International Journal of Open Publication and Exploration (IJOPE), ISSN: ISSN: 3006-2853
Volume 6, Issue 1, January-June, 2018, Available online at: https://ijope.com

A Study of Learning-Thinking Style of Secondary School Students in Relationship with Academic Achievement

Goutam Mandal

Assistant Professor - Artyee College of Education, West Bengal, India
Research Scholar - Pt. Ravishankar Shukla University, Chhattisgarh, India

ABSTRACT

Styles depend on a person's cerebral dominance over his or her own style of learning and different ways of thinking in information retention and processing. This study sought to find out the relationship and significance of differences between academic achievement and learning-thinking styles of secondary school students. The study was limited to students in the 10th grade. The objective of the present study was to see if there is a correlation between academic achievement and learning-thought patterns among secondary school students. The normative survey method was applied to conduct the study. The population for the study includes secondary school students from different regions. The mean and Pearson's product moment correlation ('r') are statistical techniques that help in the analysis and interpretation of results. The collected data were analyzed and interpreted on the basis of assumptions. It was found that learning-thinking styles and academic achievement of secondary school students are positively and significantly related to each other. High academic achievement students are good for teaching. It can be said that academic achievement is a factor that influences the learning-thinking style of secondary school students. It can also be concluded that male and female secondary school students do not differ in terms of their academic achievement whereas they do differ in terms of their learning-thinking style.

Keywords: Education, School, Academic, Achievement, Learning, Study

INTRODUCTION

"Styles depend on a person's cerebral dominance in his or her own learning and thinking styles in retaining and processing different modes of information. The style indicates the hemi-sphericity function of the brain and is based on the student's choice of learning technique and information processing brain area. (Venkataraman 1990). style rather than power. These are ways of manipulating the intellect that the person is comfortable with. Thinking learning style is the important level of achievement and we ignore them to identify the previous and appropriate level of thinking style. It is most important for teachers to focus their attention on the students' preferred style of thinking before giving them the content. If they fail to do so, the consequences can be serious, as teachers may tend to distract the minds of the students. Since the teaching methods adopted by teachers often reflect their personal thinking.

Teachers are only benefiting and rewarding like-minded students. Since any subject can be taught in any way that is compatible with any method, students will look for learning activities that are compatible with their own preferred style, with both teachers and students employing styles of their choice that may or may not match.

Therefore, it is important for teachers to know students' preferred styles, so that teachers can capitalize on students' learning opportunities. Style, like power, is not formed by birth. They develop in part because of environmental conditions and the way children are raised by their parents and teachers. Some individuals may have one preferred style at one stage and another preferred style at another stage.

The style is not fixed, but changeable. We need to recognize our students and their own preferred styles. Attempting to understand learning and thinking styles and learning to use them flexibly requires identifying a person's preferred learning and thinking styles. Research tools are readily available to identify the preferred learning styles of individuals and teachers must ultimately come forward to understand and identify the learning and thinking patterns of students. This direct approach with the help of research tool will help the students to understand and evaluate the types of learning in terms of their preferred style to develop intelligence and creativity. 'Tools' are therefore very important for assessing students' preferred styles of learning and thinking. The three different styles are learning style, cognitive style and thinking style. While these styles are different, there is one thing in common; they use the person, the preferred way of processing information, and their capabilities. Style is not power. The difference in the thinking style of the individual paves the way

for the formation of the theory of thinking style. Thinking style is the preferred way of conducting our thoughts and our activities. A learning style is how you most efficiently (and naturally) absorb information.

A THINKING STYLE IN PROCESS

Linier

Linear thinkers prefer a very structured approach to learning. If a learning process involves progression (Step A, Step B, Step C, etc.) linear thinkers will be more comfortable starting Step B right after the end of Step A. Mathematics and accounting are considered linear subjects because they involve a process-based representation of information.

Global

Global thinkers (or "strategic thinkers") are more comfortable with new information if they can put it in context with the big picture. They tend to be impatient with linear topics and linear-based instruction - they prefer access to all the information (early on) so that they can relate it to their overall goals.

Of course, it is almost impossible for a person to have only one learning style, or to be strictly a linear or world thinker, and still be able to work adequately in our complex world. Most of us tend to incorporate a wide variety of styles to complete a task. For example, when deciding how much to tip a waiter or waitress, you must use linear skills (to calculate the percentage of the tip) and global skills (to judge the quality of service and the amount of money needed to make additional purchases that day).

REVIEW OF LITERATURE

Elena L.Grigorenko, Robert J. Sternberg (1997) "Style thinking, ability and academic performance" Knowledge- and personality-centered approaches generally imply that styles are either- or constructs (a person can be either field-independent, or field-dependent, but not both). In these approaches, styles are consistent across different tasks and situations, and may vary little through training over the course of a lifetime. Cognitive and personality styles are often viewed as structures, where the focus is placed on stability over time e.g., styles are "given" in training or educational setting (Riding & Cheema, 1991). Consciousness- and personality-centered theories also typically have an attitude of built-in invalidity that presupposes some style.

F Cano-Garcia, EH Hughes (2000) conducted a study on "Learning and Thinking Styles: An Analysis of Their Correlation and Impact on Academic Achievement" and found that the academic achievement of students is related to the thinking style of students. Students who prefer to work independently (internal) who do not enjoy creating, formulating and planning to solve problems (legal in a negative sense) and who adhere to existing rules and procedures (executive) had higher educational qualifications.

Robert J. Sternberg, Li-Fang Zhang (2001) "Perspectives on Thinking, Learning, and Cognitive Style" Traditionally, many psychologists and educators believe that human successes and failures are mainly attributable to individual differences in ability. However, over the past few decades, investigators have been studying the role of thinking, learning, and cognitive styles in performance with both academic and non-academic settings. Although these three types of styles can be seen as historically overlapping, they have been conceptualized in different ways.

Li-Fang Zhang (2002) "Thinking styles: their relationship with modes of thinking and academic performance" This research aims to explore the nature of thought styles described in the theory of mental self-governance. Two hundred and twelve U.S. university students responded to the Thinking Style Inventory and learning and thinking styles. The results of the convergent statistical analysis approach indicate that thought styles and thought patterns share some common variations in the data. It was clear that more creativity-producing and more complex thought styles were significantly related to a holistic way of thinking, and more norm-consistent and more simplistic ways of thinking were significantly related to analytical modes of thinking. These results have been discussed in terms of practical implications for educators.

"Mark Mason 1 (2007)" "Critical Thinking and Learning" "This paper introduces some of the controversies in the field of critical thinking by drawing a distinction between thinkers such as Siegel, Ennis, Paul, McPake, and Martin, and some of the questions arising from these." Does debate rationality transcend specific cultures, or are there different kinds of thinking, different styles of reasoning? What is the relationship between critical thinking and learning? In what ways does the ethical domain overlap with these largely cognitive and educational issues? The paper ends by showing how Peters, Evers, Chanand Yan, Ryan and Louis.

Springer Netherlands (2009) "Process-based instruction in learning and thinking techniques" had learning effects greater than the effects of an early version of the program implemented with students at an open university. These results support the importance of process-based instructional models. Combining a thorough diagnosis of individual learning styles with individually tailored instructional systems has become a powerful way to enable students to shed light on their learning and create mental models of their learning.

Objectives

1. To study the relationship between academic achievement and learning-thinking styles of secondary school students.
2. To study the relationship between academic achievement and learning-thinking styles of male secondary school students.
3. To study the relationship between academic achievement and the learning-thinking style of female secondary school students.
4. To find out the significance of the difference between the academic achievement of male and female secondary school students.
5. To find out the significance of the difference between the learning-thinking styles of male and female secondary school students.

HYPOTHESIS

1. There is no significant relationship between the academic achievement and learning thinking of secondary school students.
2. There is no significant relationship between academic achievement and learning thinking in male secondary school students.
3. There is no significant relationship between academic achievement and female secondary school students' learning thinking.
4. There is no significant correlation between the academic achievement of male and female secondary school students.
5. There is no significant relationship between the learning thinking of male and female secondary school students.

DESIGN OF THE STUDY

For the present study, normative survey methods were applied to find out the academic achievement and learning-thought patterns of secondary school students. The sample of this study consisted of 140 students - 70 boys and 70 girls of the 10th grade.

Table No.01: Selected school

SL. NO.	NAME OF THE SCHOOL	TOTAL STUDENT IN 10^{TH} CLASS	STUDENT INCLIDE IN SAMPLE
1	KRISHNANAGER .M.N HIGH SCHOOL	120	46
2	HERIA SIVAPRASAD INSTITUTE	180	47
3	AJAYA ANNADA VIDYAPITH	100	48

Investigators made achievement test and D.Venkataraman's Style of Learning and Thinking were used for collecting data. Pearson's Product Moment Correlation is used for analyzing and interpreting the data

Table No. 02: Correlation between Academic Achievement (X) and Learning in Thinking Style (Y) of Secondary School Students

VARIABLE	(X)	(Y)	LEVEL OF SIGNIFICANCE
(X)	1.00	0.693	POSITIVE
(Y)	0.693	1.00	

It is observed from the table 02 that the computed value of co-efficient of correlation between academic achievement and learning-thinking style of secondary school students is 0.693 which is positive in nature that indicates a positive correlation. Hence, the null hypothesis of no significant correlation between academic achievement and learning-thinking style of secondary school students is rejected. Now, it can be interpreted that academic achievement and learning-thinking style are correlated with each other.

Table No. 03: Correlation between Academic Achievement (X) and Learning –Thinking Style of Male Student (Y1)

VARIABLE	(X)	(Y)	LEVEL OF SIGNIFICANCE
(X)	1.00	0.730	POSITIVE
(Y1)	0.730	1.00	

It is observed from the table 03 that the computed value of co-efficient of correlation between academic achievement and learning-thinking style of secondary school students is 0.730 which is positive in nature that indicates a positive correlation. Hence, the null hypothesis of no significant correlation between academic achievement and learning-thinking style of Male students is rejected. Now, it can be interpreted that academic achievement and learning-thinking style are correlated with each other.

Table No. 04: Correlation between Academic Achievement (X) and Learning –Thinking Style of Male Student (Y2)

VARIABLE	(X)	(Y)	LEVEL OF SIGNIFICANCE
(X)	1.00	0.81	POSITIVELY SIGNIFICANT
(Y2)	0.81	1.00	

It is observed from the table 04 that the computed value of co-efficient of correlation between academic achievement and learning-thinking style of secondary school students is 0.81 which is positive in nature that indicates a positive correlation. Hence, the null hypothesis of no significant correlation between academic achievement and learning-thinking style of male students is rejected. Now, it can be interpreted that academic achievement and learning-thinking style are correlated with each other.

Table No. 05: Significance of different between learning-thinking style of Male and Female Secondary School Student

GROUPS	MEAN	S.D.	N	CRITICAL VALUE	LEVEL OF SIGNIFICANCE
MALE	1.50	0.56	70	4.10	0.01
FEMALE	2.65	1.70			

The above table shows that calculated critical ration is more than the table value at 0.01 level of significance. It means that there exists a significant difference between academic achievement of male and female secondary school students. Hence the earlier formulated null hypothesis is rejected.

Significance of different between learning-thinking style of Male and Female student

Table No. 06: Significance of different between learning-thinking style of Male and Female Secondary school student

GROUPS	MEAN	S.D.	N	CRITICAL VALUE	LEVEL OF SIGNIFICANCE
MALE	14.80	2.60	70	3.80	0.01
FEMALE	13.40	2.01			

The above table shows that calculated critical ration is more than the table value at 0.01 level of significance. It means that there exists a significant difference between academic achievement of male and female secondary school students. Hence the earlier formulated null hypothesis is rejected.

FINDINGS

It has been found that significant relationship exists between academic achievement and learning-thinking style of secondary school students.

It has been found that significant relationship exists between academic achievement and Learning-thinking styles of male secondary school students.

It was found that significant relationship exists between academic achievement and learning-thinking style of female secondary school students.

It was found that there is a significant difference between the academic achievement of male and female secondary school students.
It was found that there is a significant difference between the academic achievement of male and female secondary school students.

It was found that there are significant differences in learning-thinking styles of male and female secondary school students.

CONCLUTION

According to the analysis and interpretation, it can be concluded that learning-thinking style and academic achievement of secondary school students are positively and significantly related to each other. Students with high academic achievement are good for teaching. It can be said that academic achievement is a factor that affects the learning-thinking style of secondary school students. It can also be concluded that male and female secondary school students do not differ in their academic achievement whereas they differ in their learning-thinking style.

EDUCATION IMPLICATIONS

No study can be said to be complete, especially in the behavioral sciences. The present study adequately dealt with academic achievement and learning-thin The findings of the study have potential importance to educational secondary school students, teacher educators and policy makers concerned with the field of education. An implication of the present conclusion for teacher educators and policy makers is that they should design their curricula, syllabi, textbooks, teaching methods, etc. in such a way that they can harness their strengths in the right direction. So developing academic achievement is most important for a student teacher to become a perfect teacher.

Achievement is the level of learning and achievement in a particular subject area in terms of knowledge, understanding, skills and application. The main focus of the educational process is to improve student performance or learning. Learning outcomes of students are measured by their achievement or performance. Performance assessment is the process of measuring students' terminal behavior at the end of instruction. The teacher's job is to measure whether students have mastered material concepts on an achievement basis before proceeding with instruction that appropriately organizes these concepts for learning principles. Achievement is the end product of instruction usually verbal performance.

REFERENCES

[1]. Appleton, Ken and Asoko, Hilary (1996). A Case Study of a Teachers' Progress Toward Using a Constructivist View of Learning to Inform Teaching in Elementary science.
[2]. Banet, E., Nunez, F. (1997), "Teaching and learning about human nutrition: a constructivist approach", International Journal of Science Education,
[3]. Beasley, lori A. (1996) Autonomy in a constructivist classroom.
[4]. Caine and caine, (1991) developed 12 principles that apply what is known about the function of the brain to teaching and learning.