International Journal of Academic Research and Development
ISSN: 2455-4197
Impact Factor: RJIF 5.22
www.academicsjournal.com
Volume 3; Issue 4; July 2018; Page No. 01-04

A comparative study on learning difficulties in high school mathematics of government and non-government schools

Remya R
Lecturer, Department of Mathematics, Sun College of education Erachakulam, Kanyakumari, Tamil Nadu, India

Abstract
The research paper is an outcome of a comparative study to assess learning difficulties in high school mathematics of government and non-government schools of Kanyakumari district. For this purpose, the information has been collected from the high school students of Kanyakumari district. The study has employed normative survey method. To measure learning difficulties the investigator constructed validated tool to identify the learning difficulties. Various statistical techniques were administered on 400 pupils of high schools of Kanyakumari district. Major objectives of the study are: 1.to study the level of learning difficulties in high school mathematics. 2. to compare the learning difficulties in high school mathematics of government and non-government schools. 3. to study the effect of background variables namely gender, locale and religion on learning difficulties in high school mathematics of government and non-government schools. Key words: school; mathematics; government; non-government.

Keywords: learning difficulties, mathematics

Introduction
Teaching of mathematics helps the development of scientific literacy, some well-defined abilities, aptitudes and values in the child. It is found that in schools several pupils find difficulty in learning mathematics. Learning difficulty is a condition where one is unable to learn, understand and communicate at the same pace as his / her peers. It affects how one understands information and they communicate. The identification of learning difficulties in mathematics is very necessary for every teacher to develop corrective programs. To avoid this difficulty, it is necessary to introduce a new approach in teaching learning process which help the students to acquire knowledge of mathematics that can be abled by giving instruction on the basis of needs, abilities, interest and aptitudes of the students.

Hypothesis
1. There exists no significant difference in the mean scores of learning difficulties in high school mathematics of government and non-government schools.
2. There exists no significant difference in the mean scores of learning difficulties in high school mathematics with respect to the background variables gender, locale and religion of government and non-government schools.

Methodology
In the present study, the researcher has employed normative survey method to compare the learning difficulties in high school mathematics of government and nongovernment schools.

Sample
In the present study, 400 high school students of Tamil Nadu state (Kanyakumari district only) have been selected as sample using stratified random sampling technique. To identify the learning difficulties the investigator constructed a tool to collect data.

Learning difficulty refers to problems in learning a subject. Here the term difficulty means the overall difficulty in understanding terms, concepts, ideas, solving problems and so on. In Tamil Nadu, high school refers to schools having standard IX and X.

Government Schools
Government schools generally refer to primary or secondary schools mandated for or offered to all children without charge, funded in whole or in part by taxation.

Non- Government Schools
Non-Government schools operate independently of the state and even make a profit by charging parents tuition fees.

Statistical Techniques
Statistical tools like percentage, mean, standard deviation, t test have been used to analyse the above said objectives.

Analysis and Interpretation

Table 1: Percentage distribution of different levels of learning difficulties in high school mathematics of government schools.

S. No	Govt. School Students	Count	Percentage
1	Low	36	18
2	Medium	130	65
3	High	34	17
	Total	200	100

From the table it is clear that 18% of government school students have low level of learning difficulty, 65% have

medium level and 17% have high level of learning difficulty. Hence it can be said that government school students have medium level of learning difficulties in high school mathematics.

Table 2: Percentage distribution of different levels of learning difficulties in high school mathematics of non - government schools.

Sl. No	Non - Govt. School Students	Count	Percentage
1	Low	28	14
2	Medium	135	67.5
3	High	37	18.5
	Total	200	100

From the table it is clear that 14% of non – government school students have low level of learning difficulty, 67.5% have medium level and 18.5% have high level of learning difficulty. Hence it can be said that non – government school students have medium level of learning difficulties in high school mathematics.

Comparison of learning Difficulties in High School Mathematics of Government and Non-Government Schools.

Null hypothesis

There exists no significant difference in the mean scores of learning difficulties in high school mathematics of government and non- government schools.

Table 3: Comparison of learning difficulties in high school mathematics of government and non-government schools

Learning Difficulties	Mean	SD	N	t	P	Level
Government	20.73	4.58	200	2.74	0.006	0.01
Non- Government	19.33	5.59	200			

From the above table, the calculated t value is 2.74, ($p < 0.01$) is significant at 0.01 level. Therefore, the two groups differ significantly in their learning difficulties in high school Mathematics. So, the null hypothesis is rejected. i.e., there exists significant difference in the mean scores of learning difficulties in high school mathematics of government and non- government schools. The mean scores of two groups' shows that the learning difficulties in high school mathematics of government school students is higher than that of non-government school students.

Comparison of learning difficulties in high school mathematics of government and non- government schools with respect to the background variable gender

Null hypothesis

a) There exists no significant difference between males of government and non-government schools on their learning difficulties in mathematics.

Table 4: Comparison of learning difficulties in high school mathematics among males of government and non – government schools

Male	Mean	SD	N	t	P	Level
Government	21.74	4.62	104	4.12	0.000	0.01
Non- Government	18.78	6.11	120			

From the above table, the calculated t value is 4.12, ($p < 0.01$) is significant at 0.01 level. Therefore, the two groups differ significantly in their learning difficulties in high school Mathematics. So, the null hypothesis is rejected. i.e., there exists significant difference in the mean scores of learning difficulties in high school mathematics among males of government and non- government schools. It is also found that male students from government schools have significantly high learning difficulties in mathematics than that of non-government schools.

Null hypothesis

b) There exists no significant difference between females of government and non-government schools on their learning difficulties in mathematics.

Table 5: Comparison of learning difficulties in high school mathematics among females of government and non- government schools

Female	Mean	SD	N	t	P	Level
Government	19.63	4.31	96	0.77	0.444	NS
Non- Government	20.15	4.62	80			

From the above table, the calculated t value is 0.77, ($p>0.05$) is not significant at any level. Therefore the null hypothesis accepted. i.e., there exists no significant difference in the mean scores of learning difficulties in high school mathematics among females of government and non-government schools. That is learning difficulties in high school mathematics of government and non-government school female students do not statistically differ with their learning difficulties. It may, therefore, be said that the government and non-government school female students possess almost same level of learning difficulties in high school mathematics.

Comparison of learning difficulties in high school mathematics of government and non-government schools with respect to the background variable locale

Null hypothesis

a) There exists no significant difference in the mean scores of learning difficulties in high school mathematics among rural students of government and non-government schools.

Table 6: Comparison of learning difficulties in high school mathematics among rural students of government and non - government schools

Rural	Mean	SD	N	t	P	Level
Government	20.62	5.02	92	2.42	0.016	0. 05
Non- Government	18.88	5.12	110			

From the above table, the calculated t value is 2.42, ($p < 0.05$) is significant at 0.05 level. Therefore, the two groups differ significantly in their learning difficulties in high school Mathematics. So, the null hypothesis is rejected. i.e., there exists significant difference in the mean scores of learning difficulties in high school mathematics among rural students of government and non- government schools. It is also found that rural students from government schools have significantly

high learning difficulties in mathematics than that of non-government schools.

Null hypothesis

b) There exists no significant difference in the mean scores of learning difficulties in high school mathematics among urban students of government and non-government schools.

Table 7: Comparison of learning difficulties in high school mathematics among urban students of government and non - government schools

Urban	Mean	SD	N	t	P	Level
Government	20.81	4.22	107	1.25	0.213	NS
Non- Government	19.86	6.11	93			

From the above table, the calculated t value is 1.25, ($p > 0.05$) is not significant at any level. Therefore the null hypothesis accepted. i.e., there exists no significant difference in the mean scores of learning difficulties in high school mathematics among urban students of government and non-government schools. That is learning difficulties in high school mathematics of government and non - government urban students do not statistically differ with their learning difficulties. It may, therefore, be said that the government and non- government urban students possess almost same level of learning difficulties in high school mathematics.

Comparison of learning difficulties in high school mathematics of government and non- government schools with respect to the background variable religion

Null hypothesis

a) There exists no significant difference in the mean scores of learning difficulties in high school mathematics among Hindu students of government and non-government schools.

Table 8: Comparison of learning difficulties in high school mathematics among Hindu students of government and non-government schools.

Hindu	Mean	SD	N	t	P	Level
Government	21.07	4.49	84	4.29	0.000	0.01
Non- Government	17.57	5.37	68			

From the above table, the calculated t value is 4.29, ($p < 0.01$) is significant at 0.01 level. Therefore, the two groups differ significantly in their learning difficulties in high school Mathematics. So, the null hypothesis is rejected. i.e., there exists significant difference in the mean scores of learning difficulties in high school mathematics among Hindu students of government and non- government schools. It is also found that Hindu students from government schools have significantly high learning difficulties in mathematics than that of non-government schools.

Null Hypothesis

b) There exists no significant difference in the mean scores of learning difficulties in high school mathematics among Christian students of government and non-government schools.

Table 9: Comparison of learning difficulties in high school mathematics among Christian students of government and non-government schools

Christian	Mean	SD	N	t	P	Level
Government	20.09	5.01	69	0.33	0.742	NS
Non- Government	20.36	5.47	98			

From the above table, the calculated t value is 0.33, ($p > 0.05$) is not significant at any level. Therefore the null hypothesis accepted. i.e., there exists no significant difference in the mean scores of learning difficulties in high school mathematics among Christian students of government and non-government schools. That is learning difficulties in high school mathematics of government and non-government school Christian students do not statistically differ with their learning difficulties. It may, therefore be said that the government and non- government school Christian students possess almost same level of learning difficulties in high school mathematics.

Null Hypothesis

c) There exists no significant difference in the mean scores of learning difficulties in high school mathematics among Muslim students of government and non-government schools.

Table 10: Comparison of learning difficulties in high school mathematics among Muslim students of government and non - government schools

Muslim	Mean	SD	N	t	P	Level
Government	21.04	4.06	47	1.04	0.298	NS
Non- Government	19.85	5.69	34			

From the above table, the calculated t value is 1.04, ($p > 0.05$) is not significant at any level. Therefore the null hypothesis accepted. ie, there exists no significant difference in the mean scores of learning difficulties in high school mathematics among Muslim students of government and non- government schools. That is learning difficulties in high school mathematics of government and non- government school Muslim students do not statistically differ with their learning difficulties. It may, therefore, be said that government and non-government school Muslin students possess almost same level of learning difficulties in high school Mathematics.

Conclusions

The major conclusions drawn from the study are the following.

1. The learning difficulties in high school mathematics of government schools is higher than that of non - government schools.
2. The female students of government and non- government schools are found to have almost same level of learning difficulties in high school mathematics.
3. The learning difficulties in high school mathematics among rural students of government school is higher than that of non –government schools.
4. The urban area students of government and non-

government schools are found to have almost same level of learning difficulties in high school mathematics.
5. The learning difficulties in high school mathematics among Hindu students of government school is higher than that of non –government schools.
6. The Christian students of government and non-government schools are found to have almost same level of learning difficulties in high school mathematics.
7. The Muslim students of government and non- government schools are found to have almost same level of learning difficulties in high school mathematics.

Suggestions for Overcome Learning Difficulty

1. The achievement of government school students can be improved by administering diagnostic tests and locating the areas of difficulty and then taking proper remedial measures.
2. Sufficient time is to be spend at the initial stages of the lesson. Initiation should ensure motivation and stamp the right things on the minds of the students.
3. Basic knowledge should be provided in a simple, clear and understanding manner.
4. Government school students are not interested in doing assignments, homework etc., when compared to the non-government school students. So the teacher should give limited, simple and interesting problems to them as homework and assignments.
5. Government school students are not able to understand the idea of definitions when compared to the non – government school students. So the teacher should teach the definitions by using teaching aids and relating the concepts in real life. So that they are able to grasp the idea easy.
6. To overcome learning difficulties steps should be taken to locate the difficult areas at each stage and more drill must be given.

References

1. Commodari, Elena. Pre school teacher attachment school readiness and risk of learning difficulties. Early child hood research quarterly. 2013; 28(1):123-133.
2. Chen, Tsai-yu, Chang, Goretti BY. The Relationship between Foreign language Anxiety and learning difficulties. Foreign language Annals. 2004; 37(2):279-289.
3. Jose, Deva, Kingsly C. Learning Difficulties faced by Tamil medium students through English Medium at college level. GCTE Journal of Research and Extension in Education. 2012; 7(1):74-78.
4. Jose, Deva, Kingsly C, Thamotharan V. Learning Difficulties of higher secondary students. New Horizonsin Educational Research. 2012; 4(2):44-50.
5. Khan, Alam, Intakhab. Difficulties in the teaching of English vocabulary. The Bilingual Context of Soudi Arabia. The Educational Review. 2000; 106(4):1-4.
6. Kroesbergen, Evelyn H, Van Luit, Johannes EH, Nagleiri, Jack A. Mathematical learning difficulties and PASS cognitive process. Journal of Learning Disabilities. 2003; 36(6):574-582.
7. Rai, Kamlesh. Children with mild learning difficulties in an integrated and in a special school. Indian Educational Review. 2008; 44(2):120-124.
8. Reddy, Lokanadha, Santhakumari. Identification an assessment of second language learning difficulties higher secondary students. The Educational Review. 2004; 2(3):66-68.
9. Thomas, Grace, Whitten, Janet. Learning Support for students with learning difficulties in India and Australia: Similarities and Differences. International Educational Journal: Comparative perspectives. 2012; 11(1):3-21.
10. Vijayal P, Premkumari N. Impact of Parents education on the learning problems of high school students in Bangalore city. Research and Reflections on Educations. 2009; 7(1):5-6.