrella term for cognitive style, Meta cognitive style (regulation and conception) and affective styles and use this term as synonymous of learning approach.

‘Learning style’ is a blanket term because different people may have different interpretations of the term. Nevertheless, it appears reasonable to view learning style as a broader concept than cognitive style. Further, it may also be noted that learning styles are not the abilities or personality traits but at the same time they may be viewed as manifestations of ability and personality in learning and instructional situations. The relationships of learning styles with intelligence and personality have been found to vary depending upon the type of tools of the learning style. Thus the notion of style has been consistently used to illustrate an individual’s quality, form, activity, or behaviour continued over time and has been nevertheless associated with individuality.

THINKING STYLES

Thinking Styles look at the way a candidate prefers to receive information via their senses, the way they interact with people and the way that they prefer to solve problems and handle tasks at work. Thinking Styles is a study of how and why Homo sapiens think and could be classified as interactive and reciprocal mental self government psychology. Its major objective is to show how

different thinking styles affect learning preferences and how individual abilities to learn should be recognized and respected.

Thinking styles are preferred ways of exploiting thinking abilities. The awareness, which is key to growth and development of developing countries, depends mainly on different types of thinking such as convergent/scientific thinking and divergent/creative thinking and their development. These consecutively depend on thinking styles of the individual learners. One may wrap up that understanding; improvement and application of variety of thinking styles of individuals go a long way in all round development of the country.

ANXIETY

According to Webster's Dictionary (1913) anxiety is defined as a concern or solicitude respecting something or event, future or uncertain, which disturbs the mind, and keeps it in a state of painful uneasiness and a state of restlessness and agitation with general indisposition and a distressing sense of oppression at the epigastria.

Education is about the preparation of unprepared minds. Preparation of mind as a process, thus involves enormous inputs and efforts on the parts of all stakeholders namely parents, teachers, peers and society. All these play a very significant role in the development of a child from his birth till death. The child learns a lot from all these in all stages of his life. But, this process of development is not an easy process. Youth today are living in an increasingly anxiety ridden atmosphere. They live in a world where nothing seems to be guaranteed with certainty and at the same time they are expected to perform at every front, the main being the academics. Anxiety is one of the most studied phenomena in psychology. It is normal human response to stress. The concept of anxiety is differentiated from fear as it is a normal human response to stress. Today anxiety is a common phenomenon of everyday life. It plays a crucial role in human life because all of us are victim of anxiety in different ways.

Anxiety is often referred to as a feeling of unease and fear that may be characterized by physical symptoms such as palpitations, sweating and feeling of stress. It is a non-specific, unpleasant feeling of apprehension, discomfort, and in some cases, dread and impending doom that is manifested physically by such symptoms as motor-tension, autonomic hyperactivity, or

hyper attentiveness. It is an uncomfortable emotional state associated with a perceived danger, feelings of powerlessness and prolonged tension in preparation for the expected danger.

Anxiety is some level of distress caused by a fear of some future state of affairs and a feeling of apprehension, uncertainty and fear without apparent stimulus, and associate with physiological changes. It is a generalized feeling of dread or apprehension that is not focused on or directed toward any particular object or event. It is also a debilitating condition of fear, which interferes with normal life functions. An uneasiness of mind, fearful concerns or interest in a non-specific threat or a fear of most things that give rise to feelings of uneasiness and distress about future uncertainty, apprehension and worry is an anxiety condition.

SIGNIFICANCE OF THE STUDY

Decades ago, teachers had the assumption that the quality of learning depended solely on the expertise of the information giver, the teacher. With this premise, greater emphasis was on the improvement of teachers and their knowledge of instructions: how to teach a course. Later on, this paradigm shifted to the assumption that learning depended on the student's frame of mind; thus focus was turned on the creation of a conducive learning environment and learning communities. Such environment gave the students opportunities to a) seek new knowledge and make new discoveries, b) master new skills for dynamism, c) ask questions so that they would improve, and d) perfect old skills needed for lifelong learning. Such environment also gives opportunities for students to explore the subject matter with the teacher. The teacher and the students become co-learners and collaborators in search of new knowledge; students are heard and they receive answers to their queries. Learners having different learning style preferences would behave differently in the way they perceive, interact, and respond to the learning environment. Since learners differ in their preferences to certain learning styles, it will be important for teachers to examine the variations in their students on the features of their learning styles, because the information about learner's preference can help teachers become more sensitive to the differences students bring to the classroom. Adjustments can then be made to accommodate the students' varied needs. Serious mismatches may occur between the learning styles of students in a class and the teaching style of the instructor. The concept of learning styles

will challenge teachers to rethink of their methods to improve students' academic achievement. Effective educational decisions and practices must derive from an understanding of the ways that individuals learn. Teachers should be made aware of the learning style patterns their students bring to the classroom. By understanding the connection between their methods of teaching and the ways their students learn, they can accumulate a general profile of their class and then orient their teaching to meet the needs of their students. Research has demonstrated that students are capable of mastering new skills if they are taught through instructional methods that complement their hemispheric preference. Several studies have found that students taught through methods that matched their hemispheric styles achieved statistically significant higher test scores than when they were taught through other teaching methods. The difference in Learning Styles and Preferences for the Hemisphere of the learners in any classroom necessitates a differentiated approach to instruction at all school levels and in all areas of learning. So the curricula, methods of teaching, human and material resources and other things in any scheme of education and institutional set up should be organized in a close tune with these individual differences.

A look at related literature reveals that the area of Thinking Styles and Learning Styles in relation to anxiety among secondary school students in Indian perspective as only a few studies could be located. Hence there is considerable scope to probe into the area of styles of thinking and learning of secondary school students in relation to anxiety. In view of the above, the need of undertaking the proposed study is vividly clear and quite justified.

OPERATIONAL DEFINITIONS OF KEY TERMS

The terms used in the statement are defined as under:

Thinking Style: It is dealing with peripheral issues and thinking about them that it is said to be thinking style

Learning Style: learning styles refers to individual capability and preferences that it affects How to understand, collect and process of teach

Anxiety: Anxiety is a combination of physiological over-arousal, tension and somatic symptoms, along with worry, dread, fear of failure, and catastrophizing, that occur before or during test situations.

Secondary School Students: The students of Classes 9th and 10th are considered as Secondary School Students.

OBJECTIVES OF THE STUDY:

- To study the styles of learning and thinking of urban students.
- To study the styles of learning and thinking of rural students.
- To compare the different styles of learning and thinking of Urban and rural students.
- To study the different styles of learning and thinking of male students.
- To study the different styles of learning and thinking of female students.
- To compare the different styles of learning and thinking of male and female students.
- To study the anxiety level of urban students.
- To study the anxiety level of rural students.
- To compare the anxiety level of rural and urban students.
- To study the anxiety level of male students.
- To study the anxiety level of female students.
- To compare the anxiety level of male and female students.
- To study the relationship between Learning and Thinking Styles and Anxiety among senior Secondary School Students.

HYPOTHESES OF THE STUDY:

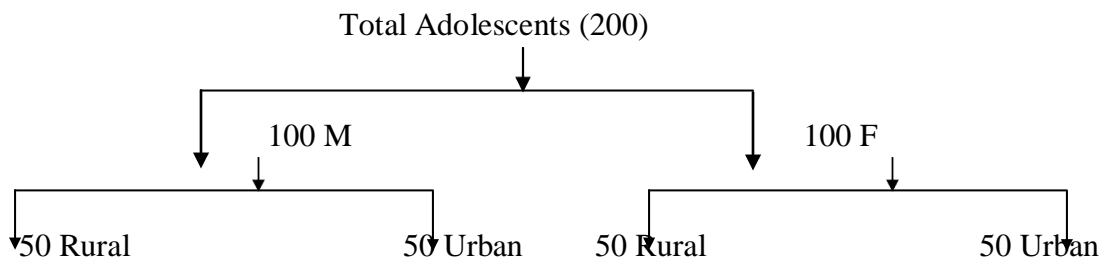
1. There is no significant difference between different styles of learning and thinking of Urban and rural students.
 - There is no significant difference between the different styles of learning and thinking of male and female students.
 - There is no significant difference in the Anxiety among rural and urban senior secondary school students.
 - There is no significant difference in the Anxiety among male and female senior secondary school students

- There is no significant relationship between Learning and Thinking style and Anxiety of Senior Secondary School Students

POPULATION AND SAMPLE OF THE STUDY

All the students studying in senior secondary schools of Haryana state constitute the population of the study for the present investigation. A sample refers to the sub-group of a large population under study from which inferences are drawn about the large population. The research requires data to be collected from the concerned categories of all subjects who form the population of the study. The sample for this study consisted of 200 students of senior secondary school students from Bahadurgarh, In this study stratified random sampling technique was used to select the sample. 200 students of class 10th and 11th were included in the present study. A random sample of 200 adolescents studying in standard 11th and 12th of ten schools affiliated to BSHE Bhiwani was taken in the present study. 100 male and 100 female, 100 rural and 100 urban students were included in the research.

Figure showing Sample break-Up



TOOLS:

The following tools have been used in the present study:

1. In the present study, the Indian version of the SOLAT test developed by Venkataraman (2011) was used to measure learning & thinking style of school students in terms of hemisphericity functions of their brain.
2. Hamilton Anxiety Rating Scale (HAM-A)

Objective 1 and 2: To study different styles of learning and thinking of Urban and rural students.

Table 1: Showing dominant style of learning and thinking

Area	Right		Left		Whole	
	N	%	N	%	N	%
Urban (100)	86	86%	11	11%	3	3%
Rural (100)	57	57%	26	26%	17	17%
Total (200)	143	71.5%	37	18.5%	20	10%

Objective 4 and 5: To Study the different styles of learning and thinking of male and female students.

Table 2: Showing dominant style of learning and thinking of Girls & Boys.

Gender	Right		Left		Whole	
	N	%	N	%	N	%
Girls (100)	71	71%	17	17%	12	12%
Boys (100)	72	72%	20	20%	8	8%
Total (200)	143	71.5%	37	18.5%	20	10%

It is inferred from the table 1 & 2 that 86% of Urban students and 57% students have right hemispheric dominant style of learning and thinking. Similarly 71% Girls and &72% boys have

right brain dominance. Hence majority of the students have right hemispheric dominant style of learning and thinking.

Objective 3: To compare the different styles of learning and thinking of Urban and rural students.

Hypothesis 1: There is no significant difference between different styles of learning and thinking of Urban and rural students.

Table 3: Showing comparison of the different styles of learning and thinking of Urban and rural students

Styles of Learning and Thinking	Gender	Mean	SD	T value	Diff. between means
Right	Urban	25.34	4.94	4.96	Sig
	Rural	21.25	6.59		
Left	Urban	16.77	4.55	0.41	Not Sig
	Rural	16.47	5.60		
Whole	Urban	5.83	5.28	4.46	Sig
	Rural	10.12	8.03		

df 198 at 0.05 level of significance = 1.97 From table 3, the obtained t values 4.96 & 4.46 are greater than table value 1.97 at 0.05 level of significance. Therefore significant difference was found in right hemispheric and whole hemispheric dominant learning & thinking style of urban and rural students. whereas t value 0.41 is less than 1.97 showing insignificant difference in left hemispheric learning thinking style of urban and rural students.

Objective 6: To compare the different styles of learning and thinking of male and female students.

Hypothesis 2: There is no significant difference between the different styles of learning and thinking of male and female students.

Table 4: Showing comparison of the different styles of learning and thinking of Girls and Boys.

Styles of Learning and Thinking	Gender	Mean	SD	T value	Diff. between means
Right	Girls	22.26	6.08	2.40	Sig
	Boys	24.33	6.10		
Left	Girls	15.29	5.03	3.81	Sig
	Boys	17.95	4.82		
Whole	Girls	10.01	7.07	4.21	Sig
	Boys	5.94	6.57		

df 198 at 0.05 level of significance = 1.97 From table 4 ,the obtained t values 2.40, 3.81 & 4.21 are greater than table value 1.97 at 0.05 level of significance .Therefore significant difference was found in right, left and whole hemispheric dominant learning & thinking style of Girls and Boys.

Hypothesis 3: There is no significant difference in the Anxiety among rural and urban senior secondary school students.

The means of Anxiety scores of rural and urban secondary school students along with number, SD and t-value are given in Table 5

Table 5 Means and Standard Deviation of Anxiety among Rural and Urban sr. secondary school students

Variable	Gender	N	Mean	SD	SED	Df	T Value	Sig

Anxiety	Rural	100	9.77	3.074	0.473	198	0.127	Not
	Urban	100	9.83	3.590				Sig.

Table 5 depicts that the calculated value of 't' for finding out the significance of the difference in the means of Anxiety of students coming from rural and urban area, for df 198, came out to be 0.127 which is below the table even at 0.05 level of significance. Hence, the hypothesis that "There will be no significant difference in the Anxiety among rural and urban senior secondary school students" is accepted. However, students coming from urban area have slightly higher mean of anxiety score (9.83) than their counterparts coming from rural area (9.77) but this difference is not significant statistically.

Hypothesis 4: There is no significant difference in the Anxiety among boys and girls senior secondary school students.

The means of Anxiety scores of boys and girls secondary school students along with number, SD and t-value are given in Table 6 Means and Standard Deviation of Anxiety among boys and girls secondary school students

Variable	Gender	N	Mean	SD	SED	Df	T Value	Sig
Anxiety	Boys	100	10.47	3.073	0.463	198	2.894	Sig
	Girls	100	9.13	3.463				

Table 6 depicts that the calculated value of 't' for finding out the significance of the difference in the means of anxiety of boys and girls Sr. secondary school students for df 198, came out to be 2.894 which is higher the table even at 0.01 level of significance. Hence, the hypothesis that "There will be no significant difference in the anxiety among boys and girls sr. secondary school students" is rejected. However, boys students have higher mean of anxiety score (10.47) than their counterparts coming from girls students (9.13), this difference is significant statistically. So, anxiety of secondary school boys students higher than girls secondary school students.

Hypothesis 5: There is no significant relationship between Learning and Thinking style and Anxiety of Senior Secondary School Students

Table 7 Relationship between Learning and Thinking style and Anxiety of Senior Secondary School Students

Variable	Mean	SD	R	Sig/Non Sig
Learning and Thinking Style	22.38	5.13	0.12	NS
Anxiety	9.24	3.15		

Table 7 depicts that the calculated value of 'r' for relationship of Learning and Thinking Style and anxiety of Sr. secondary school students for df 198, came out to be 0.12 which is not significant at 0.01 level of significance. Hence, the hypothesis that "There is no significant relationship of Learning and Thinking Style and anxiety of Sr. secondary school students" is accepted.

FINDINGS RELATED TO DIFFERENT STYLES OF LEARNING AND THINKING:

Research finding reveals that majority of the students have right hemispheric dominant style of learning and thinking. Significant difference was found in right hemispheric and whole hemispheric dominant learning & thinking style of urban and rural students .Insignificant difference was found in left hemispheric learning thinking style of urban and rural students. Significant difference was found in right, left and whole hemispheric dominant learning & thinking style of Girls and Boys.

FINDINGS RELATED TO ANXIETY:

Table 5 depicts that the calculated value of 't' for finding out the significance of the difference in the means of Anxiety of students coming from rural and urban area, for df 198, came out to be 0.127 which is below the table even at 0.05 level of significance. Hence, the hypothesis that "There will be no significant difference in the Anxiety among rural and urban senior secondary school students" is accepted. However, students coming from urban area have slightly higher mean of anxiety score (9.83) than their counterparts coming from rural area (9.77) but this difference is not significant statistically. Table 6 depicts that the calculated value of 't' for finding out the significance of the difference in the means of anxiety of boys and girls Sr.

secondary school students for df 198, came out to be 2.894 which is higher the table even at 0.01 level of significance. Hence, the hypothesis that “There will be no significant difference in the anxiety among boys and girls sr. secondary school students” is rejected. However, boys students have higher mean of anxiety score (10.47) than their counterparts coming from girls students (9.13), this difference is significant statistically. So, anxiety of secondary school boys students higher than girls secondary school students.

Finding related to Relationship between Learning and Thinking style and Anxiety of Senior Secondary School Students

Table 7 depicts that the calculated value of ‘r’ for relationship of Learning and Thinking Style and anxiety of Sr. secondary school students for df 198, came out to be 0.12 which is not significant at 0.01 level of significance. Hence, the hypothesis that “There is no significant relationship of Learning and Thinking Style and anxiety of Sr. secondary school students” is accepted.

CONCLUSION:

To conclude it is essential to identify the styles of learning and thinking of children in order to facilitate the process of learning and teaching. Since the focus is on child centered pedagogy giving primacy to the child’s experiences, voices, thoughts and participation in learning which the National Curriculum Framework (2005) reiterates in its chapter on ‘Learning and Knowledge’, it becomes necessary to change our approach to teaching. In fact, knowledge of the child’s information processing styles would enhance teaching and make the exercise fruitful. The teaching techniques in the schools can be undertaken in consonance with the students’ style of learning and thinking. The difference in Learning Styles and Preferences for the Hemisphere of the learners in any classroom necessitates a differentiated approach to instruction at all school levels and in all areas of learning. So the curricula, methods of teaching, human and material resources and other things in any scheme of education and institutional set up should be organized in a close tune with these individual differences. The students at Secondary level have different Learning Styles and Hemispheric Preferences. This should come to the mind of the teacher while teaching. Teachers should design their instructional methods to connect with all four learning styles, using various combinations of experience, reflection, conceptualization, and

experimentation. It is hoped that the results of the present study will give teachers and trainers a template for designing more effective instruction.

EDUCATIONAL IMPLICATIONS:

The finding of the present study revealed that students learned by left hemisphere had slightly higher academic achievement in comparison to students learned by right hemisphere. It is considered that no one is totally left-brained or right-brained however, probably everyone has a dominant side of the brain. Left brained children have analytical thinking. They always want to know the rules and follow them. They take in information through analysis, observation and thinking. Their language abilities are so refined and also good at processing symbols and mathematical formulas. Right brained ones use mostly their feelings about something to decide if it is true or not. Their minds move rapidly from one thought to another and this causes difficulties in finishing their assignments. They are holistic, creative, imaginative & visual learners and singing, music, art, writing, designing, anything based on creativity are easy for them. They view their opinions through their own personal experiences and backgrounds. The reason responsible for poor academic achievement of right brained school students may be the left-brain strategies which are most often used in classrooms by left brained teachers, who themselves love order, sequence and planning which results in their academic achievement. Right brained learners do not always get the rewards or understanding of a different way to process information and feel inadequate. To solve this problem teacher should find out the dominant part of their students' brains and use the appropriate classroom techniques, methods and tools according to them only then better and greater learning can be accomplished. Discussions may be arranged on general problems, world affairs from the reading of daily newspapers and magazines. Games based on verbal materials, numerical, events and meditation can be encouraged after class hours in order to activate the preferred dominant style of learning and thinking style among students. The students at Secondary level have different Learning Styles and Hemispheric Preferences. This should come to the mind of the teacher while teaching. Teachers should design their instructional methods to connect with all four learning styles, using various combinations of experience, reflection, conceptualization, and experimentation. It is

hoped that the results of the present study will give teachers and trainers a template for designing more effective instruction.

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