

# INFLUENCE OF PARENTAL QUALIFICATION AND OCCUPATION OVER MATHEMATICAL PROBLEM SOLVING ABILITY OF IX STANDARD STUDENTS

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## ABSTRACT

*Solving Mathematical Problems remains a big tough task for the student now-a-days. Solving them effectively requires some specific skills that are acquired hereditarily and in some cases practiced in typical situations. This article explores the effect of Parental Qualification and Occupation over Mathematical Problem Solving Abilities of IX standard students. The study compares the Achievement of IX standard students in Mathematical Problem Solving Ability Scale with their parent's qualification and occupation. The scores are also subject to the difference in relationships which exists between the subsamples under consideration. It is found that there is a significant relationship between parental qualification and Mathematical Problem Solving Ability of IX standard students in general and with respect to the girls group, whereas with respect to the boys group and type of school studying, it remains not significant. With respect to the parental occupation and Mathematical Problem Solving Ability, no significant relationship exist in general, gender wise and also type of school studying.*

*Key Words: Problem Solving Ability and Qualification.*

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## INTRODUCTION:

Problem Solving is more of an art than a science. There are no universally accepted methods which can be used to help people solve problems. However, there are some factors that have been found in people who are proficient with solving problems. One of these factors is flexibility. Avoiding barriers on oneself will give much wider range of possible solutions. The basic structure of Problem Solving can be broken down into four parts, namely, understanding the problem, creating a plan, utilizing the plan and reviewing the plan.

While the problem is not something you will want to focus on, it needs to be understood. Students, who have difficulties in solving problems, generally don't understand them. Many students improperly solve problems as they don't use their skills which are based on logic. Instead, they try to solve problems emotionally. Attempting to solve problems emotionally, almost and always leads to failure. Rather any problem should be solved logically.

Parents play an important role in their children's learning. Aside from being actively involved in their children's education, parents provide a home environment that could affect learning. Parents serve as a model for learning, determine the educational resources available in home and hold particular attitudes and values towards education. Although it is difficult to examine the home environment of each student, the education attainment and occupation of parents, serve as an indicator to the values and resources with which parents create this environment.

#### NEED AND SIGNIFICANCE OF THE STUDY:

In the present context of education at high school level, generally students feel that they are challenged with the solving of mathematical problems present in their text / resource book. All students irrespective of gender, class and creed feel that solving mathematical problems is a tough task they face every day in their classrooms. A general opinion that many researches adhere with is that students feel bored of the Mathematics class, since it is one of the dry subjects full of problems. This inevitable fact can neither be totally denied nor could be purely accepted, since mathematics could also be taught and learnt in an interesting and better manner. It should also be acceptable that not all the students have adverse experiences with proving problems which may be because of their teachers and parents. Therefore the purpose of this study is to investigate the effects of parental qualification and their occupation over mathematical problem solving ability of IX standard students. This study hopes to contribute knowledge by enlightening on the mathematical problem solving ability of the offspring's of parents of various qualification and occupations.

#### OBJECTIVES:

1. To find out the influence of Parental qualification and occupation on Mathematical Problem Solving Ability of IX standard students

2. To find out the difference in relationships between the groups in Parental qualification and occupation with respect to gender and type of school studying

#### HYPOTHESES:

1. There will be no significant relationship between Parental Qualification and Mathematical Problem solving ability of IX standard students in general and with respect to gender and type of school studying
2. There will be no significant relationship between Parental Occupation and Mathematical Problem solving ability of IX standard students in general and with respect to gender and type of school studying
3. There will be no significant difference in relationships between Parental Qualification and Mathematical Problem solving ability of IX standard students with respect to gender and type of school studying
4. There will be no significant difference in relationships between Parental Occupation and Mathematical Problem solving ability of IX standard students with respect to gender and type of school studying

#### METHOD:

For the present investigation, Survey method was adopted.

#### SAMPLE:

Convenient Sampling Method was adopted for selecting the sample for the present study. A total number of 300 students studying IX standard from various schools in Tindivanam City were selected as sample. Off the 300 sample, 139 students were from government school and 161 from private school. Also the 139 samples from government schools comprised of 77 boys and 62 girls and 161 samples from private school is comprised of 88 boys and 73 girls.

#### TOOL USED:

Problem Solving Ability Scale constructed and validated by Mrs. Vijayapriya in the year 2008 is used for the present study. The tool consists of 50 items of which 25 items representing routine mathematical problems and the other 25 items representing non-routine mathematical problems. A

score of 1 is given to each correct answer and 0 for incorrect answer. The tool possesses content validity adequate sample reliability.

#### DATA COLLECTION:

On getting permission through proper channel from the heads of the institutions, the students were given the tool of the present study and also the personal data forms were given to each student to collect their personal information such as, gender, age, type of school studying, Father and Mother's Qualification, Occupation, etc. For the purpose of quantifying the data on Parental qualification and occupation, highest qualification and occupation possessed by either of their parents is taken for consideration.

#### RESULTS:

Hypothesis 1: There will be no significant relationship between Parental Qualification and Mathematical Problem solving ability of IX standard students in general and with respect to gender and type of school studying

Variables	Group	N	df	r	Result
Parental Qualification and Mathematical Problem Solving Ability	IX Std Students	300	298	0.161 *	Sig. at 0.01
	Boys	165	163	0.061	Not Sig.
	Girls	135	133	0.257 *	Sig. at 0.01
	Govt. school	139	137	0.121	Not Sig.
	Pvt. school	161	159	0.137	Not Sig.

It is found that the relationship between parental qualification and mathematical problem solving ability of IX standard students is significant at 0.01 level. Therefore the null hypothesis framed is rejected. Also it is to be noted that for the girls group, the relationship is significant at 0.01 level whereas for the boys group and the subsample type of school, the relationship remains not significant.

Hypothesis 2: There will be no significant relationship between Parental Occupation and Mathematical Problem solving ability of IX standard students in general and with respect to gender and type of school studying

Variables	Group	N	df	r	Result
Parental Occupation and Mathematical Problem Solving Ability	IX Std Students	300	298	0.064	Not Sig.
	Boys	165	163	0.024	Not Sig.
	Girls	135	133	0.155	Not Sig.
	Govt. school	139	137	0.071	Not Sig.
	Pvt. school	161	159	0.132	Not Sig.

The relationship between Parental occupation and mathematical problem solving ability of IX standard students is not significant. Therefore the null hypothesis framed is accepted. Also with respect to the subsamples gender and type of school studying, the relationship is not significant.

Hypothesis 3: There will be no significant difference in relationships between Parental Qualification and Mathematical Problem solving ability of IX standard students with respect to gender and type of school studying

Variables	Group	df	r	Z	t	Result
Parental Qualification and Mathematical Problem Solving Ability	Boys	163	0.061	0.061	1.70	Not Sig.
	Girls	133	0.257	0.26		
	Govt. school	137	0.121	0.121	0.14	Not Sig.
	Pvt. school	159	0.137	0.137		

The difference between two r's is not significant with respect to gender and type of school studying in their relationship between parental qualification and mathematical problem solving ability of IX standard students. Hence the null hypothesis is accepted.

Hypothesis 4: There will be no significant difference in relationships between Parental Occupation and Mathematical Problem solving ability of IX standard students with respect to gender and type of school studying

Variables	Group	df	r	Z	t	Result
Parental Occupation and Mathematical Problem Solving Ability	Boys	163	0.024	0.024	1.12	Not Sig.
	Girls	133	0.155	0.155		
	Govt. school	137	0.071	0.071	0.52	Not Sig.
	Pvt. school	159	0.132	0.132		

It is observed that there is no significant difference between the relationships of boys and girls and government and private school IX standard students in their Parental occupation and mathematical problem solving ability. Therefore the null hypothesis is accepted.

#### CONCLUSION AND RECOMMENDATIONS:

As per the study, it is concluded that parental qualification has some positive and significant impact over mathematical problem solving ability of IX standard students of Tindivanam city. It is also very clear from the study that Parental occupation does not have any significant role to play over mathematical problem solving ability of IX standard students. From the study, it is recommended to train the students with Mathematical problem solving strategies in order to solve the mathematical problems, no matter what their parent's qualification or occupation is. However, parents should develop an attitude to acquire more number of additional qualifications in order to have better and positive impact on their children.

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