

Learning Styles Preferences of Secondary School Students in Relation to Their Achievement Motivation

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Abstract:

Individual learning style preference is the key to academic success .Learning styles provide a sound bases for formulation of the group of students and the means for individualization of instruction .in this study the researcher study the relationship between learning style and achievement motivation of secondary school students. The objectives of the study are:-1.to compare the learning style preferences of students at different level of achievement motivation of secondary school students, 2.to study the relationship between learning style and achievement motivation of secondary school students. The hypotheses of the study are:- H_{o1} There is no significant difference in the learning styles preferences among high and low achievement motivation of secondary school students. $H_{o1}(a)$ There is no significant difference between the boys and girls with respect to their learning style. $H_{o1}(b)$ There is no significant difference between the boys and girls in achievement motivation. H_{o2} There is no significant relationship among learning style and achievement motivation of secondary school students. A sample of 80 secondary school students in are the sample of the study.. The main findings of the study have been presented under the following heads. 1.There is no significant difference in the activist learning styles preferences among high and low achievement motivation of school students is retained. It means that both high and low achievement motivation secondary school students have preferred similar activist learning styles.2.There is no significant difference in the reflector learning styles preferences among high and low achievement motivation of school students is retained. It suggests that both high and low achievement motivation secondary school students have preferred reflector learning style. 3.There is no significant difference in the theorist learning styles preference among high and low achievement motivation of school students is retained. This results show that both high and low achievement motivation secondary school students preferred theorist learning style. 4.There is no significant difference in the pragmatist learning styles preference among high and low achievement motivation of school students is retained. It indicates that

both high and low achievement motivation secondary school students preferred pragmatist learning style. *Findings based on Relationship between Learning Styles preference and Achievement Motivation:* 1. There is positive relationship between learning styles preference and achievement motivation of school students is retained. It is concluded that there is significant relationship between learning style and achievement motivation of secondary school student. Further, learning style positively related with the achievement motivation of secondary school students.

Key words: learning style, secondary school students, achievement motivation,

I. INTRODUCTION

Learning styles are considered that the manner in which an individual learns on the psychological and cognitive characteristic that determine the way a person learn (De Bello, 1990). It is generally believed that the majority of people favour some fastidious method of interacting with, taking in, and processing stimuli on information. On the basis of this concept, the idea of individualized 'learning styles' originated in the 1970s and has gained recognition in recent years. Keefe (1979) defines learning styles as the composite of characteristics cognitive, affective, and psychological factors that serve as relatively stable indicators of how learners perceives, interacts with, an responds to the learning environment. Stewart and Felicetti (1992) define learning styles as those educational conditions under which a student is most likely to learn. Thus, learning styles are not actually concerned with 'what' learners learn, but rather 'how' they prefer to learn. It has been expected that

teachers should appraise the learning styles of their students and get used to their classroom methods to best fit each student's learning style.

Therefore, researchers who made serious efforts to understand relationship between learning style and achievement motivation. However, the results of these studies are not steady and decisive. Ismail (1982), Verma (1996), Vitorio et al.(1998) and Mishra (2011)found some relationship between achievement motivation learning style but Verma (1991) concluded learning style preferences independent from achievement motivation.

Researchers have examined the role of learning style in foreign language achievement. So fare studies on the learning styles of Odia medium secondary school students with reference to their achievement motivation are concerned, they are negligible in number. The purpose of the present study was to explore the differences in learning

styles preferences of secondary school students to their achievement motivation.

STATEMENT OF THE PROBLEM

The present study is entitled as:-

“LEARNING STYLES PREFERENCES OF SECONDARY SCHOOL STUDENTS IN RELATION TO THEIR ACHIEVEMENT MOTIVATION”.

operational definitions of the terms used

Learning style: It is an individual’s natural or habitual pattern of acquiring and processing information in learning situation.

Achievement Motivation: The achievement motivation is an acquired tendency of the individual which impels by the individuals.

Secondary Schools: A school for students intermediate between elementary school and college; usually grades (IX) and (X). A secondary school is also called as high school. A high school is a school that provides children with part or all of their secondary education.

objectives of the study

The objectives of the study are:-

1. To compare the learning style preferences of students at different level of achievement motivation of secondary school students.
2. To study the relationship between learning style and achievement motivation of secondary school students.

hypothesis of the study

The hypotheses of the study are:-

H_{o1} There is no significant difference in the learning styles preferences among high and low achievement motivation of secondary school students.

$H_{o1} (a)$ There is no significant difference between the boys and girls in learning style.

$H_{o1} (b)$ There is no significant difference between the boys and girls in achievement motivation.

H_{o2} There is no significant relationship among learning style and achievement motivation of secondary school students.

delimitations of the study

The study will be limited to:-

1. Nayagarh district of Odisha.
2. A sample of 80 students in secondary schools.
3. Secondary school students studying in class-IX and X.

research method

In order to accomplish the objectives of the present investigation, the descriptive survey method of research was considered appropriate.

sample

All the students studying in class-IX and X of secondary schools of Nayagarh district constitute as population for the present study. Though it is not possible to study the entire population by considering this fact, at the first stage, two secondary schools were selected purposively. After that, forty students from each selected schools was selected. Finally, in the present study, a sample of eighty students was selected from two secondary schools i.e. Gopinath Dev Bidyapitha, Padmabati, Swapneswar Dev High School, Rakama, Bhapur. Further, forty students (20 boys and 20 girls) from each schools were selected on the basis of cluster random sampling.

tools used

In the present study two standardized tools were used for collection of data:-
Keeping the purpose in view, the requisite data were collected by administering learning style questionnaire and achievement motivation scale on the selected sample. The information gathered through the questionnaires was scored and tabulated. The data were analysed and interpreted using

- i) Learning Styles Questionnaire developed and standardized by Peter Honey and Allan Mumford (1982).
- ii) Deo Mohan Achievement Motivation Scale (n-Ach) by Prativa Deo and Asha Mohan

statistical techniques used

The following standardized techniques were used to analyse and interpreted the collected data. The 't' test was applied to see the differences between the means of learning style preference among high and low achievement motivation of secondary school students. Coefficient of correlation 'r' was used to determine the relationship between learning style preferences and achievement motivation of secondary school students.

RESULT AND DISSCUSSION

The major focus of the present investigation was to compare variation in the learning style preference of secondary school student in relation to their achievement motivation.

statistical technique such as descriptive statistics, 't' test and product moment correlation were applied.

Group	N	Mean	S.D.	SE _D	't'	Sig./ Not Sig.
HAM	41	15.61	1.6	2.74	1.43	Not sig.
LAM	39	12.75	0.54			

Group	N	Mean	S.D.	SE _D	't'	Sig./ Not Sig.
<i>Obtained value (0.49) < Table value (1.99) at 0.</i>						
HAM	41	16.68	0.64	4.37	0.49	Not sig.
LAM	39	14.56	0.41			

analysis and interpretation based on 't' test

In order to determine the significance difference between the mean scores of learning style preference between high and low achievement motivation of secondary school students, 't' test was applied. The detail analysis and interpretation have been given in the following headings.

Significant Difference Between the Mean Scores of Activist Learning Style Preference among High and Low achievement motivation of Secondary School Students

In order to find out the significant difference between the mean scores of activist learning style preference among high and low achievement motivation has been given in the Table 1.

Table - 1
Significant Difference of Mean Scores of Activist Learning Style Preference among High and Low achievement motivation of Secondary School Students

From the table 1 it is seen that the mean scores of the activist learning style preference among high and low achievement motivation secondary school students are 16.68 and 14.56 and SD score are 0.64 and 0.41 respectively. The calculated 't' ratio (0.49) of activist learning style preference among high and low achievement motivation is not significant at 0.05 level and not significant at 0.01 level of significance with df – 78. It means that both high and low achievement motivation secondary school students have preferred similar activist learning style. So the first null hypothesis (H_{01}) is accepted which is stated earlier that, "there will be no significant difference in the activist learning styles preferences among high and low achievement motivation of secondary school students" is retained.

Significant Difference between the Mean Scores of Reflector Learning Style Preference among High and Low Achievement motivation of Secondary School Students

Group	N	Mean	S.D.	SE _D	't'	Sig./ Not Sig.
HAM	41	15.20	1.10	2.69	0.95	Not sig.
LAM	39	12.65	0.53			

In order to find out the significant difference between the mean scores of reflector learning style preference among high and low achievement motivation of secondary school students 't' test was applied. The detail analysis and interpretation has been given in the Table 2.

Table - 2
Significant Difference of Mean Scores of Reflector Learning Style Preference among High and Low Achievement Motivation of Secondary School Students

Obtained value (1.43) < Table value (1.99) at 0.05 level. Obtained value (1.43) < Table value (2.64) at 0.01 level. Obtained value (1.43) is lesser than the table value and hence is not significant.

From the table 2, it is seen that the mean scores of the reflector learning style preference among high and low achievement motivation secondary school students are 15.61 and 12.75 and SD score are 1.6 and 0.54 respectively.

The calculated 't' ratio (1.43) of reflector learning style preference among high and low achievement motivation is not significant at 0.05 and 0.01 level of significance with df – 78. It means that both high and low achievement motivation secondary school students have preferred reflector learning style. So the second null hypothesis (H_{01}) is accepted which is stated earlier that, "there will be no significant difference in the reflector learning styles preferences among high and low achievement motivation of secondary school students" is retained.

Significant Difference between the Mean Scores of Theorist Learning Style Preference among High and Low Achievement Motivation of Secondary School Students

In order to find out the significant difference between the mean scores of theorist learning style preference among high and low achievement motivation of secondary school students, 't' test was applied. The detail analysis and interpretation has been given in the Table 3.

Table - 3
Significant Difference of Mean Scores of Theorist Learning Style Preference among High and Low Achievement Motivation of Secondary School Students

Obtained value (0.95) < Table value (1.99) at 0.05 level. Obtained value (0.95) < Table value (2.64) at 0.01 level. Obtained value (0.95) is lesser than the table value and hence is not significant.

Table 4.3 reveals that the mean scores of the theorist learning style preference among high and low achievement motivation secondary school students are 15.20 and 12.65 and SD score are 1.10 and 0.53 respectively. The calculated ‘t’ ratio (0.95) of theorist learning style preference among high and low achievement motivation is not significant at 0.05 and 0.01 level of significance with df – 78. It means that both high and low achievement motivation secondary school students have preferred theorist learning style. So the null hypothesis (H_{01}) is accepted which is stated earlier that, “there will be no significant difference in the theorist learning styles preferences among high and low achievement motivation of secondary school students” is retained.

Significant Difference between the Mean Scores of Pragmatist Learning Style Preference among High and Low Achievement Motivation of Secondary School Students

In order to find out the significant difference between the mean scores of pragmatist learning style preference among high and low

achievement motivation of secondary school students, ‘t’ test was applied. The detail analysis and interpretation has been given in the Table 4.

Table - 4
Significant Difference of Mean Scores of Pragmatist Learning Style Preference among High and Low Achievement Motivation of Secondary School Students

Group	N	Mean	S.D.	SE _D	‘t’	Sig./ Not Sig.
HAM	41	15.32	1.09	2.73	1.56	Not sig.
LAM	39	12.62	0.66			

Obtained value (1.56) < Table value (1.99) at 0.05 level. Obtained value (1.56) < Table value (2.64) at 0.01 level. Obtained value (1.56) is lesser than the table value and hence is not significant.

Table 4 reveals that the mean scores of the pragmatist learning style preference among high and low achievement motivation secondary school students are 15.32 and 12.62 and SD score are 1.09 and 0.66 respectively. The calculated ‘t’ ratio (1.56) of pragmatist learning style preference among high and low achievement motivation is not significant at 0.05 and 0.01 level of significance with df – 78. It means that both high and low achievement motivation secondary school students

have preferred pragmatist learning style. So the null hypothesis (H_{01}) is accepted which is stated earlier that, “*there will be no significant difference in the pragmatist learning styles preferences among high and low achievement motivation of secondary school students*” is retained.

Significant Difference between the Boys and Girls in Learning Style Preference of Secondary School Students

Analysis of significant difference between boys and girls in learning style. The first objective stated as “*to compare the learning style preferences of students at different levels of achievement motivation of secondary school students*”.

Testing of First Sub-Hypothesis { $H_{01}(a)$ }:

In order to achieve the first objective the researcher framed a hypothesis as “there is no significant difference between boys and girls in learning style”.

**Table - 5
Significant Difference between Boys and Girls in Learning Style**

Obtained value (1.52) < Table value (2.02) at 0.05 level. Obtained value (1.52) < Table

Gender	N	Mean	S.D.	SE_D	t'	Sig./ Not Sig.
Boys	40	58.1	1.284	0.263	1.52	Not sig.
Girls	40	58.5	1.072			

value (2.71) at 0.01 level. Obtained value (1.52) is lesser than the table value and hence is not significant.

It shows that there is no significant different between boys and girls in learning style. So the null hypothesis is accepted.

Significant Difference between the Boys and Girls in Achievement Motivation.

Analysis of significant difference between boys and girls in Achievement motivation. The first objective stated as “*to compare the learning style preferences of students at different levels of achievement motivation of secondary school students*”.

Testing of First Sub-Hypothesis { $H_{01}(b)$ }:

In order to achieve the first objective the researcher framed a hypothesis as “there is no significant difference between boys and girls in achievement motivation”.

Table - 7

Table - 6

Significant Difference between Boys and Girls in Achievement Motivation

Gender	N	Mean	S.D.	SE _D	Group (N = 80)		Coefficient of Correlation (r)	Significant/ Not significant
					Learning style preferences and achievement motivation	Sig./ Not Sig.		
Boys	40	156	2.037	0.472	6.35	0.218	Sig. at 0.01 level	Significant at 0.05 level and Not significant at 0.01 level.
Girls	40	153	2.19					

Obtained value (6.35) > Table value (2.02) at 0.05 level. Obtained value (6.35) > Table value (2.71) at 0.01 level. Obtained value (6.35) is greater than the table value and hence is significant.

It shows that there is significant difference between boys and girls in achievement motivation. So the null hypothesis is rejected.

ANALYSIS AND INTERPRETATION BASED ON COEFFICIENT CORRELATION

In order to determine the relationship between learning style preferences between achievement motivation of secondary school student, product moment correlation ‘r’ co-efficient correlation was computed. The detail analysis and interpretation has been given in the table 7.

Coefficient of Correlation between Learning Style Preferences and Achievement Motivation of Secondary School Students

Interpretation:

It is clear from Table 7 that the coefficient of correlation (0.218) between learning style and achievement motivation of secondary school students is positively related and significant at 0.05 level of significance with df – 78. It is concluded that there is significant relationship between learning style and achievement motivation of secondary school students. Further, learning style positively related with the achievement motivation of secondary school students and not significant at 0.01 level of significance with df – 78. So the null hypothesis No.2 is accepted which is stated earlier that: “there will be positive relationship between

learning styles and preference and achievement motivation of school students” is retained.

FINDINGS OF THE STUDY

The main findings of the study have been presented under the following heads.

Findings based on learning styles preference and high and low achievement motivation of secondary school students:

- i) There is no significant difference in the activist learning styles preferences among high and low achievement motivation of school students is retained. It means that both high and low achievement motivation secondary school students have preferred similar activist learning styles.
- ii) There is no significant difference in the reflector learning styles preferences among high and low achievement motivation of school students is retained. It suggests that both high and low achievement motivation secondary school students have preferred reflector learning style.
- iii) There is no significant difference in the theorist learning styles preference among high and low achievement motivation of school students is retained. This results show that both high and low achievement

motivation secondary school students preferred theorist learning style.

- iv) There is no significant difference in the pragmatist learning styles preference among high and low achievement motivation of school students is retained. It indicates that both high and low achievement motivation secondary school students preferred pragmatist learning style.

Findings based on Relationship between Learning Styles preference and Achievement Motivation:

- i) There is positive relationship between learning styles preference and achievement motivation of school students is retained. It is concluded that there is significant relationship between learning style and achievement motivation of secondary school student. Further, learning style positively related with the achievement motivation of secondary school students.

CONCLUSION

Every scientific investigation contributes either to theory or practice or both. The present research being descriptive has some educational implications. Secondary school students may be made aware about the importance of learning styles and achievement motivation. They

may be provided training in diagnosing their own styles and capitalize on their students of learning style and achievement motivation. Curriculum designer may take into consideration various learning styles and flourish the achievement motivation at the time of curriculum making. High achievement motivation students have environment oriented learning style. It suggests that teacher should ensure advantageous environment such as proper light, ventilation, seating arrangements and silence etc. Alternatively should be encouraged to be more environments oriented. The study can help in students to know about their abilities science aptitude and their level of achievement motivation.

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REFERENCES

Aggarwal, J.C. (1982). *Learning Style Preference of Secondary Students in Relation to Institution and Sex*. Indian Journal of Psychology, New Delhi.

Aggarwal, Y. P. (1999). *Statistical Method, concepts, applications and*

computation. New Delhi, Sterling Publishers.

Barrie, M.C. (1984). *Variability in Learning Style and its Relation to Learning Performance in Introductory Computer for Adult Learners*. International Dissertation Abstracts.

Best, J.W. & Khan, J. V. (2005). *Research in Education*, Prentice Hall of India Private Limited, New Delhi.

Bishop, H.N. (1985). *Students Learning Styles: Implication for Student and Institutional Development*. International Dissertation Abstracts, February,10 2015, from Sood Ganga.com.

Buch, M. B. (1987). *Fourth Survey of Research in Education (Vol.I and II (1983-88))*. New Delhi, NCERT.

Bremer, B.A.(1996). *Emotional and Health in Frank N. Magill (Edu.)*. International Encyclopedia of Psychology Rathbone Place, London.

Brew, C.R.(2002). *Kolb's Learning Style Instrument: Sensitive to gender*. Psychology Abstracts.

Chopra, P. (2012). *Prachi Journal of Psycho-cultural Dimension*.

- Claxton and Ralston, Y. (1978). *Learning Styles, their impacts on Teaching and Administration*. Washington, D.C., American Association for higher education research report.
- Debollo, T.C. (1990). *Comparison of Eleven Different Learning Style Models*.
- Ferrell, B.G. (1981). *A Factor Analytic Comparison of Four Learning Style Instruments*. Journal of Educational Psychology.
- Gallaway, C. (1976). *Psychology for Learning and Teaching*, New York, McGraw Hill, Book Co.
- Garret, H.E. (1981). *Statistics in Psychology and Education*. Bombay, Vakils, Feffers and Simon Limited.
- Good C.V. (1995). *Dictionary of Education*. New York: Mc Graw Hill.
- Kaul Lokesh (1985). *Methodology of Educational Research*. New Delhi: Vikas Publishing House.
- Keefe, J.W. (1979). *Learning Style: An overview*. Reston, VA National Association of Secondary School Principals.
- Kolb, D.A. (1976). *Learning Style Inventory Manual*. Boston, M.E. Ber & Company.
- Mishra, M. (2011). *Modern Education Research in India*. A Quarterly Journal of Education Research.
- Reissman, F. (1966). *Style of Learning*. National Education Association Journal.
- Sakia, L.R. (2013). *Achievement Motivation in relation to their Gender*. Indian Journal of Psychometry and Education.
- Tali, D.B. & Guarav. (2013). *Learning and Thinking Style of Teacher trainees in relation to their Mental Health*.
<http://www.socialsciencejournal.in/download/14/1-1-37.pdf>
<http://www.academia.edu/30430322/>
<http://www.socialsciencejournal.in/download/14/1-1-37.pdf>
<https://turcomat.org/index.php/turkbilmata/article/download/771/564/1364>