

AN EXPERIMENTAL STUDY ON THE INFLUENCE OF VISUAL LEARNER'S LEARNING STRATEGIES AND THE ACADEMIC ACHIEVEMENT OF VI STANDARD STUDENTS

P. Sophia Mesalina

*Assistant Professor in Education,
Thiagarajar College of Preceptors, Madurai, Tamil Nadu, India*

Abstract

A Research paper on the influence of Learning style preferences and their academic achievement of VIth standard students in Madurai. 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. Academic achievement is affected by various cognitive and non- cognitive factors; learning may be one of the factors that affect the academic achievement of an individual; 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. This study focuses on the important psychological variables like visual learner's learning style and academic achievement. It examines the impact of visual learner's learning style on the academic achievement of secondary students with reference to their status in the academic achievement. In the present study VI std. Students (40) were selected randomly. By using the standardised learning style inventory by J. A Beat rice, the visual learners are identified and selected as sample for this study. Experimental method has been used for this research. Sample includes visual learner of VI grade students. The statistical technique will be mean, percentage analysis and pair test.

Learning style is an individual's unique approach to learning based on strengths, weakness and preferences. As a teacher educator, the investigator try to investigate about the learning style of secondary school students and check its relationship with their academic achievement. The result of the study revealed that there is significant difference between the pre-test and post – test. It revealed that there is the significant impact of learning style on the Academic achievement of both higher achiever and slow learners in the selected sample. The teachers should blend their teaching with learning approaches in an effective way to make their student's learning better.

Key Words: *Influence, Visual Learner, Learning strategies, Academic Achievement.*

Today the world is undergoing a change at every second. Along with the scientific and technological development, complexities of life are increasing every day. Academic achievement is the key instrument which helps the students in making better adjustment 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. 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 s/he learns the best. Some may learn best through lectures; some may learn by showing figures; some may learn by writing the learning material while some may learn best by doing some work in any activity. The teacher should have

the knowledge of all the learning styles and has to take into consideration the learning styles of all the students in the class room.

Statement of the Problem

To what extent visual learner's learning strategies influence their academic achievement?

Objectives

1. To identify the learning style preferences among students and the visual learners.
2. To find out the difference between the higher achiever and slow learners in their academic achievement after the training in visual learner's learning style strategies
3. To find out the difference between pre-test and post-test of the visual learners after the practice with their own visual learner's strategies.
4. Make appropriate recommendations and strategies for visual learners and teachers based on the findings of the study.

Hypotheses

1. There will be significant difference between higher achiever and slow learner of secondary level students in their academic achievement after the training with visual learner strategies.
2. There will not be significant difference between higher achiever and slow learner of secondary level students in their academic achievement after the training with visual learner strategies.
3. There is the significant difference between the pre-test and post-test marks of the single group of visual learners.
4. There is no significant difference between the pre-test and post-test marks of the visual learners.

Operational Definition

Academic Achievement

It refers to the level of schooling we have successfully completed and the ability to attain success in our studies.

Learning Style Preference

It is an individual unique approach based on strength and preferences naturally.

Secondary School Students

From VI standard students who are studying in higher secondary school

Higher Achiever

Those who were consistently score the higher rank in the class.

Slow Learner

Those who were consistently score the least rank in the class.

Need and Significance

This study is aimed at assisting teachers and educational researchers to understand the various learning styles favoured by the learners. In addition, the researcher hopes that to gather enough information to help instructors to recognise the important relationship between learning style preferences and academic achievement.

Why does the teacher incorporate learning style in her teaching? Active learning is possible when the teacher engages their students with multiple learning style approach. For this, effective implications on the teaching behaviour, the teacher might sets or check their student's academic achievement to the preference of learning style positively.

As a teacher educator, the investigator interested to teach her student teacher about this research findings and ensure their teaching more rewarding and this will help the learners to discover their own learning style that will develop successful and lifelong learners. The teacher should have the knowledge of all the learning styles and while teaching the teacher has to take in to consideration the learning styles of all the students in the class room.

Sample of the Study

Purposive sampling method was used to select the samples. 17 students from VIth standard are the sample. They come under the strata as visual learners.

Design of the Study

Pre Experimental – one group – Pre-test – post-test design. The single group is pre - tested exposed to a treatment X and post tested O. The research will begin with all 17 students by taking a pre-test in August, in Science. No treatment will be administered. Visual learner group will be provided the environment by the teacher which suits their own learning style preferences. J.A. Beatrice learning style inventory will be used for identifying the student's learning style preferences. The visual learners are advised to follow the strategies specifically which suits their individuality.

Instrumentation

The investigator employed Learning style Inventory by J. A. Beatrice. It has 14 statements with three choices of answers which indicate the visual, auditory and kinesthetic learners. This is the standardized inventory for assessing the learning style. The scores were added in an orderly manner as per the different learning styles of the students. However the researcher collected marks of the students from the result register of the concerned school.

Scoring Procedure

There are three choices for each question. Each one indicates their learning style preferences as (V) for visual learners, (A) for Auditory learners and (K) for Kinesthetic

learners. According to their choice, they will be categorized as visual, Auditory and kinesthetic learner.

Recommended Actions for the Visual Learners

1. Use neatly organised or typed study material to learn.
2. Sit away from visual attractive ie colourful places.
3. Use note pads, Post-its, to-do lists and other form of reminders.
4. Use underlining, highlighting in different colours, visual encoding, symbols, flow charts, graphs or pictures, charts, Maps, filmstrips, notes and flash cards.
5. Practice visualising or picturing the words or concepts
6. Write out everything for frequent and quick visual review.
7. Develop written and pictorial outlines of responses before answering essay questions.
8. Allow sufficient time for planning and recording thoughts before learning.
9. Reconstruct the images in different ways - try different spatial arrangements.
10. Follow clustering strategies to break your concepts into small.
11. Practice the students with the provided environment in the class room itself.

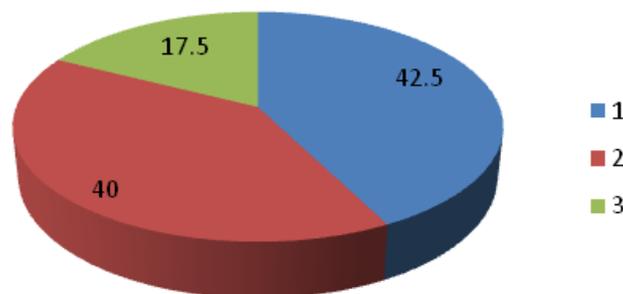
Experimentation

17 students were identified as visual learner. These students are advised to follow the above strategies while they are studying the lessons in science subject again before their post-test.

Data Analysis

The pre -test marks has been compared to the post-test mark of the visual learners. The “t” test has been engaged to find out the difference between pre-test and post-test. There is the significant difference between the Pre-test and post-test mark of the visual learners. The percentage analysis help us to find out difference between the higher achiever and slow learners and their mean value shows their differences in their academic achievement.

Pie chart shows that the learning style preferences among the students.



1. Visual learners
2. Auditory learners
3. Kinesthetic learners

Visual learners are more than the other learners in number. It infer that naturally visual perceptions are faster than the other sense.

Table 1: Significant Difference between the Pre-test and Post-test Results of the Visual Learner in their Academic Achievement

Test	No. of participants	Mean value	S.D	Calculated t value	Table value At 5% level	Remarks at 5% level of significance
Pre test	17	76.4	17.55	9.040	1.96	S
Post test	17	84.0	43			

The above calculated "t" value 9.040 is much greater than the table value 1.96 as well as 2.58, the critical values required to reach 5% and 1% levels of significance respectively. Thus, we may safely conclude that the difference between the means of two samples cannot be attributed to a chance factor. This difference is quite trust worthy and dependable to say that the visual learner's strategies are more effective and the training has been the successful one.

Table 2 Shows that the Difference between the Academic Performance of Higher Achiever and Slow Learner

Mean value	Higher achiever	Slow learner
Mean value(pre-test)	85.8%	79%
Mean value (post-test)	99.3%	85.8%
Mean value (Global)	76.4% (pre-test)	84% (post-test)
Difference (pre & post)	8.4%	-
Difference (higher & slow learner)	13.5%	6.8%

The above table reveals that the higher achievers are improved much better than the slow learners. Their increasing percentage is 14% as double as slow learners 7%. From that we can infer that higher achievers are much benefited by this training strategy because of their fast grasping power and good memory. Slow learners are also improved by these strategies. They will be achieve as equal as higher achiever if we increase their duration of their training.

Findings and Suggestion

1. There is the significant difference between the pre-test and post test marks of the students. It ensures that the impact visual learning style strategies influences both high achievers and slow learners in their academic achievement.
2. There is the significant difference between the higher achiever and slow learner's academic achievement by their application of visual learner's learning style strategies.
3. Each student should identify their own learning style and follow the strategies to learn well. By that, they can easily achieve in this Education field.

4. Every teacher should find out their student's learning style preferences and incorporate that in their teaching.

Educational Implications

1. The head of the institution and the teachers should identify their student's unique learning style and provide the environment for better and easy learning.
2. The evaluation pattern should be designed to check the student's understanding and application level of their subject.
3. Learning style preferences and its strategies promotes easy learning and quick understanding which leads the students to be the skilled one in any field.

Conclusion

This study will yield some important insights in to learning style preferences among high school students. Each individual has a unique way of learning and every one learns by the style which suits him/her best and accordingly the achievement will be higher. The Management and school administrators need to provide various learning materials which can bring diversity in class room by employing visual, auditory and kinesthetic materials such as use of technology and student's project writing.

References

1. Begalane, E.T. "Principles who faced obstacles to learning style instruction." *NASSP Bulletin*, vol. 85, no. 627, 2001, pp. 79-84.
2. Best, J.W. and Kahn, J.V. *Research in Education*, Pearson, 2005.
3. Felder, R.M. and Henriques, E.R. "Learning and Teaching styles in Foreign and second language Education." *Foreign Learning Annuals*, vol. 28, no. 1, 1995, pp.21-31.
4. Verma, B.P. "Relationship between Learning style and achievement Motivation." *Psycho-Lingua*, vol. 21, no. 2, 1991, pp. 73-78.