

INFLUENCE OF CLASSROOM CLIMATE ON LEARNING DIFFICULTIES IN MATHEMATICS AMONG SECONDARY SCHOOL STUDENT

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Abstract

The present Study is an attempt to find out the Influence of Classroom Climate on Learning Difficulties in Mathematics among Secondary school Students. Classroom Climate scale developed by Shefari Pandiya and Classroom Climate scale containing 35 items and Learning difficulties in mathematics scale developed and standardized by Janakiraman and Dr Leo Stanly and containing 60 items was used to collect the required data. Students studying in standard IX in high and higher secondary schools of Kancheepuram district formed the population. Among these, ten schools were randomly selected. From these three schools, 300 students were selected using lottery method and they were administered the Classroom Climate scale and Learning difficulties in Mathematics scale. The minimum score of the Classroom Climate scale is 35 and maximum score is 140 and learning difficulties in Mathematics scale minimum score is 60 and maximum score is 300. The findings revealed that there is no significant difference in the classroom climate and learning difficulties in Mathematics of secondary school students with respect to Gender, there is significant difference in classroom climate and learning difficulties in Mathematics of secondary school students with respect to Nature of school and there is significant positive relationship between the classroom climate secondary school students and their learning difficulties in Mathematics.

Keywords: *Classroom Climate, Learning Difficulties, Mathematics and Secondary School Students.*

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I. Introduction

Education helps to promote the all round development of each and every individual. Education enables the individual to live his life efficiently and successfully. Every individual has certain goals in life. He tries to achieve those goals. In this endeavor he/she is to acquire certain skills to lead a happy life in the present democratic society that encounters a number of challenges in economic, social, political and technological fields. These skills are known as 'life skills'. Every teacher has to keep these life skills in his/her mind while creating optimum and challenging learning atmosphere in the class room situation. Classroom climate is defined as the types of classroom environment, social climate, the emotional and physical aspect of the classroom that is created for the idea for teachers influence student's growth and behavior. The student's behavior affects peer interaction the responsibility of influencing these behaviors is placed with the instructor and which as encompasses all the socio-psychological dimensions of class room life. Classroom climate was most important for promote positive learning environment and stimulate the students who want to learn. Students' achievement can be influenced by many factors and one among them is classroom climate. The learning difficulties faced by the students can be influenced by classroom climate. Hence the present investigator attempted a study to find out influence of classroom climate on learning difficulties of Mathematics among secondary students.

II. Literature Survey

Ayesha Kausar, Almas Ikram Kiyani¹ and Qaiser Suleman (2017) conducted a study on "Effect of classroom climate on the Academic Achievement of Secondary School Students." This study was found that the effect of classroom climate on the academic achievement of students in the subject of studies in Rawalpindi district from Pakistan. All the secondary school students were selected the population of the study. The experimental design was used in the study. This study was limited to Xth Grade students and sample students were divided into two groups namely control and experimental group. To found to be the academic achievement of students, achievement test was developed. Data was collected through pretest and posttest techniques. Raw data was organized, tabulated, analyzed and interpreted applying descriptive statistics that is mean, standard deviation and inferential statistics that is independent sample t-test. The study revealed that a well-managed and vibrant classroom climate has a positive effect on the academic achievement of students in the subject of studies Pakistan at secondary level.

Bed Raj Acharya(2017) conducted a study on " Factors Affecting Difficulties in learning Mathematics by Mathematics learners." In this study explores the adversities faced by public school students in learning Mathematics in their learning context. The study was to explore the causes of learning difficulties in Mathematics. The design of the study was adopted in qualitative. Classroom observed of three schools of Arghakkanchi disttict and interview taken to the research participants to achieve the research objective. It discussed the different data tests from the potential participants. From the data was analysis and interpret the study, it was concluded that students, teachers and parents have to

play an important roles as key and provider of sound environment for improvement of pass rate respectively. Teachers lack the linkage between new Mathematical concepts and previously learned Mathematics structure, Mathematics anxiety; negative feeling of Mathematics, Economic condition and their educational backgrounds, school management system, lack of infrastructure of school and lack of regular assessment system of school are the main important causes for the difficulties in learning Mathematics.

Dwi Hastuti Riyadi T and Dewi Retno Sari S (2018) conducted a study on “Analysis of Junior high school students in Mathematics learning difficulties on the material relations and functions.” This study found to analyze the Mathematics learning difficulties of Junior high school students in Mathematics learning difficulties on the material relations and functions and was conducted on 8th grade students in one of Junior high school first semester in Surakarta city. The result of National Examination for the city of Surakarta, can be seen from the absorption of UN value in 2015 with indicators to solve problems related to the functions of 57.23%, while the year 2016 with indicators determine the value of the function if the formula of the known functions of 52.70%. This study uses test methods and interviews to found to be the learning difficulties and their causes. Based on the test and interview on three Junior high school students who have high, medium and low learning achievements, it is found that students got difficulties in determining the value of function and value of X, if the image of X is known. The Students get difficulty in solving problems related to the function and determine the value of the functions and determined the value of X if the image of X is given.

III. Significance of the Study

Academic achievement has been quite successful in attracting the attention of educationists because of its importance in academic and professional field. The study of classroom climate and its effect on students learning has been going on for more than a century. A positive classroom climate leads to values improvement in student achievement and attitudes. The educational standard of a student is usually determined by the achievement. A student’s academic achievement is influenced by several factors like improvement in curricula, teaching techniques, teacher training and so on. But researches show that other than this, there are several others factors also that influence the academic achievement of the pupils. The major reasons for unequal academic achievement in spite of being intelligent may lie outside the school.

Learning takes place effectively only when proper and congenial climate is provided for children in classroom. Thus, classroom climate plays an inherent role in molding the innate potentialities of the individual. Research studies also reveals that classroom climate and school should provide feeling of security and conductive environment for learning free from fear, tension and frustration, to enhance academic achievement had much to do with the academic achievement of pupils.

Achievement in secondary school is a turning point in an individual’s life for example if the mark score of a science of a science student is blow 50% he is not eligible for professional entrance examination. But for a common science student, it is not easy to score high marks without fighting

against the factors which may retard his growth in learning. The investigator approaches this problem with critical views of higher secondary school teacher. If the school factors are positive then they will lead to good academic achievement compared to a school where there are no such favorable factors for the student's achievement.

The investigator tried to conduct a study on difficulties in learning Mathematics of secondary school students in relation to their classroom climate. Here, the investigator feels that the problem is relevant to the present situation and like s to reveal the reality behind it. The investigator feels the results of the study could give an insight to teachers and students in enhancing the performance in Mathematics and thus paving way for a prospective future.

IV. Aim of the Study

This study was attempted to:

- To find out if there is any significant difference between the male and female secondary school students in their classroom climate.
- To find out if there is any significant difference among the secondary school students in boys, girls and co-education schools in their classroom climate.
- To find out if there is any significant difference between the male and female secondary school students in their learning difficulties in Mathematics.
- To find out if there is any significant difference among the secondary school students studying in boys, girls and co-education schools in their learning difficulties in Mathematics.
- To find out if there is any significant relationship between the classroom climate secondary school students and their learning difficulties in Mathematics.

V. Methodology

Method of the current study included the research method, sample size and tools:

Method: In the present study, the investigator intended to measure the "Influence of Classroom Climate on Learning Difficulties in Mathematics among Secondary school Students." So, this study aims at measuring the Classroom Climate and Learning Difficulties in Mathematics. Here, normative survey method for conducting research, because it provides information useful to the solution of educational problems and it gathers data from relatively large number of samples.

Population and Sample: This study was conducted in Kanchipuram District of Tamilnadu. Sample of the present study consists of 300 students studying in high/ higher secondary schools and they were selected by following stratified random sampling technique.

Tools: Classroom Climate Scale developed and standardized by **Shafari Pandiya** and Classroom Climate scale containing 35 items and the Classroom Climate has two point scale, minimum score of Classroom Climate scale is 35 and maximum score is 70. Learning difficulties in Mathematics scale

developed and standardized by **Janakiraman and Dr Leo Stanly** and containing 60 items and it has four dimensions which consisted of 60 questions with 25 Positive and 35 negative items under four dimensions namely lack of interest, teaching methodology, syllabus and fundamentals of Mathematics was used to collect the required data. Each dimension has fifteen items. So, the maximum and minimum score for this tool is 300 and 60.

VI. Results and Discussion

Hypothesis -1

There is no significant difference between the male and female secondary school students in their classroom climate.

Table 1. Mean difference in the classroom climate of secondary school students with respect to Gender

Gender	N	Mean	S.D.	df	t-value	Remark
Male	158	70.60	6.86	298	0.25	NS
Female	142	70.79	6.57			

From the above table, it is found that the calculated t-value (0.25) is less than the table value for 298 degrees of freedom at 5% level of Significance. Hence, the hypothesis is accepted. That is, there is no significant difference between the male and female secondary school students in their classroom climate.

Hypothesis -2

There is no significant difference among the secondary school students in boys, girls and co-education schools in their classroom climate.

Table 2. Mean difference in the classroom climate of secondary school students with respect to Nature of school

Variable	Nature of School	Sum of Squar	df	Mean Squar	F-value	Remark
classroom clima	Between Groups	1032.85	2	516.42	12.21	S
	Within Groups	12555.55	297	42.27		
	Total	13588.40	299			

From the above table, it is found that the calculated F-value (12.21) is more than the table value for 2,297 degrees of freedom at 5% level of significance. Hence, the hypothesis is rejected. That is there is significant difference among the secondary school students in boys, girls and co-education schools in their classroom climate. Boys' school students have better classroom climate than their counterparts.

Hypothesis – 3

There is no significant difference between the male and female secondary school students in their learning difficulties in Mathematics.

Table 3. Mean difference in learning difficulties in Mathematics of secondary school students with respect to Gender

Gender	N	Mean	SD	df	t-value	Remark
Male	158	155.97	26.12	298	1.392	NS
Female	142	160.48	29.54			

From the above table, it is found that the calculated t-value (1.392) is less than the table value for 298 degrees of freedom at 5% level of Significance. Hence, the hypothesis is accepted. That is, there is no significant difference between the male and female secondary school students in their learning difficulties in Mathematics.

Hypothesis -4

There is no significant difference among the secondary school students studying in boys, girls and co-education schools in their learning difficulties in Mathematics.

Table 4. Mean difference in learning difficulties in Mathematics of secondary school students with respect to Nature of school

Variables	Nature of school	Sum of Squar	df	Mean Squa	F-value	Remark
Learning difficulti in Mathematics	Between Groups	1665.06	2	832.53	14.95	S
	Within Groups	16539.75	297	55.68		
	Total	18204.81	299			

From the above table, it is found that the calculated F- value (14.95) is more than the table value for 2,297 degrees of freedom at 5% level of significance. Hence, the hypothesis is rejected. That is,

there is significant difference among the secondary school students studying in boys, girls and co-education schools in their learning difficulties in Mathematics. Co-education school students have more learning difficulties in Mathematics.

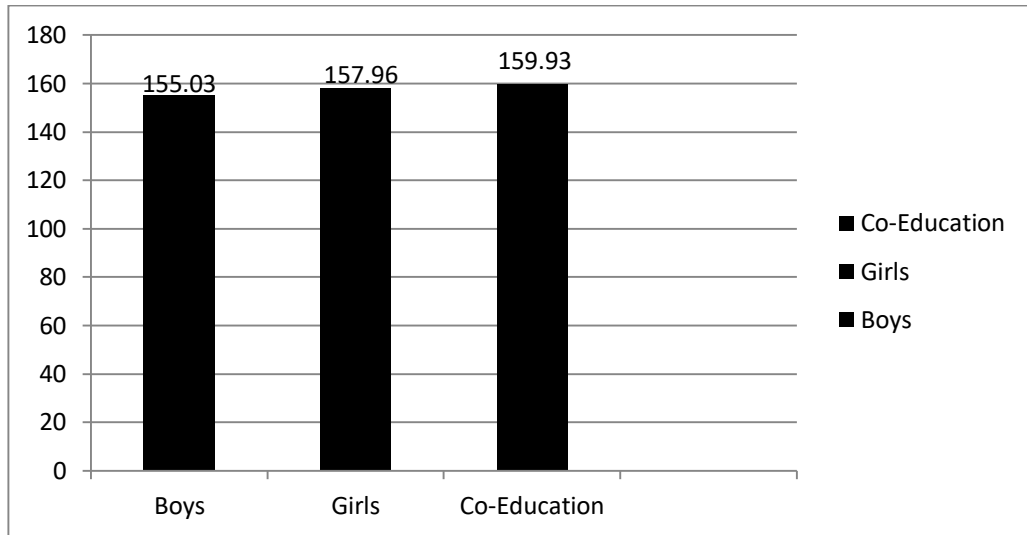


Figure 2. It shows mean difference in learning difficulties in Mathematics of secondary school students with respect to Nature of school

Hypothesis – 5

There is no significant relationship between the classroom climate secondary school students and their learning difficulties in Mathematics.

Table -5: Relationship between the classroom climate secondary school students and their learning difficulties in Mathematics

Variable	N	r-value	Table Value	Remark
Classroom Climate and Learning difficulties in Mathematics	300	0.627	0.113	S

From the above table, it is found that the calculated r- value (0.627) is greater than the table value for 298 degrees of freedom at 5% level of Significance. Hence, the hypothesis is rejected. That is, there is significant relationship between the classroom climate secondary school students and their learning difficulties in Mathematics. Hence there is positive relationship between the classroom climate secondary school students and their learning difficulties in Mathematics.

VII. Conclusion

The present study found out that there is no significant difference in the classroom climate and learning difficulties in Mathematics of secondary school students with respect to Gender, there is significant difference in classroom climate and learning difficulties in Mathematics of secondary school students with respect to Nature of school and there is significant positive relationship between the classroom climate and learning difficulties in Mathematics secondary school students. Hence classroom climate plays a vital role in learning difficulties in Mathematics of secondary students. If the students are provided with appropriate classroom climate for learning, they will not find any difficulties in learning Mathematics.

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