LEARNING STYLES (LS) OF SCHOOL - GOING CHILDREN

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ABSTRACT

Learning Style (LS) is the way that the learner children use to learn, observe, process, comprehend and retain information. Individualized learning styles received popularity in the 1970s and have immensely influenced education. Interestingly, there have been mixed reactions from proponents regarding the learning style of students and likewise the classroom teaching methods. Intrigued by this, an attempt has been made by the researcher in getting to know more about the learning style adopted by the school-going children. Adopting a descriptive cross-sectional research design, a total of 3026 school children were selected as a sample in the age group of 11-15 years. Two tools namely a general profile questionnaire to get the socio-demographic details and a standardized Learning Style Inventory (LSI) tool developed by Misra (2012) to assess the learning styles of the respondents were used. The LS scale measures six dimensions of learning patterns and each dimension has seven statements with a five-point Likert scale. The minimum to the maximum range of scores was 42 to 210. The key findings are as follows -A great majority of the target respondents preferred a single learning style and the Constructive type of learning is preferred over reproducing learning style among the school children. Enactive constructive, figural reproducing, and verbal reproducing learning styles were significantly influenced by one or more socio-demographic predictors. The significant predictors were the type of school, area of residence, mother's education, and a class of study. However, the enactive reproducing and verbal constructive types of learning are observed to be completely independent of the socio-demographic factors when put together as well as when considered as individual factors. The figural constructive type of learning though not dependent on socio-demographic factors as a total, the type of school was found to influence the figural constructive patterns of learning. The present study would aid the school children's awareness of learning style and its importance in uplifting their overall performance. It would also help in giving valuable inputs to their teachers in understanding the relevance and significance of learning style in improving the all-around performance of school-going children.

Key Words : *Learning Style, Enactive Constructive, Enactive Reproducing, Figural Constructive, Figural Reproducing, Verbal constructive, Verbal Reproducing*

Introduction

Although learning style benefits all aspects of one's life - personal, academic, and professional - it is considered as the stepping stone as far as academics is concerned as academics form the base for the rest to blossom. Hence, school children, in particular, can be considered as the main beneficiaries as it aids in laying a sound foundation for them that would help them in the long run. Many educationists too have talked about the importance of learning style. Ellington and Benders (2012) have discussed this and mentioned that learning style has a crucial role in the lives of school-going children as it helps them in self-assessment and self-improvement. Hence, by realizing the importance of learning styles of school children specifically, the current study was carried out to not only understand their learning styles but go one step further and try to understand the effect of certain socio-demographic variables on the various learning styles of the selected sect of children.

Significance of the study

Learning Style (LS) is the way that the learner children use to learn, observe, process, comprehend and retain

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information. The study's key findings would aid the educationists in better understanding the predictor variable(s) for each type of learning style adopted by the children, and thereby it could act as a base to better stimulate the necessary learning styles that would further trigger the children to perform better academically.

Objectives

1. To identify the preferred Learning Style (LS) of the selected school children
2. To find out the effect of socio-demographic variables on each of the Learning Styles (LS)

Methodology

School-based descriptive cross-sectional research design was adopted with specific inclusion criteria to identify the schools as well as the sample of the study. 3026 school children were selected from the 6th, 7th, and 8th classes. Two tools namely a general background questionnaire to elicit the socio-demographic profile and a Learning Style Inventory (LSI) by Misra (2012) were used. The two major domains and their dimensions of LSI are 1. Reproducing domain - Enactive Reproducing, Figural Reproducing, and Verbal Reproducing 2. Constructive domain - Enactive Constructive, Figural Constructive, and Verbal Constructive. Seven statements in each of the six dimensions were scored based on the target respondents' preference pattern (very much-5, much-4, average-3, less-2, very less-1). The maximum time allowed to fill in the LS inventory was 15 minutes. The score ranged between 42 and 210. The data were subjected to statistical analysis through SPSS and multiple regression analysis was carried out to find out the effect of socio-demographic factors on learning styles. The key findings of the study are discussed below

Results and Discussion

Socio-demographic profile of selected school-going children

Class-wise distribution: 34% were in the 7th class, closely followed by 8th and class 6.

Gender-wise distribution: Girls had a higher representation of 52% when compared to their counterparts.

Distribution based on the educational status of parents: 34% of the fathers and 36.3% of the mothers of the respondents have completed their secondary level of education, 31%, and 28% were graduate fathers and mothers respectively, and only 13.5% and 10.5% were postgraduates' fathers and mothers.

Distribution based on occupational status of parents: Fathers involved in business were nearly three times greater than mothers doing business. An equal percentage of parents (13.6%) were found to be government employees, whereas there is a wide difference between the fathers (33%) and mothers (44.5%) employed in the private sector. More than 1/4th of the mothers were house-wives.

Distribution based on the structure of the family : Just above 1/4th of the children hail from joint families (27.9%) and around 64% belong to nuclear families.

Distribution based on the type of school : Only 15% are enrolled in government schools. However, the enrolment in aided schools was higher (45.5%), followed by private schools (39.4%).

Birth order-based distribution : Around 52% of the children under study are firstborn.

Distribution based on the locale of residence : 45% of them hail from semi-urban areas and 34.8% are from urban areas. The number of students residing in rural areas was only 20.6%.

Objective 1: Preferred Learning Style of the selected school children.

Table 1
Preferred Learning Style of the respondents

Preferred Learning style	N	%	Preferred Domain of Learning Style	N	%
Enactive Reproducing	336	11.10	Reproducing learning	1200	40
Figural Reproducing	261	8.63			
Verbal Reproducing	603	19.93			
Enactive Constructive	713	23.56	Constructive Learning	1660	55
Figural Constructive	253	8.36			
Verbal Constructive	694	22.93			
Multiple Learning Style	166	5			
Total	**3026**	**100**			

The enactive constructive learning style tops the list with 23.56% of the respondents following it. The finding indicates the preference of school children to conceptualize their experiences based on learning. The verbal constructive style was not very far behind as 22.93% of the children were found using it. This style of learning states the preference for reflective, accommodative, and abstract thinking on a concept to advance the conceptualization. Nearly 20% of them preferred the verbal reproducing style. In other words, they prefer written or spoken information concerning the concept communicated with the help of words. The enactive reproducing learning style was adopted by just 11% of the children. These children preferred action-based concrete experiences in which the accent is on imitation and practice.

The figural reproducing style of learning is one's preference for visual experiences related to making diagrams, charts, pictures, maps, and photographs, and was preferred by 261 children. However, a more or less equal number of children have had (253) figural constructive process as their learning style as they learn through figural experiences leading to conceptualizations Very few children (166) use more than one learning style. This finding poses the question of whether two or more learning style is beneficial for uplifting their performance.

Further, it can be inferred from the above table that the constructive type of learners (1660) is more than reproducing type of learners (1200). This suggests that the children prefer to conceptualize based on the processing of information received rather than reproducing by imitation and practice, which is a welcoming feature. Though it can be said that the education system and pattern have evolved with time, even today as far as the Samacheer syllabus is concerned a good reproduction of subject matter earns better grades academically. Hence, practically children need to be more oriented toward easy methods of reproducing the concepts so that they can perform well academically.

Objective 2: Effect of socio-demographic variables on each of the Learning Styles (LS)

Table 2
Influence of socio-demographic variables on the children's Learning Style

Variables	Regression Coefficient B	Std. Error	Beta	T	R	R-Square	F df-11
Enactive Reproducing type							
Constant	***22.838***	***0.865***		***0.000***			
Class	*0.235*	0.121	0.04	1.941^{ns}	0.067	0.004	1.357^{ns}
Gender	*0.074*	0.198	0.01	.374^{ns}			
Father's Education	*0.033*	0.105	0.01	.314^{ns}			
Mother's Education	*-0.156*	0.108	-0.03	-1.442^{ns}			
Father's Occupation	*0.046*	0.058	-0.02	.811^{ns}			
Mother's Occupation	*-0.03*	0.067	-0.01	-.448^{ns}			
Type of family	*0.085*	0.153	0.01	.551^{ns}			
Type of School	*-0.18*	0.125	-0.03	-1.441^{ns}			
Birth order	*-0.109*	0.102	0.02	1.064^{ns}			
Area of residence	*-0.207*	0.15	-0.03	-1.449^{ns}			

Enactive Constructive type							
Constant	**25.731**	**0.856**		**30.058**			
Class	0.15	0.12	0.02	1.257 ns			
Gender	0.016	0.196	0.02	.081 ns			
Father's Education	-0.058	0.104	-0.01	-.554 ns			
Mother's Education	-0.095	0.107	-0.02	-.889 ns			
Father's Occupation	0.059	0.057	0.02	1.023 ns	0.078	0.006	**1.841***
Mother's Occupation	-0.004	0.066	-0	-.062 ns			
Type of family	-0.167	0.152	-0.02	-1.099 ns			
Type of School	-0.421	0.123	-0.07	**-3.413****			
Birth order	0.029	0.101	0.01	.290 ns			
Area of residence	-0.229	0.148	-0.03	-1.541 ns			
Figural Reproducing type							
Constant	22.367	0.758		29.496			
Class	-0.218	0.106	-0.04	**-2.053***			
Gender	0.149	0.173	0.02	.861 ns	*0.099*	*0.01*	***2.966****
Father's Education	0.115	0.092	0.03	1.244 ns			
Mother's Education	-0.393	0.095	-0.09	**-4.147** **			
Father's Occupation	0.022	0.051	0.01	.432 ns			
Mother's Occupation	-0.04	0.059	-0.01	-.674 ns			
Type of family	0.113	0.134	0.02	.843 ns			
Type of School	0.069	0.109	0.01	.628 ns			
Birth order	0.094	0.089	0.02	1.054 ns			
Area of residence	0.27	0.131	0.04	**2.051***			
Figural Constructive type							
Constant	**25.201**	**0.859**		**29.323**			
Class	0.032	0.12	0.01	0.269			
Gender	0.062	0.197	0.01	0.316			
Father's Education	-0.017	0.105	-0	-0.162	*0.064*	*0.004*	*1.245 ns*
Mother's Education	-0.042	0.107	-0.01	-0.395			
Father's Occupation	0.099	0.057	0.03	1.729			

Mother's Occupation	0.066	0.067	0	0.091			
Type of family	-0.178	0.152	-0.02	-1.17			
Type of School	-0.335	0.124	-0.06	**-2.700****			
Birth order	0.005	0.101	0	0.052			
Area of residence	-0.112	149	-0.02	-0.751			
Verbal Reproducing type							
Constant	**27.536**	**0.84**		**32.763**			
Class	0.278	0.118	0.04	**2.368****			
Gender	-0.359	0.192	-0.04	-1.867^{ns}			
Father's Education	-0.094	0.102	-0.02	-.921^{ns}	*0.118*	*0.014*	***4.262*****
Mother's Education	0.057	0.105	0.01	.545^{ns}			
Father's Occupation	0.003	0.056	0	.060^{ns}			
Mother's Occupation	0.02	0.065	0.01	.305^{ns}			
Type of family	-0.18	0.149	-0.02	-1.210^{ns}			
Type of School	-0.377	0.121	-0.07	**-3.109****			
Birth order	-0.188	0.099	-0.03	-1.864^{ns}			
Area of residence	-0.636	0.146	-0.09	**-4.368****			
Verbal Constructive type							
Constant	**24.132**	**0.957**		**25.206**			
Class	-0.15	0.134	-0.02	-1.118^{ns}	*0.054*	*0.003*	*.893*^{ns}
Gender	0.002	0.219	0	.008^{ns}			
Father's Education	-0.143	0.117	-0.03	-1.228^{ns}			
Mother's Education	0.085	0.12	0.02	.713^{ns}			
Father's Occupation	-0.117	0.064	0.03	-1.823^{ns}			
Mother's Occupation	-0.03	0.074	-0.01	-.403^{ns}			
Type of family	0.197	0.17	0.02	1.158^{ns}			
Type of School	-0.008	0.138	-0	-.059^{ns}			
Birth order	-0.153	0.113	-0.03	-1.359^{ns}			
Area of residence	-0.019	0.166	-0	-.116^{ns}			

**** Significant at 1% level,* Significant at 5% level, Ns –not significant**

The results of multiple regression R^2=.010, F=2.966, p<.01, and R^2 =.014 F value = 4.262, p<.01 confirm that socio-demographic factors significantly influence the figural reproducing and verbal reproducing type of learning style among children. The R^2 value further revealed that there was a 1.0%, and 1.4% variance in the children's figural reproducing and verbal reproducing type of learning style scores respectively and the selected independent variables have explained it. Moreover, the results of multiple regression demonstrate R^2=006, F=1.841, df =11, p<.05, where R^2 exposed that there was 0.6% variance in children's enactive constructive type of learning scores concerning various socio-demographic factors and showed significance at 5% level. The other learning styles namely enactive reproducing, verbal constructive, and figural constructive shows an insignificant variance and are not described by the selected demographic predictors.

At a glance at each predictor, the enactive reproducing style of learning adopted by children is completely independent of the socio-demographic factors. Nirjesh and Sharma (2018) mentioned that the term reproducing learning style means to produce the learned subject in the same manner as it was. Going by this, it can be said that the enactive reproducing type of learning involves more of an individual's efforts than being influenced by any other factor. The researcher perceives that this might be the reason for the socio-demographic variables not influencing the above-mentioned type of learning style. A study carried out by Singh et al. (2015) also revealed no significant effect of demographic variables on the learning style of school-going children.

For the enactive constructive type of learning, the t and p-value of each of the predictors specified that type of school (F=-3.413, p<.01) alone to be significant at a 1% level. The study done by Bhat and Govil (2014) reveals that the type of institution in which the learner studies (Government /Private) significantly affect the preference of learning style. This further reinforces the crucial role the teachers play in shaping the academic profile of school children.

By looking at each of the independent variables with that of the figural reproducing type of learning, it can be stated that the educational status of mothers (-4.147, p<.01) alone was significant at a 1 percent level. A study by Singh et al. (2015) too revealed that there was a significant impact of the mother's educational level on the learning style of school children. Two other variables namely class of study (-2.053) and area of residence (2.051) were found to be significant at a 5% level.

Looking at the individual p and F value of figural constructive learning style, the predictor, the type of school (-2.700) alone seems to play a significant influencing role in figural constructive type learning of the respondents. Going by the very definition of this type of learning style it requires the guidance and hand-holding of able school teachers.

Three out of ten factors showed a 1% level of significance in inducing the verbal reproducing learning style. They were class (2.368), type of school (-3.109), and area of residence (-4.368). Eighth standard students were found to have adopted the verbal reproducing type of learning style. Further research is needed to analyze the reason for these predictors.

From the t and p-value of each variable, it is evident that none of the predictors showed any significant difference in the school-going children's verbal constructive type of learning. A constructive learning style means that all the knowledge is constructed from the learner's previous knowledge, regardless of how one is taught (Misra, 2005). Hence, it can be concluded the constructive type of learning is just an attempt of the child and doesn't depend on socio-demographic predictors.

Conclusion

The study revealed that a high majority of the target respondents prefer one single Learning Style (LS) as their predominant pattern of learning. Enactive reproducing and verbal constructive types of learning are observed to be completely independent of the socio-demographic factors when put together as well as when considered as individual factors. However, the figural constructive type of learning though not dependent on socio-demographic factors as a total, the type of school was found to influence the figural constructive patterns of learning. The other three types of learning namely enactive constructive, figural reproducing, and verbal reproducing learning styles were significantly

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integrates as one. The paper highlights how teachers are the sole torch-bearers of this integration in the CLIL approach and how a "hybrid" teacher comes into the forefront with the content and language teachers' collaborative efforts. It also highlights the importance of teachers' workshops to help with the approach. This study is limited in terms of respondents it reached and provided the scope for more research on the approach, making it more acceptable in the Indian educational system.

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influenced by one or more socio-demographic predictors. The significant predictors were the type of school, area of residence, mother's education, and a class of study.

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