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A study on learning strategies and its dimensions of higher secondary school students in Thnjavur district

Dr. Jasmine Suthanthiradevi
Dean & Professor, Department of Education (CRD), PRIST University, Thanjavur

P. Kavitha
Ph.D Research Scholar, Department of Education (CRD), PRIST University, Thanjavur

***Abstract*---**This study aims to find out the Learning Strategies and its dimensions of higher secondary school students in relation their selected variables in Thanjavur District of Tamil Nadu. This study was conducted on 750 higher secondary school students. This study also found that there was a i) the higher secondary school students have average level of Learning Strategies and its dimensions. ii) There is significant difference between boys and girls of higher secondary students in their Learning Strategies and its dimensions except structural iii) There is no significant difference between rural and urban area of higher secondary students in their Learning Strategies and its dimensions except structural iv) The government, Matriculation and government aided higher secondary school students differ significantly in their Learning Strategies and its dimensions.

***Keywords*---**learning strategies, dimensions, higher secondary, school students.

Introduction

Learning is a cognitive process. It is one of the most important mental functions of human, animals and artificial cognitive systems. It relies on the acquisition of different types of knowledge supported by perceived information. Strategies are 'the secret algorithms of learning'. The term 'strategy' is used to indicate a level above that of skills: strategies are the executive processes which choose, co-ordinate and apply skills. Understanding the strategies of learning and gaining self-knowledge helps us to control these processes and do better. Learning strategies is a technique that assists in the acquisition, manipulation, integration, storage and retrieval of the studied content.

Statement of the problem

The present study is termed as "Learning Strategies and its dimensions of higher secondary school students in relation their selected variables in Thanjavur District"

Need and significance of the study

The outcome of students' achievement in the course depends on the learning strategies they use. Various researches have investigated the relationship between these learning strategies and academic success. Byrne et al. (2001) revealed that the deep and strategic approaches are positively associated with high academic performance and the surface approach with poor academic performance. There was a significant positive relationship between the deep and strategic approach and the total assessment marks. Strichart and Mangrum (1933) also state reasons why students need to learn strategic practices for learning. They contend that "for learning to occur, students must be able to remember newly acquired information so that they can retrieve the information and use it whenever necessary. Information that is not remembered is of no value to students for dealing with current requirements in or out of school. The present study is significant because it encourages autonomous learning especially in the time of the large amounts of information and technological complexities to our world and our societies and it provides insight for both teachers and learners on strategy use. It highlights the importance of using effective strategies in carrying out learning activities. It stresses the value of strategy instruction in planning courses in order to help learners become successful learners.

Review of Literature

Review of literature helped to investigate the various studied undertaken in relation to the same. McWhaw and Abrami (2001) confirmed that students with high level of interest use more strategies than those with low level of interest in a learning area. This is consistent with the result that students have more power or control over the use of strategies than teachers (Eshel & Kohavi, 2003). Age Diseth, Therese Kobbeitvedt (2010) A mediation analysis of achievement motives, goals, learning strategies and academic achievement.‖ Previous research is in conclusive regarding antecedents and consequences of achievement goals and there is a need for more research in order to examine the joint effects of different types of motives and learning strategies as predictors of academic achievements with meta-cognition. Meta-cognition positively affected the use of the four study strategies. The strategy pathway involved positive effects of mastery and performance-approach goals on the use of meta-cognitive and deep cognitive strategies. Further, performance-approach goals positively affected the use of surface cognitive and resource management strategies. The use of meta-cognitive and resource management strategies had a positive and the use of surface cognitive strategies had a negative effect on exam scores.

Objectives of the Study

- To find out the level of Learning Strategies and its dimensions among higher secondary school students
- To find out whether there is any significance difference between Learning Strategies and its dimensions of higher secondary school students with respect to gender.
- To find out whether there is any significance difference between Learning Strategies and its dimensions of higher secondary school students with respect to location of the students
- To find out whether there is any significance difference between Learning Strategies and its dimensions of higher secondary school students with respect to type of the school

Hypothesis of the study

- There is no significant difference between Learning Strategies and its dimensions of higher secondary school students with respect to gender.
- There is no significant difference between Learning Strategies and its dimensions of higher secondary school students with respect to location of the students
- There is no significant difference between Learning Strategies and its dimensions of higher secondary school students with respect to type of the school

Design of the Study

The investigator has used survey method to study on Learning Strategies and its dimensions of higher secondary school students in relation their selected variables. The survey method gathers data from a relatively large number of cases of particular time. It attempts to describe and interpret what exists at present conditions, processes, trends, attitudes and belief for which the survey type of research would be more relevant and useful.

Population & Sample of the Study

The population for the present study comprises of higher secondary school students, who were studying higher secondary school in Thanjavur district of Tamil Nadu. The sample consists of 750 higher secondary school students.

Testing the Null Hypothesis
Null Hypothesis

There is no significant difference between Learning Strategies and its dimensions of higher secondary school students with respect to Gender, Location of the Students and Type of the school

Table 1
Significant difference between Learning Strategies and its dimensions of higher secondary school students with respect to Gender

Dimension	Boys N=366		Girls N=384		Calculated value of 't'	Remarks at 5% level
	Mean	SD	Mean	SD		
Mnemonic	39.55	7.37	40.74	8.89	1.99	S
Generative	30.41	5.48	32.68	6.11	5.35	S
Structural	40.65	7.18	41.53	8.49	1.52	NS
Learning Strategies	110.61	17.75	115.07	22.03	2.87	S

(At 5% level of significance, the table value is 1.96)
NS- Not significant, S- Significant

It is inferred from the above table that the calculated value of 't'(1.99, 5.35 and 2.87) is greater than the table value of 't' (1.96) at 5% level of significance for df 749 in respect of their leaning strategies and its dimensions of Mnemonic and Generative except Structural. Thus, there is significant difference between boys and girls higher secondary school students in their learning strategies and its dimensions of Mnemonic and Generative. Hence the null hypothesis is ***rejected.*** It is inferred from the above table that the calculated value of 't'(1.52) is less than the table value of 't' (1.96) at 5% level of significance for df 749 in the Structural dimension. Hence the null hypothesis is ***accepted.***

Table 2
Significant difference between Learning Strategies and its dimensions of higher secondary school students with respect to Location of the Students

Dimension	Rural N=364		Urban N= 386		Calculated value of 't'	Remarks at 5% level
	Mean	SD	Mean	SD		
Mnemonic	40.51	8.14	39.82	8.25	1.142	NS
Generative	41.58	8.16	32.04	5.97	1.611	NS
Structural	31.07	5.83	40.64	7.71	2.248	S
Learning Strategies	112.69	20.05	112.97	20.32	0.189	NS

(At 5% level of significance, the table value is 1.96)
NS- Not significant, S- Significant

It is inferred from the above table that the calculated value of 't'(2.248) is greater than the table value of 't' (1.96) at 5% level of significance for df 749 in the Structural dimension of learning strategies. Thus, there is significant difference between rural and urban higher secondary school students in the dimension of structural. Hence the null hypothesis is ***rejected.*** Hence the null hypothesis is ***accepted.*** It is inferred from the above table that the calculated value of 't'(1.142, 1.611 and 0.189) is less than the table value of 't' (1.96) at 5% level of significance for df 749 in the dimensions of Mnemonic, Generative and leaning strategies. Thus, there is no significant difference between rural and urban higher secondary school students in the dimensions of Mnemonic, Generative and Leaning Strategies. Hence the null hypothesis is ***accepted.***

Table 3
Significant difference between Learning Strategies and its dimensions of higher secondary school students with respect to Type of the school

	Sources of variation	Sum of square	Mean square of variance	Calculated value of 'F'	Remark at 5% level
Mnemonic	Between	2342.98	1171.49	18.206	S
	Within	48065.76	64.34		
Generative	Between	283.95	141.97	4.083	S
	Within	25975.52	34.77		
Structural	Between	681.99	340.99	5.539	S
	Within	45988.71	61.56		
Learning Strategies	Between	7149.25	3574.62	8.968	S
	Within	297762.92	398.61		

(At 5% level of significance, for (2,747) df the table the table value 'F' is 3.00)
NS- Not significant, S- Significant

It is inferred from the above table that the calculated value of 'F' (18.206, 4.083, 5.539 and 8.968) is greater than the table value of 'F' (3.00) for df (2, 747) at 5% level significance. Thus, the Government, Government Aided and Matriculation higher secondary school students differ significantly in their Learning Strategies and its dimensions. Hence null hypothesis is ***rejected.***

Findings of the study

- 24.3% of the higher secondary school students have low, 56.1%, of them have average and 19.6% of them high level of Mnemonic. 24.1% of the higher secondary school students have low, 54.3%, of them have average and 21.6% of them high level of Generative.23.5% of the higher secondary school students have low, 52.8% of them have average and 23.7% of them high level of Structural.23.6% of the higher secondary school students have low, 52.3% of them have average and 24.1% of them high level of Learning Strategies.
- There is significant difference between boys and girls of higher secondary students in their Learning Strategies and its dimension of Mnemonic, Generative except Structural. While, comparing means scores of boys' students have better than girl's students in their Learning Strategies.
- There is significant difference between rural and urban area of higher secondary students in their Structural dimension of Learning Strategies except Learning Strategies and its dimensions of Mnemonic, Generative. While, comparing means scores of the higher secondary urban students have better than rural area higher secondary students in their Learning Strategies.
- The government, Matriculation and government aided higher secondary school students differ significantly in their Learning Strategies and its dimensions. While comparing means scores of Types of the school, Matriculation (116.85) higher secondary school students are better than Government (112.20) and Government Aided (109.45) school students in their Learning Strategies.

Recommendations of the Study

- Students should learn to expand and attain, learning strategies like Mnemonic, Generative and Structural that enhances their commitment in the academic tasks they undertake, this in turn, enhances their academic performance. The students who are willing to improve their academic skills and ability to learn, should be guided to make effective use of learning strategies thereby making optimum use of their academic experiences during the course of their study.
- Teachers should promote students to improve and make efficient use their Mnemonic strategies like Dual coding, Organization, Association and develop skills, such as planning and focused execution while they are involved in academic tasks.
- Teachers should equip themselves with information on students' motivation for learning. More research on this front should be carried to have a profile of the learning strategies being used by rural area government school students.
- The students should be provided with the assignments, projects, worksheets etc. based on higher order learning that requires use of Structural and metacognitive learning strategies along with suggestive means to develop for enhancement of their learning performance.

Educational Implications

The term learning strategies is used in a very broad sense to identify a number of different competencies that researchers and practitioners have postulated as necessary, or helpful, for effective learning and retention of information for later use. These competencies include cognitive information- processing strategies, such as techniques for organizing and elaborating on incoming information to make it more meaningful: active study strategies, such as systems for note-taking and test preparation, coping with performance anxiety, and directing attention to the learning task at hand. In addition, there is a range of metacognitive strategies that learners can use to detect discrepancies between what they know and what they do not know and to monitor and direct their acquisition of the new information. It should be noted that the term “learner” is being used here to refer to any person trying to acquire new knowledge, attitudes, or skills, regardless of whether this occurs in a formal school setting, an on-the-job placement, or an informal interaction.

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