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A Study on Mathematical Skills of High School Students Theni District

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Abstract

Mathematics skill isindividual is unable to resolve certain situational problems in his life and his inadequate attempts to do so are having undesirable effects, such as anxiety, depression and the creation of additional problems. The tool was developed and validated by the Investigator and Research Supervisor. The investigator has prepared the tool with 30 statements. The investigator had used a simple random sampling technique for selecting a sample of 120 High School students from the Theni District. There is a significant difference between male and female high school students in their mathematics skill. When compare the Female (23.87) students better than male (22.67) students in their mathematics skills with respect to gender. There is a significant difference between male and female high school students in their mathematics skill. . When compare the urban (24.01) students better than rural students (22.57) in their mathematics skills with respect to locality.

Keywords: Mathematics skill and High school

INTRODUCTION

Ability denotes the power or capacities of an individual. Ability commonly refers to something which a person can do here and there. Ability is the quantity of being able to

perform a mental or physical task or action with a minimum or greater degree of success. According to “Lee” (1955) Ability is defined as success in a subject as the power to grasp and manipulate the fundamental operations required for its study.

MATHEMATICAL ABILITY

“Mathematical ability is the quantity of being able to think and choose the accurate method and able to apply the correct principles in different new types of problems”. In the computer conscious world of today, mathematics is playing an important role and the future is going to be more mathematically inclined. The basic knowledge of modem mathematics is vital in day to day life. At the maximumelementary level, a information of mathematics is crucial in normal living. More advanced mathematical concepts and techniques are indispensable tools in commerce, engineering and the natural and social sciences. Thus, the learning of mathematics can represent firstly, a basic preparation for adult life and secondly, an entry to a wide array of career choices. There is a common belief that knowledge of mathematics is essential to succeed in different types of technical courses.

THE RATIONALE OF THE STUDY

The entire world is now moving in a direction of enhancing the quality of life. Students have to be provided very many skills which can enable them to keep pace with the progress of the world. Young people hold the promise of our upcoming. Working with and helping the students have continuously been a importance across times and cultures. Then the shifting times hasfaced us in excellenttechniques to find habits to guard and authorise our our young children completely to encounter the up-to-the-minute demands and numerousexperiments of life Education has a distinctpart to performance in it. In this direction life skills, education can do a lot of good to students. The life skills approach contributes to the well-being of our young and empower them to strengthen their acquaintance and core life skills and enables them to effectively manage up with dangerous situations, they encounter in their daily lives. By its very nature, mathematics is the science of logical thinking and reasoning. Problem-solving is the highlighting activity of mathematics and the first and foremost aim of teaching mathematics at the secondary stage is to enable the students to solve the problems of real life. Mathematics is a man-made science and it was evolved out of the felt needs of man. Therefore mathematics if rightly taught can prove itself that it successfully performs its role of training the child for life. There is no exaggeration in saying that mathematics is one of the ways of developing life needing skills in an individual

through its learning. Therefore the researcher felt the necessity of conducting a study on the role of mathematical ability in developing life skills in students.

STATEMENT OF THE PROBLEM

A study on Mathematical Skills of High School Students Theni District

Operation of the terms

Mathematics skill

Mathematical skills are the quantity of being able to think and choose the accurate method and able to apply the correct principles in different new types of problems

High school

High school Students By high school students, the investigator means the students studying IX standard in high schools under the State Board of High School Education.

Theni district

Theni District is unique of the 38 districts in Tamil Nadu in India. Theni district is situatednearby Madurai district. The city of Theni is the region headquarters.

OBJECTIVES:

1. To find out whether there is a significant difference between male and female high school students in their mathematics skill with respect to gender.
2. To find out whether there is a significant difference between male and female high school students in their mathematics skill with respect to locality
3. To find out whether there is a significant difference among boys, girls and co-education school of higher school students in their mathematics with respect to the nature of the school.
4. To find out whether there is a significant difference among Government, aided and self-financed school of higher school students in their mathematics with respect to the type of school.

HYPOTHESIS:

1. There is a significant difference between male and female high school students in their mathematics skill with respect to gender.
2. There is a significant difference between male and female high school students in their mathematics skill with respect to locality
3. There is a significant difference among boys, girls and co-education school of higher school students in their mathematics with respect to the nature of the school.

4. There is a significant difference among Government, aided and self-financed school of higher school students in their mathematics with respect to the type of school.

POPULATION FOR THE STUDY

The population for the study includes all the high school students studying in the schools of the Theni district of Tamil Nadu.

SAMPLE FOR THE STUDY

A sample is a small proportion of the population selected for observation and analyses. The main methods of selecting a sample are deliberate or purposive sampling, random sampling, stratified sampling, quota sampling etc. The investigator had used a simple random sampling technique for selecting a sample of 120 High School students from the Theni District.

METHOD USED FOR THE STUDY

The step or procedure in research is an element of all methods of research, while, different methods of research have different distinguishing features. In this study, the investigator adopted the survey method to study a study on Mathematical Skills of High School Students Theni District

TOOLS USED FOR THE PRESENT STUDY.

The tools are used for the present study to collect data which are given in the below table. The tools are meant for high school students.

Description of the Tools

A) Personal Data

Form the personal data form is used to get general information about the higher secondary students. The investigator has prepared the personal data form with due consideration of the background variables of the study in mind which included the following categories as Gender, Type of school, Nature of school, Locality of school, The personal data form is given in Appendix – I.

Tool 1: Mathematics skill

The tool was developed and validated by the Investigator and Research Supervisor. The investigator has prepared the tool with 30 statements. These items were given to the experts and they scrutinized the items. Based on the suggestions given by the experts in the field of education and psychology, some items were deleted and some of them were modified. The

tool was translated into the Tamil language too. Scores are assigned as, 1 for 'correct' and 0 for 'wrong'. A copy of the tool has been given in Appendix II.

Null Hypothesis: 1

There is no significant difference between male and female high school students in their mathematics skill

Table: 1
Significant difference between male and female high school students in their mathematics skill

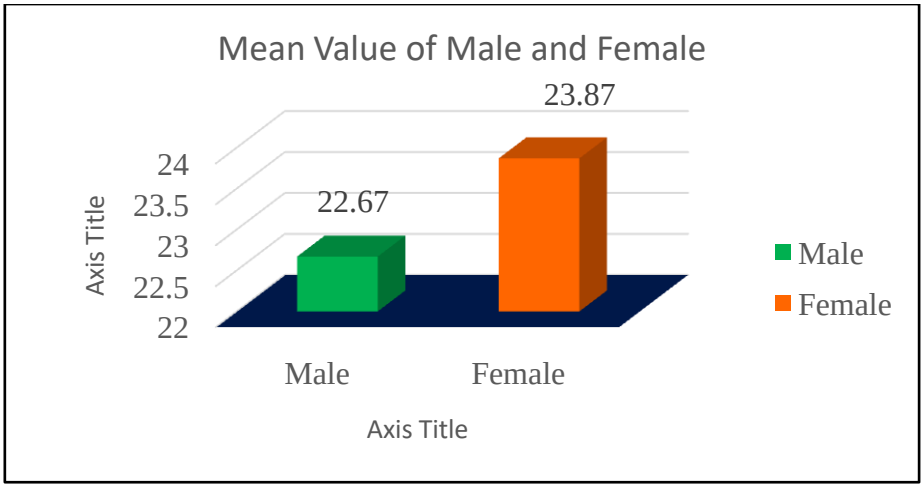
Group	Number	Mean	SD	't' value	df	Remark
Male	65	22.67	1.85	4.147	118	S
Female	55	23.87	1.1556			

(At the 0.05 level of significance the table value of 't' is 1.98)

The above table 1 shows that, the mean value of male (M=22.67) and female (23.87) high school students in their mathematics skills with respect to gender. The calculated' value (t=4.147) is greater than the critical values of 1.98 at 0.05 level of significance with df=118. The hypothesis is rejected. Hence there is a significant difference between male and female high school students in their mathematics skill. When compare theFemale (23.87) students better than male (22.67) students in their mathematics skills with respect to gender.

Fig.1

Mean value of male and female



Null Hypothesis: 2

There is no significant difference between male and female high school students in their mathematics skill

Table: 2
A significant difference between male and female of high school students in their mathematics skill

Group	Number	Mean	SD	't' value	df	Remark
Rural	66	22.57	1.7192	5.168	118	S
Urban	54	24.01	1.2361			

(At the 0.05 level of significance the table value of 't' is 1.98)

Table 2 shows that, the mean value of rural (M=22.57) and urban (24.01) high school students in their mathematics skills with respect to locality. The calculated' value (t=5.16) is greater than the critical values of 1.96 at 0.05 level of significance with df=118. The hypothesis is rejected. Hence there is a significant difference between rural and urban high school students in their mathematics skill. When compare the urban (24.01) students better than rural students (22.57) in their mathematics skills with respect to locality.

Null Hypothesis:3

There is a significant difference among boys, girls and co-education school of higher school students in their mathematics.

Table :3

Significant difference among boys, girls and co-education school of higher school students in their mathematics.

Variable	Source of variance	Sum of square	Degrees of freedom	Mean square variance	Calculated 'F' value	Remark at 5% level
Nature of school	Between	32.863	2	16.431	6.36	S
	Within	302.062	117	2.582		
	Within	313.537	117	2.680		

(For 2,117 df at 1% level of significance, the table value of 'F' is 3.04)

It is inferred from the mean value of boys(M=22.53), girls(M=M=23.76) and co-education (M=23.21) school of higher school students in their mathematics.The calculated value (6.36) greater than the table value at a 5% level of significance The hypothesis is rejected.There is a significant difference among boys, girls and co-education school of higher school students in their mathematics. When compare Girls school students are better (M=23.76) than boys school (M=22.53) and Co-education school (M=23.21) in their mathematics skills. With respect to the nature of the school.

Null Hypothesis: 4

There is a significant difference among Government, aided and self-financed school of higher school students in their mathematics.

Table :3

Significant difference among Government, aided and self-financed school of higher school students in their mathematics.

Variable	Source of variance	Sum of square	Degrees of freedom	Mean square variance	Calculated 'F' value	Remark at 5% level
Type of school	Between	21.388	2	10.694	3.99	S
	Within	313.537	117	2.680		

(For 2,117 df at 1% level of significance, the table value of 'F' is 3.04)

It is inferred the there is a significant difference among Government, aided and self-financed school of higher school students in their mathematics. The calculated value (3.99) greater than the table value.The hypothesis is rejected. Aided school students are better (M=23.72) than government (M=22.93) and self-finance (M=22.78) in their mathematics skills. With respect to the type of school.

FINDING

1. There is a significant difference between male and female high school students in their mathematics skill. When compare the Female (23.87) students better than male (22.67) students in their mathematics skills with respect to gender.
2. There is a significant difference between male and female high school students in their mathematics skill.. When compare the urban (24.01) students better than rural students (22.57) in their mathematics skills with respect to locality.
3. There is a significant difference among boys, girls and co-education school of higher school students in their mathematics. When compare Girls school students are better (M=23.76) than boys school (M=22.53) and Co-education school (M=23.21) in their mathematics skills. With respect to the nature of the school.
4. There is a significant difference among Government, aided and self-financed school of higher school students in their mathematics. The calculated value (3.99) greater than the table value.The hypothesis is rejected. Aided school students are better (M=23.72) than government (M=22.93) and self-finance (M=22.78) in their mathematics skills

DISCUSSION AND INTERPRETATION

1. The finding of the present study pointed out that there is a significant difference between male and female high school students in their mathematics skill. When compare the Female (23.87) students better than male (22.67) students in their mathematics skills with respect to gender. Therefore, it may be concluded that need, studies suggest that females tend to score slightly higher than men on mathematics skill andgirls have more basic mathematics skills and arranged mathematics problems that have a fixedtechnique for solving them.This finding is in agreement with the finding of the studies by Kaldo, Indrek; Õun, Kandela(2020)revels that Females showed more powerful organizing skills and had better repeating strategies than males. Females attempt to direction the topicmaterial in a technique that creates it stress-free for them to recollect, they go ended their notes and construction the maximumessential points more than males. A review of the previous studies indicated that these results agree with the results of Eccles, Jacquelynne S.; Wang, Ming-Te.
2. The finding of the present study points out there is a significant difference between rural and urban high school students in their mathematics skill. . When compare the urban (24.01) students better than rural students (22.57) in their mathematics skills with respect to locality. This is maybe due to fact that urban have more exposure than rural students.Students' viewpoints, strong-minded that a dynamic peer philosophy for mathematics learning compulsoryteamwork, announcement, optimisticnatures, meta cognition, and peer support. This finding is in agreement with the finding of the studies bySalihu, Linda; Aro, Mikko; Räsänen, Pekka(2018).
3. There is a significant difference among boys, girls and co-education school of higher school students in their mathematics. When compare Girls school students are better (M=23.76) than boys school (M=22.53) and Co-education school (M=23.21) in their mathematics skills with respect to the nature of the school. Girl’s school students have more discipline, drill and better hostel facilities. The greater proportions of girls school students were classified into the knowledge states with more mastery attributes and greater proportions of girls school students occupied the knowledge states with fewer mastery attributes. . This finding is in agreement with the finding of the studies by Forgasz, Helen; Leder, Gilah.
4. There is a significant difference among Government, aided and self-financed school of higher school students in their mathematics. The calculated value (3.99) greater than the table value.The hypothesis is rejected. Aided school students are better (M=23.72) than government (M=22.93) and self-finance (M=22.78) in their mathematics skills. With

respect to the type of school. Aided school students are Practice math in everyday scenarios. Review math concepts every day. Show your work, not just your answers. Outline out expression problems to give yourself a graphical. Exercise with example problems.This finding is in agreement with the finding of the studies byKim, Helyn; Duran, Chelsea A. K.; Cameron(2018).

RECOMMENDATION OF THE STUDY

Relying on an ample review of the study,

1. Mathematics Learning in school days lays out the dangerous areas that should be the emphasis of young children's early mathematics education
2. To explores the extent to which they are currently being incorporated in early childhood settings,
3. To identifies the changes needed to improve the quality of mathematics experiences for young children.
4. Action to improve the state of early childhood mathematics.
5. It will be particularly useful for policymakers and practitioners-those who work straight with youngsters and their families in shaping the policies that affect the education of young children.

CONCLUSION

School days mathematics is extremely significant for young children's present-day and upcoming educational success. Investigation demonstrates that effectively all young children have the competence to learn and develop competence in mathematics. Furthermore, school children appreciate their initial informal involvements with mathematics. Unfortunately, many children's potential in mathematics is not fully understood, particularly those children who are economically disadvantaged. This is due, in part, to a deficiency of chances to learn mathematics in school days throughеveryday experiences in the home and their communities. Enhancements in early childhood mathematics education can provide school children with the foundation for school success.

REFERENCE

1. Kim, Helyn; Duran, Chelsea A. K.; Cameron, Claire E.; Grissmer, David W.(2018)Developmental Relations among Motor and Cognitive Processes and

Mathematics Skills,Grantee Submission, Child Development v89 n2 p476-494 Mar-Apr 2018.

2. Kaldo, Indrek; Õun, Kandela(2020)Gender Differences Favouring Females in Learning Strategies in Mathematics, Problems of Education in the 21st Century, v78 n4 p595-611 2020.
3. Eccles, Jacquelynne S.; Wang, Ming-Te(2016)What Motivates Females and Males to Pursue Careers in Mathematics and Science? ,International Journal of Behavioral Development, v40 n2 p100-106 Mar 2016
4. Salihu, Linda; Aro, Mikko; Räsänen, Pekka(2018)Children with Learning Difficulties in Mathematics: Relating Mathematics Skills and Reading Comprehension, Issues in Educational Research, v28 n4 p1024-1038 2018.
5. Forgasz, Helen; Leder, Gilah(2017)Gender and VCE Mathematics Subject Enrolments 2001-2015 in Co-Educational and Single-Sex Schools, Mathematics Education Research Group of Australasia, Paper presented at the Annual Meeting of the Mathematics Education Research Group of Australasia (MERGA) (40th, Melbourne, Victoria, Australia, 2017)
6. Chen, Yi-Hsin(2012) Cognitive Diagnosis of Mathematics Performance between Rural and Urban Students in Taiwan, Assessment in Education: Principles, Policy & Practice, v19 n2 p193-209 2012.
7. https://www.nap.edu/read/12519/chapter/15
8. Lee, S. and Coffin, J.C. (1955). Discussion of “A method of estimating precipitation normals for short-record stations”. Transactions, American Geophysical Union .