

A Study of Educational Achievement of Standard XI Students in Context of their Learning Style in Reference to Area

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ABSTRACT

In the Era of Change, teacher should consider the individual differences while teaching in the classroom. In fact teacher must keep in mind the individual differences for teaching. Students have so many talent, we as a teacher must have that angel of view of identifying it. This individual difference can be divided in dimension of Learning Style, too. Researcher was giving service in High School as a teacher, he observe such an Individual difference in context to learning style in class room. Is there any relationship between Educational Achievement and Learning Style? Is there any effect of Learning Style on Educational Achievement in reference to Area? To find the answer of this question present study was conducted. Population & Sample: Population for present study was students studying in Standard-XI of Gujarati Medium School of Gandhinagar District. The selection of schools was by Stratified Randomization Technique and selection of students was selected by Cluster Method. In last, the Sample size was 607. Method: Survey Method was used for Data Collection. Tool: Self constructed Learning Style Inventory (L.S.I.) was used for Data Collection. Learning Style Inventory (L.S.I.) was three Point Likert type Scale. Findings: 1) There was no significance different in educational achievement among students having Visual Learning Style, Auditorial Learning Style and Kinesthetic Learning Style. 2) In matter of educational achievement, students of Rural are superior to students of Urban among students having Visual Learning Style. 3) In matter of educational achievement, students of Rural are superior to students of Urban among students having Auditorial Learning Style. 4) In matter of educational achievement, students of Urban are superior to students of Rural among students having Kinesthetic Learning Style.

Keywords: *Learning Style, Higher Secondary School, VAK Model, Educational Achievement*

There is always an individual difference in classroom. This individual difference has different angles. All students have their own styles to learn. There are different models defining learning styles i.e. Kolb's Model, VARK Model, VAK Model, etc. In VAK Model there are three

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modality of learning which is known as three learning styles. According to VAK Model, three Learning Styles are as followed:

1. Auditorial Learning Style
2. Visual Learning Style
3. Kinesthetic Learning Style

Statement of Problem

For present study, Researcher studied Educational Achievement of standard-IX's students in context to their learning style with references to Area. Thus title was as followed:

"A Study of Educational Achievement of Standard XI Students in context of their Learning Style in reference to Area"

Objectives

Any study can't be meaningful unless objectives are formed, thus objectives for present study were as followed:

1. To Construct L.S.I. (Learning Style Inventory)
2. To study Educational Achievement of Students in context to their Learning Style.
3. To study Educational Achievement of Students having Visual Learning style in reference to Area.
4. To study Educational Achievement of Students having Auditorial Learning style in reference to Area.
5. To study Educational Achievement of Students having Kinesthetic Learning style in reference to Area.

Hypotheses

According to Objectives hypothesis were formed as followed:

HO1: There will be no significant difference between educational achievement of students having Visual and Auditorial Learning Style.

HO2: There will be no significant difference between educational achievement of students having Visual and Kinesthetic Learning Style.

HO3: There will be no significant difference between educational achievement of students having Auditorial and Kinesthetic Learning Style.

HO4: There will be no significant difference between Educational Achievement of Students of Rural and Urban having Visual Learning Style.

HO5: There will be no significant difference between Educational Achievement of Students of Rural and Urban having Auditorial Learning Style.

HO6: There will be no significant difference between Educational Achievement of Students of Rural and Urban having Kinesthetic Learning Style.

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Variables

Independent Variable

Learning Style	Visual Learning Style
	Auditorial Learning Style
	Kinesthetic Learning Style

Dependent Variable

Educational Achievement of students (Percentage of Standard-X obtained by Students)

Moderator Variable

Area	Rural Area
	Urban Area

Control Variable: Standard-IX, Medium- Gujarati, Area – Gandhinagar District

Population

In present study, Researcher studied Students' Educational Achievement in context to their learning style. Thus, Population for present study was students studying in Standard-XI of Gujarati Medium School of Gandhinagar District.

METHODOLOGY

Sampling

Sampling frame of all Higher Secondary Schools (Commerce Stream) in Gandhinagar District is made. This list is stratified in Rural and Urban and then Sample was selected in proper portion. All selected school's all Standard-IX's class's all students were selected by Cluster sampling Technique. By this method 700 students were selected, but 93 students who were having same score on L.S.I. (Learning Style Inventory) removed. Thus, School's selection was by Stratified Sampling Technique and Students were selected by Cluster Sampling Technique. Hence at last there were 607 students were selected in sample. Sample Size is shown in Table No. A

Table No. A Details of Sample Size

Learning Style	Gender	Boys			Girls			Total		
	Area	Join	Nuclear	Total	Join	Nuclear	Total	Join	Nuclear	Total
Visual Learning Style	Rural	102	10	112	24	7	31	126	17	143
	Urban	128	23	151	63	29	92	191	52	243
	Total	230	33	263	87	36	123	317	69	386
Auditorial Learning Style	Rural	52	8	60	8	2	10	60	10	70
	Urban	44	5	49	13	6	19	57	11	68
	Total	96	13	109	21	8	29	117	21	138
Kinesthetic Learning Style	Rural	22	8	30	2	0	2	24	8	32
	Urban	16	11	27	16	8	24	32	19	51
	Total	38	19	57	18	8	26	56	27	83

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Research Method

In present study, Data was about to collect from vast group. Researcher selected the survey method according to objectives of present study.

Tool for Data Collection

Construction of Tool is a scientific process, which follow the logical order. For present study, researcher made self-constructed L.S.I. (Learning Style Inventory) to know the learning style of students, for which following steps were followed:

- 1. In depth study of Three types of Learning Style :** For present study, Researcher selected V.A.K. (Visual, Auditorial and Kinesthetic) Model among different learning Style Models. In this V.A.K. Model, Visual, Auditorial and Kinesthetic Modality of learning was used as a component. To construct tool, in depth study of these three learning modality (Learning Style) was used.
- 2. Writing of Statements for L.S.I. (Learning Style Inventory):** After studying three learning style in depth, statements for these three learning styles were framed.
- 3. Primary form of L.S.I. (Learning Style Inventory):** After writing statements for three learning styles, three separate lists were prepared. Primary Form of L.S.I. (Learning Style Inventory) was prepared.
- 4. Expert review of primary form of L.S.I. (Learning Style Inventory):** Primary Form of L.S.I. (Learning Style Inventory) along with letter showing Objectives of study and Primary Information was given to experts to review.
- 5. Piloting:** After getting review from expert, necessary changes were applied and L.S.I. (Learning Style Inventory) was prepared for piloting. Piloting was done on sample size of 100 by purposive sampling technique.

After piloting for three lists of three different learning styles were prepared and also scored. All three tools were arranged in descending order according to scores. 't'-value was found between Upper 27% (27) Students and Lower 27% (27) Students statement wise. Statements having most significant difference were selected in final form of L.S.I. (Learning Style Inventory). Detail of Item Analysis of L.S.I. (Learning Style Inventory) is shown in Table No. B

Table No. B Details of Item Analysis to Select Statements

No.	Learning Style	Total Statements	Selected Statements
1	Visual Learning Style	28	26
2	Auditorial Learning Style	26	15
3	Kinesthetic Learning Style	25	20

Here there were 15 statements of Auditorial Learning Style having significant difference selected in final form of L.S.I. (Learning Style Inventory). For equal probability of statements response,

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15 Statements of each Visual Learning Style and Kinesthetic Learning Style having most significant difference were selected in final form of L.S.I. (Learning Style Inventory).

6. **Final form of L.S.I. (Learning Style Inventory):** After Item Analysis with letter of Primary Information and variables, final form of L.S.I. (Learning Style Inventory) was prepared. Statements No.-1, 4, 7, 10, 13, 16, 19, 22, 25, 28, 31, 34, 37, 40, 43 were statements of Auditorial Learning Style. Statements No.-2, 5, 8, 11, 14, 17, 20, 23, 26, 29, 32, 35, 38, 41, 44 were statements of Visual Learning Style. Statements No.-3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42, 45 were statements of Kinesthetic Learning Style.
7. **Scoring of Response on Tool :** Researcher scored the response to give the quantitative form which helps to analysis. There were 45 statements of Visual Learning Style, Auditorial Learning Style and Kinesthetic Learning Style. There are three Points against all the statements of Always, Occasionally and Never. For Always “3”, For Occasionally “2” and For Never “1” score was given.

Data Collection

For Data Collection, Prior permission of Principals of selected schools was asked. After establishing rapport with students of standard-XI, students were explained by researcher about the objective and importance of study and then tool was administrated. Thus, in one period of 35 minutes, Data was collected.

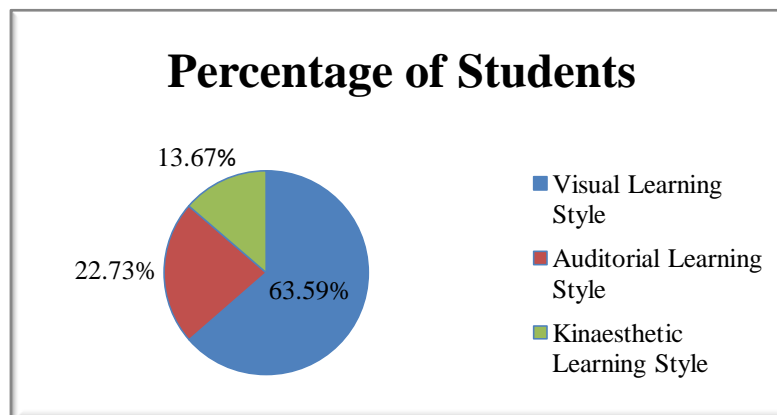
Data Analysis

In present study, ‘t’- test was applied for testing Hypothesis.

Table No. C Percentage of Students in reference to Learning Style

No.	Learning Style	No. Of Students	Percentage
1	Visual Learning Style	386	63.59 %
2	Auditorial Learning Style	138	22.73 %
3	Kinesthetic Learning Style	83	13.67 %
	Total	607	100 %

Pictorial Presentation is as followed:



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Table No. D Hypothesis Testing for Learning Style

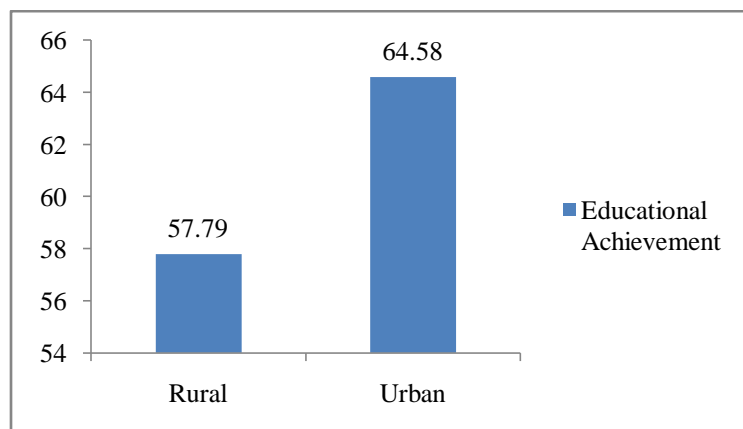
Hypothesis	Group	N	M	SD	Sed	t-value	Remarks
Ho ₁	Visual Learning Style	386	64.30	12.34	1.09	1.42	NS
	Auditorial Learning Style	138	62.76	10.44			
Ho ₂	Visual Learning Style	386	64.30	12.34	1.25	1.87	NS
	Kinesthetic Learning Style	83	61.96	9.89			
Ho ₃	Auditorial Learning Style	138	62.76	10.44	1.40	0.57	NS
	Kinesthetic Learning Style	83	61.96	9.89			

According to Table No. D, There was no significant difference found in all the above mentioned Hypotheses.

Table No. E Hypothesis Testing for Area

Hypothesis	Learning Style	Group	N	M	SD	Sed	t-value	Remarks
Ho ₄	Visual Learning Style	Rural	143	63.06	12.88	1.32	1.50	NS
		Urban	243	65.04	11.98			
Ho ₅	Auditorial Learning Style	Rural	70	61.45	7.95	1.78	1.49	NS
		Urban	68	64.11	12.41			
Ho ₆	Kinesthetic Learning Style	Rural	32	57.79	8.26	2.02	3.36	0.01
		Urban	51	64.58	9.99			

According to Table No. E, There was no significant difference found in first two Hypotheses and it was a significant difference found in Ho₆. Pictorial Presentation for Ho₆ is as followed:



Graph No. – A Educational Achievement of Students of Rural and Urban having Kinesthetic Learning Style

FINDINGS

Findings for present study were as followed:

1. There was 386 (63.59%) Students having Visual Learning Style, 138 (22.73%) Students having Auditorial Learning Style and 83 (13.67%) Students having Kinesthetic Learning Style.

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2. There was no significance different in educational achievement among students having Visual Learning Style, Auditorial Learning Style and Kinesthetic Learning Style.
3. In matter of educational achievement, students of Rural and Urban are found equal among students having Visual Learning Style.
4. In matter of educational achievement, students of Rural and Urban are found equal among students having Auditorial Learning Style.
5. In matter of educational achievement, students of Urban are superior to students of Rural among students having Kinesthetic Learning Style.

OUTCOME OF THE STUDY

At the end of any research along with the findings some outcome is also found. For present study, Outcome of Study is as followed:

1. **L.S.I. (Learning Style Inventory) :** In present study, researcher made self constructed L.S.I. (Learning Style Inventory) to know the Learning Style of Students. To construct L.S.I. (Learning Style Inventory), Researcher used Visual Learning Style, Auditorial Learning Style and Kinesthetic Learning Style as a component. This L.S.I. (Learning Style Inventory) might be outcome of study.

CONCLUSION

Keeping in mind the Research gap in Survey Researches, Recommendations for future research are as followed: In present study, researcher use V.A.K. (Visual, Auditorial, Kinesthetic) as a Component in Learning Style, one can use Kolb Model to construct L.S.I. (Learning Style Inventory). Present study was delimited to Standard-XI only; one can extend it to Standard-XII. Learning Style may prove Key-factor for Students to get Success in every field. As a teacher, one should observe Students and should try to assess Learning Style of Students and Teaching Methods and Techniques can also be improved as per Students' need.

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Conflict of Interests: The author declared no conflict of interests.

REFERENCES

- Agrawal J. C. (1996), *Education Research: An Introduction*, New Delhi: Arya Book Depot.
- Borg Water R. (1996); *Educational Research: An Introduction*, New Delhi: Arya Book Depot.
- Choksi, H. B., & Raval, A. B. (2016). Effectiveness of Programmed Learning Material in Teaching Basic Elements of Accountancy Subject for Students of Standard XI in References to Scholastics Achievement. *The International Journal of Indian Psychology*, Volume 3, Issue 3, No. 9, 29.

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Reference to Area**

- Desai H.G. and Desai K.J. (1997), *Research Method and Techniques*, (6th edition) University Granth Nirman board, Gujarat State, Ahmedabad.
- J.W Best, (1982), *Research in Education*, Practice hall of India Private Ltd., New Delhi.
- Malhotra , P. V. (1996), *Elements of Education Research*, Alliod publishers Pvt.Ltd.
- Mansuri, G. R. (2003-04), *Manovignan Shabdkosh*, Mayur Publication, Ahmedabad.
- Patel , A.J. (2005), *Real Dictionary*, Akshar Publication, Ahmedabad
- Shah Deepika B. (2009), *Educational Research*, University Granth Nirman board, Gujarat state, Ahmedabad.

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