

A Study on Interest in Mathematics Interest and its Relation to Academic Achievement in Mathematics among Higher Secondary Students

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ABSTRACT

In our march towards scientific and technological advancement, we need nothing short of good performance in mathematics at all levels of schooling. In an effort to achieve this, this study investigated the impact of motivation on students' school academic achievement in mathematics in secondary schools using motivation measuring instrument and achievement test in mathematics. Six hypotheses were tested for significant at 0.05 margin of error using t-test and analysis of variance (ANOVA) Results showed that gender difference and Parents Income were significant when impact of motivation on academic achievement was compared in male and female students. Also other result indicates significant difference when extent of motivation was taken as variable of interest on academic achievement in mathematics based on the degree of their motivation. Implications, suggestions and recommendations on students, parents, government, counsellors, educational stakeholders, etc were discussed.

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Introduction

Mathematical knowledge is required by many of our daily jobs to be done effectively. For example, if a person wants to decorate a house he needs to work out the amount of materials required in order to decorate the house nicely. The required amount of material will be purchased only when one is aware of the measurement, space and shape of the area he is working on. This helps in ensuring that you do not run out of essential materials before the job is finished or you do not have too much left over. Jobs which do not use mathematics every day still require some basic knowledge of mathematics to complete certain tasks. Some people might be against this, but it is advisable for everyone to learn basic mathematic skills.

Strength in mathematics is a gauge of a nation's scientific and technological standing. Therefore, mathematics education is a big concern and becomes a hot polemic in the government, especially the Ministry of Education (MOE) Malaysia. Since 1992, some common themes that appeared in the local news media reflect this concern. For example, "Maths help from Chinese schools" (The Star, 21 January 1992); "Ministry studying Chinese approach to Mathematics" (New Strait Times, 21 January 1992); "Teaching Math the Chinese way" (The Star, 3 September, 1999) and lately "Success of Chinese students in Science and Math to be studied" (Business Times, 2 September 2004). Malaysian Examination Board yearly report for the year 1991-2001 also showed a clear difference in mathematics achievement of three ethnic national type schools.

we found that Chinese students are high achievers in mathematics examination. Although the performance gap decreased from 1991 to 2001, still Chinese are dominant in the percentage passes. The above stated situation leads to several questions and potential research themes. The major concern is to identify the factors affecting mathematics achievement and the question "can we manipulate these

identified factors for improved mathematical skills" arises. One research domain related to culture and math in Malaysia titled as "The culture of mathematics learning in two Chinese school: Drill and Practice" and "Cultural Differences and Mathematical Learning in Malaysia" has already been explored (Lim, 2002, 2003) and the findings are quite helpful to visualize the problem dimensions.

The number of research studies conducted in mathematics education over the past three decades has increased dramatically (Kilpatrick, 1992). The resulting research base spans a broad range of content, grade levels and research methodologies. The results from these studies, together with relevant findings from research in other domains, such as cognitive psychology, are used to identify the successful teaching strategies and practices. Teaching and learning mathematics are complex tasks.

The effect on student learning of changing a single teaching practice may be difficult to discern because of the simultaneous effects of both the other teaching activities that surround it and the context in which the teaching takes place. Thus, as teachers seek to improve their teaching effectiveness by changing their instructional practices, they

should carefully consider the teaching context, giving special consideration to the types of students they teach. And, further, they should not judge the results of their new practices too quickly.

Judgments about the appropriateness of their decisions must be based on more than a single outcome. If the results are not completely satisfactory, teachers should consider the circumstances that may be diminishing the impact of the practices they are implementing. For example the value of a teacher focusing more attention on teaching for meaning may not be demonstrated if student assessments concentrate on rote recall of facts and proficient use of isolated skill. The quality of the implementation of a teaching practice also greatly influences its impact on student learning. The value of using manipulative materials to investigate a concept, for example, depends not only on whether manipulatives are used, but also on how they are used with the students. Similarly, small group instruction will benefit students only if the teacher knows when and how to use this teaching practice. Hence, as a teacher implements any of the recommendations, it is essential that he or she constantly monitors and adjusts the way the practice is implemented in order to optimize improvements in quality.

Knowledge such as skills or declarative knowledge such as facts. Also, academic achievement refers to a person's strong performance in a given academic field. Academic achievement generally refers to how well a student is accomplishing his or her tasks and studies. The most well-known indicator of academic achievement is the student's 'score' for their classes and overall period of academic year.

Researchers are doing more number of comparative studies on students studying in English medium and students studying in Vernacular medium. However, still need more quality research to explore the possible way to improve the vernacular medium studies compare to the English medium. Academic achievement in mathematics subject among students studying in Tamil medium and English medium has been conducted few studies in the educational sciences, sociology and economics, especially in developing countries like India. India had a multicultural nation with multi language states. Early academic achievement enhances the later academic achievement.

Therefore, this study was aimed to compare higher secondary school students' mathematics achievement of students studying in Tamil medium and students studying in English medium.

Gender differences in mathematics achievement have important implications for the underrepresentation of women in science. Typically, gender differences in mathematics achievement are thought to emerge at the end of middle school and beginning of high school, yet some studies find differences among younger children. This paper utilizes data from the Early Childhood Longitudinal Study, Kindergarten Class of 1998-99 to analyze differences in a nationally representative sample of kindergartners as they progress from kindergarten to fifth grade. Using quantile regression models to examine gender differences across the distribution, differences are found among students as early as kindergarten. Initially boys are found to do better at the top of the distribution and worse at the bottom, but by third grade boys do as well or better than girls throughout the distribution. The male advantage at the top of the

distribution among entering kindergartners is largest among families with high parental education, suggesting that gender dynamics in middle and upper class families have important implications for continuing gender segregation in science occupations. Gender differences for entering kindergartners also vary across race, with Asians exhibiting the largest male advantage at the top of the distribution. In contrast to the overall pattern, among Latino kindergartners girls have an advantage over boys at the top of the distribution.

This study zeroes in on the professional development activities for teachers by espousing the idea that the classroom performance of teachers is a critical factor for student academic performance. The researcher based her assumption from Weiner's Attribution Theory that external and internal factors can improve performance.

For example, students may attribute their academic performance to their teachers (external factor) while the teachers may attribute their teaching performance to in-service trainings (external factor) and perhaps, to their teaching efficacy, job satisfaction, and attitude towards the teaching profession (internal factors).

Review of Literature

Manju Krishna (2004) had conducted "a study on effectiveness of strategies involving multiple intelligence theory on the achievement in mathematics at higher secondary level". The purpose of the study was to compare the effectiveness of strategies involving multiple intelligence theory on mathematics at secondary school level with reference to instructional objectives. The researcher adopted experimental method for the present study and selected the pre-test and post-test non equivalent group design for the study. The tools used were lesson transcript multiple intelligence theory is more effective than present methods of teaching on achievement on mathematics and strategies involving multiple intelligence theory were effective than the present method under instructional objectives.

Ravindra G, Basavvya D, Basti B C, (2004) studied in the Indian context the possible areas of gender differences with respect to the following abilities arithmetical ability, abstract thinking, logical thinking, symbolizing concepts, mathematical modelling, application skills and attitudes. Their main findings were that boys were good in abstract thinking and symbolizing concepts whereas girls were good in logical thinking and mathematical modelling. Both males and females have the same perception of mathematics and the same level of liking for mathematics. Males stated that social factors do not favour girls for going in for higher studies in mathematics leading to scarcity in top level women mathematicians while females stated that the vocational interest of women were different as the cause. A study by Katiyar (1979) reported that boys and girls did not differ in mathematics achievement.

Saha (2007) conducted a study 'Gender, Attitude to Mathematics, Cognitive style and Achievement in Mathematics'. It was found that all the three contribute to statistically significant difference in achievement in mathematics. Hariharan D (1992) in his studies on 'Attitudes of high school students towards homework and achievement in mathematics' developed measures to measure the attitude of high school students towards homework in mathematics and academic achievement. He concluded that girls, urban and private school students have a more positive attitude

towards homework and students with this positive attitude have better academic achievements. Rosaly A (1992) had studied the relationship between attitude of students towards mathematics and mathematics achievement and found that the two were highly correlated and urban boys and girls showed a more positive attitude towards mathematics than rural boys and girls. Reasoning power, space visualizations, attitude towards mathematics were found significantly related to mathematics achievement (Patel, 1984). Singh (1986) found attitudes to be related to mathematics achievement.

Shahapur Nagappa Panchalingappa (2004) had conducted "a study on selfconfidence, anxiety, study habits and mathematics achievement of underachievers at secondary school level". The main objective of the study was to study self-confidence, general anxiety, test anxiety, and study habits in relation to underachievers in mathematics at secondary school level. Survey method was adopted in the study. The findings were, there is significant difference between normal achievers and underachievers in respect of their self-confidence; there is significant difference between normal achievers and underachievers in respect of their general anxiety; there is significant difference between normal achievers and underachievers in respect of their test anxiety mathematics; there is significant difference between normal achievers and underachievers in respect of their study habits; there is significant difference between normal achievers and underachievers in respect of their mathematics achievement.

Subrata Saha (2007) had conducted "a study on academic achievement in mathematics in relation to cognitive styles and attitude towards mathematics". The boys and girls differed significantly on all the three measures under consideration. The field independent boys excelled over the field dependent boys significantly in their achievement in mathematics. Similarly, field independent girls also excelled over the field dependent girls significantly.

Xavier and Annaraja (2007) had conducted "a study on effectiveness of multiple intelligence based teaching mathematics on achievement of VI standards students". The purpose of the study was to find out the performance of control and experimental groups in their gain scores and to find out the difference between control and experimental groups in their multiple intelligence. The findings revealed that 10% of the control group students had high level of gain scores and 26.67% of the experimental group students had high level of gain scores. It is also found that there is no significant difference between control and experimental group students in their multiple intelligence.

Suresh et al. (2007) studied the influence of personality on the environmental awareness ability of college students and found that gender did not affect the personality of students whereas subject specialization, residential area, parental income and parents' level of education significantly influence certain dimensions of personality; locality of the students had a significant influence on the extraversion, sensation, intuition and perception dimension of personality.

Ravi (2008) studied learning discrepancy in relation to personality factors among primary school students and found that the personality traits of boldness, confidence, verbal ability contributed positively to their scholastic achievement; the over achieving groups of superior and

general ability were less extraverted and less maladjusted than under achievers.

Rajni (2009) had conducted "a study on mathematics anxiety and cross gender identity in young adult males and females". The present study had investigated the relationship between cross gender identity and Mathematics anxiety. Masculine Gender Identity Scale (Freund and Blanchard, 1988) and Feminine Gender Identity Scale (Blanchard and Freund, 1983) were administered to 236 males and 189 females respectively. On the basis of scores obtained on these tests, high and low Cross Gender Identified males and females were selected. To these selected subjects Mathematics Anxiety Rating Scale (short version) by Suinn (2003) was administered. High masculine females exhibited low mathematics anxiety as compared to low masculine females. There was no significant difference between high and low feminine males on mathematics anxiety. The findings are explained in terms of advantages of Cross Gender Identification for mathematics performance and gender differences.

Noorjehan et al. (2009) studied factors affecting academic achievement of IX standard students in mathematics and found that factors like mathematical creativity, attitude towards mathematics, achievement motivation and a low level of anxiety influenced the academic achievement in mathematics at secondary stage and recommend the inclusion of curricular and co-curricular programmes to improve performance in mathematics.

Aruna et al. (2009) studied academic achievement in relation to social phobia and socio economic status and found that there was no significant difference in the achievement of social studies for the students paired as government and private school; management of school and social phobia were not the factors influencing the achievement in mathematics; significant difference in achievement in social studies was observed for the students paired as boys and girls, rural and urban students, and high and low socio economic status groups. This indicates that factors like gender and socio economic status were the factors influencing the achievement in social studies.

Mohanty (2009) studied social correlates of academic achievement of rural underprivileged primary school girls and found that socio economic status was a potential social correlate of academic achievement; home environment had positive correlation with academic achievement in case of low achievers only; school environment failed to establish any relationship with the achievement level of high and low achievers.

Choudhary (2009) studied family patterns and academic achievement of students and found that students from urban joint family were better in academic achievement than the students coming from rural joint family; students coming from urban nuclear family were better in academic achievement than the students coming from rural nuclear families; urban students were better in academic achievement than rural students.

Gurubasappa (2009) studied intelligence and self concept as correlates of academic achievement of secondary school students with the objective to find out the relationship between academic achievement with intelligence and self concept by taking a sample of 400 students and found that

there was high significant correlation between academic achievement with intelligence and self concept; there was significant difference in the academic Review of Related Literature 37 achievement of students with different levels of intelligence and self concept; there was significant difference in the academic achievement of students in context of gender, type of school, medium of instruction, locality and socio economic status.

Singh (2010) studied mental health in relation to spiritual intelligence, altruism, school environment and academic achievement of senior secondary students and found that male students had significantly higher level of academic achievement than female students; students residing in urban area had significantly higher academic achievement than students residing in rural area; academic achievement of students studying in aided schools was significantly higher than students studying in government schools; academic achievement of students studying in unaided schools was significantly higher than students studying in government school; academic achievement of students studying in aided schools was significantly higher than students studying in unaided schools.

Mehta (2010) studied personality needs and academic achievement of secondary school students with the objective to find out the relationship between personality needs and academic achievement by taking a sample of 120 students (50 high achievers, 70 low achievers) from five schools by using systematic sampling technique and found that need achievement, need dominance, need nurturance and need endurance were positively and significantly related to students academic achievement while need succorance, affiliation, abasement and aggression were significantly but negatively related to academic achievement.

Lal et al. (2010) studied emotional intelligence of scheduled caste students in relation to academic achievement with the objective to study relationship between emotional intelligence and academic achievement of male and female students of arts and science stream by taking a sample of 300 students from Meerut region through cluster random sampling technique and found that the male scheduled caste students having high emotional intelligence and academically superior to their counterpart; there was significant difference between mean achievement scores of male scheduled caste students of arts and science stream having high and low emotional intelligence; there was no significant difference between mean achievement scores of female scheduled caste students of arts stream having high and low emotional intelligence.

Vasanthi (2010) studied learning environment and academic achievement of higher secondary physics students with the objective to study the relationship between learning environment and academic achievement by taking a sample of 223 students of Mathematics and Science group and found that the correlation between learning environment and academic Review of Related Literature 38 achievement of hindu students, non BC students, and rural students vary significantly.

Gakhar et al. (2010) studied intellectual and non intellectual correlates of scientific attitude with the objective to find the relationship of intelligence and science achievement (intellectual variable) and socio economic status, scientific interest and home environment (non intellectual variables)

with scientific attitude by taking a sample of 740 IXth class students selected on the basis of multistage randomization technique from eight districts of Punjab and found that science achievement was not significantly correlated with scientific attitude. The reasons may be that science achievement depends on memory, recall, knowledge and hardwork whereas scientific attitude involves scientific temper of mind, rational thinking, open mindedness, objectivity etc.

Singh et al. (2010) studied the influence of spiritual intelligence on academic achievement of adolescents with the objective to study the influence of spiritual intelligence, gender, type of school and their interaction on academic achievement of adolescents by taking a sample of 934 students with a mean age of 16.64 years through cluster sampling technique and found that academic achievement of adolescents with low spiritual intelligence were better than adolescents with average spiritual intelligence; male adolescents had higher academic achievement than females; academic achievement of adolescents studying in aided schools were better than adolescents studying in government schools; academic achievement of adolescents studying in unaided schools were better than adolescents studying in government schools; academic achievement of adolescents studying in aided schools were better than adolescents studying in unaided schools.

Vijaya kumari (2010) studied correlates of academic achievement of secondary school students with the objective to study the relationship of academic anxiety and achievement motivation with academic achievement, and to find out the interaction effect of academic anxiety, achievement motivation and gender on academic achievement by taking a sample of 400 students of IXth class through stratified sampling technique and found that academic achievement was negatively related to academic anxiety and positively to achievement motivation; the interaction of academic anxiety and achievement motivation on academic achievement was not significantly different for boys and girls; the interaction effect of gender and academic anxiety on academic achievement did not differ significantly for different levels of achievement motivation; the interaction effect of gender and achievement motivation on academic achievement did not differ significantly among different levels of academic anxiety.

Sarsani et al. (2010) studied achievement in Mathematics of secondary school Review of Related Literature 39 students with the objective to find out the differences in Mathematics scholastic achievement test in relation to gender, caste, type of school, nativity and medium of instruction at secondary school level by taking a sample of 480 students and found that girls performed better than boys in Mathematics scholastic achievement test; caste did not influenced the performance in Mathematics scholastic achievement test; type of school, medium of school and locality influenced the performance in Mathematics scholastic achievement test. Parvathamma and sharanamma (2010) had conducted "a study on anxiety level and level of self- confidence and their relation with academic achievement". The objective of the study were to find out the relation between anxiety level and level of academic achievement of IX standard students; to find out relation between level of self-confidence and level of academic achievement of IX standard students; to find out the difference between anxiety level of boys and girls

students of IX standard; to find out the difference between level of self-confidence of boys and girls students of IX standard. The investigator has adopted the tools and personal information data sheet were administered on the selected sample. The findings of the study were there is significant co-relation between anxiety and academic achievement; there is a significant co-relation between self-confidence and academic achievement; there is a significant difference between anxiety level of boys and girls; there is a significant difference between self-confidence levels of boys and girls.

Noorjehan Ganihar, Wajiha (2008) had conducted “a study on factors affecting academic achievement of IX standard students in mathematics”. The objective of the study was to find out the relationship between achievement in mathematics and mathematics creativity, test anxiety, attitude towards mathematics and achievement motivation of IX standard students. The sample was comprised of 800 boys and girls, selected from 20 secondary schools giving due representation to sex, type of management and medium of instruction. Achievement test in mathematics constructed by the researchers and mathematics creativity test (Singh 1988) were used as tools for the study. The result of the study reveals that there is significant effect of gender on academic achievement and the study of schools in which the study has significant effect on achievement in mathematics. The purpose of the study was to compare self-regulation scale, self-efficacy scale and attitude towards mathematics scale in relation to achievement test in mathematics

Sampling Techniques

The sample which was collected from various colleges located in and around Tiruppur is shown as below.

TABLE 1 LIST OF SCHOOLS USED FOR DATA COLLECTION

S. No	Name of the Colleges	Number of students
1	PVKN higher secondary school, pongalur .	120
2	Govt higher secondary school, kattur.	30
3	Jayanthi matric higher secondary school,palladam.	35
4	KNS matric higher secondary school,palladam.	40
5	SV matric higher secondary school,Tirupur.	30
6	Blue bird matric higher secondary school.	45
		300

TABLE 2 DISTRIBUTION OF SAMPLES BASED ON VARIABLES

S. NO	CATEGORY	SUB GROUPS	NUMBER	PERCENTAGE	TOTAL
1	Gender	Male	121	40	300
		Female	179	60	
2	Locality	Rural	167	56	300
		Urban	133	44	
3	Type of School	Government	150	50	300
		Private	150	50	
4	Medium of Study	Tamil	150	50	300
		English	150	50	
5	Parents Income	Below 60000	90	30	300
		Above 60000	210	70	
6	Maths Tuition	Home tution	230	77	300
		Private tution			
		Not Attend	70	23	

Research Tool

Tool become another major consideration in an education research. The instrument employed for the collection of data required for the study of any problem is called tool. “Tool employ distinction way of describing and qualifying the data” the important tools of educational research include interview schedule, questionnaire, observation, rating scale, achievement test, proficiency test, psychological tests and sociogram.

.investigator administered to a random sample of 1000 first year higher secondary students. The result of the study reveals that there is achievement in mathematics of boys is significantly greater than girls and there is exists positive and significant correlation between achievement and self-efficacy.

Variables of the Study

In research, this term refers to the measurable characteristics, qualities, traits or attributes of a particular individual, object or situation being studied. Nurses use the term variable whether they are conducting, reading or using results of qualitative or quantitative research. Researchers often refer to variable by the terms dependent or independent. Dependent variable represent outcomes of interest and they are affect by independent (i.e predictor) variables. In this study, the investigator follows independent variable and dependent variables.

An independent variable is a variable that is expected to influence the dependent variables. Its value may be changed or altered, which is independent of any other variables. Also the following demographic variables were used as independent variables.

- Gender (Male/Female)
- Locality (Rural/Urban)
- Type of school (Government/Private)
- Medium of study (Tamil /English)
- Parent’s income (Below 60000/Above 60000)
- Tuition for mathematics (Attend/Not Attend)

Hypothesis of the Study

1. There will be a significant mean score difference in study the interest in Mathematics and its relation to academic achievement in mathematics among higher secondary students between the groups based on Gender.
2. There will be a significant mean score difference in study the interest in Mathematics and its relation to academic achievement in mathematics among higher secondary students between the groups based on Locality.
3. There will be a significant mean score difference in study the interest in Mathematics and its relation to academic achievement in mathematics among higher secondary students between the groups based on Type of Schools.
4. There will be a significant mean score difference in study the interest in Mathematics and its relation to academic achievement in mathematics among higher secondary students between the groups based on Medium of instruction.
5. There will be a significant mean score difference in study the interest in Mathematics and its relation to academic achievement in mathematics among higher secondary students between the groups based on Parents Income.
6. There will be a significant mean score difference in study the interest in Mathematics and its relation to academic achievement in mathematics among higher secondary students between the groups based on Maths Tuition.

Analysis and Interpretation of Data

Hypotheses: 1

There is no significant mean score difference in study the interest in Mathematics and its relation to academic achievement in mathematics among higher secondary students between the groups based on Gender.

TABLE 3 Mean Score difference and t- value of factors related to significant study of level of study the interest in Mathematics and its relation to academic achievement in mathematics among higher secondary students based on their Gender.

S.No	Gender	N	Mean	df	t-Value	P-value	Result
1	Male	121	3.1074	263	0.5449	0.5863	Accept
2	Female	179	3.0223				

The Table 3 shows the mean score difference in significant study the interest in Mathematics and its relation to academic achievement in mathematics among higher secondary students between the groups based on Gender (Male/Female). The calculated t value is statistically high value, a significance at 0.05 to 0.5863 levels and hence the hypotheses 1 is accepted. It can be concluded that there is no significant mean score difference in study the interest in Mathematics and its relation to academic achievement in mathematics among higher secondary students between the groups based on Gender.

CHART 1

LEVEL OF STUDY THE INTEREST IN MATHEMATICS AND ITS RELATION TO ACADEMIC ACHIEVEMENT IN MATHEMATICS AMONG HIGHER SECONDARY STUDENTS BASED ON THEIR GENDER



Hypotheses: 2

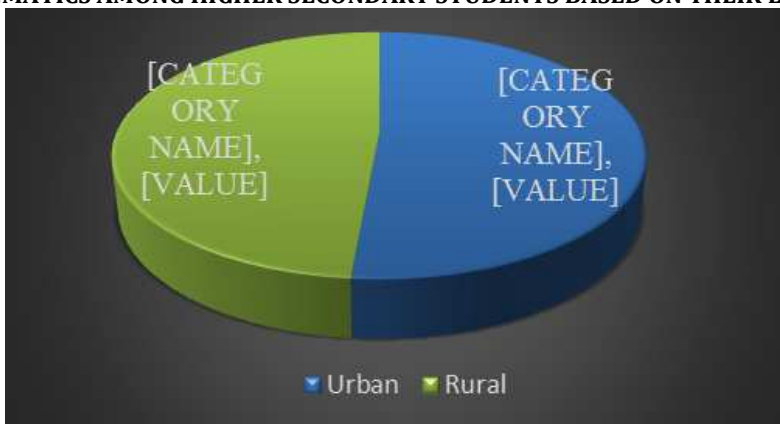
There will not be a significant level of study the interest in Mathematics and its relation to academic achievement in mathematics among higher secondary students based on their Locality.

TABLE 4 Mean Score difference and t- value of factors related to significant study of level of study the interest in Mathematics and its relation to academic achievement in mathematics among higher secondary students based on their Locality.

S.No	Locality	N	Mean	Df	t-Value	P-value	Result
1	Rural	167	3.1437	286	1.0799	0.2811	Accept
2	Urban	133	2.9699				

The Table 4 shows the mean score difference in significant study the interest in Mathematics and its relation to academic achievement in mathematics among higher secondary students between the groups based on Locality (Urban/Rural). The calculated t value is statistically low value, a significance at 0.05 to 0.01 levels and hence the hypotheses 2 is accepted. It can be concluded that there will be a significant mean score difference in study the interest in Mathematics and its relation to academic achievement in mathematics among higher secondary students between the groups based on Locality.

CHART 2 LEVEL OF STUDY THE INTEREST IN MATHEMATICS AND ITS RELATION TO ACADEMIC ACHIEVEMENT IN MATHEMATICS AMONG HIGHER SECONDARY STUDENTS BASED ON THEIR LOCALITY



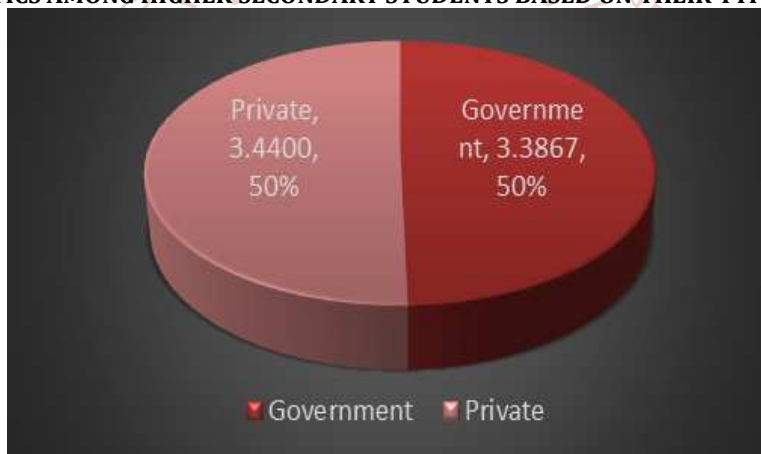
Hypotheses: 3

There is no significant level of study the interest in Mathematics and its relation to academic achievement in mathematics among higher secondary students based on their Type of Schools.

TABLE 5 Mean Score difference and t- value of factors related to significant study of level of study the interest in Mathematics and its relation to academic achievement in mathematics among higher secondary students based on their Type of School.

S. No	Type of School	N	Mean	Df	t-Value	P-value	Result
1	Government	150	3.3867	298	0.4109	0.6814	Accept
2	Private	150	3.4400				

CHART 3 LEVEL OF STUDY THE INTEREST IN MATHEMATICS AND ITS RELATION TO ACADEMIC ACHIEVEMENT IN MATHEMATICS AMONG HIGHER SECONDARY STUDENTS BASED ON THEIR TYPE OF SCHOOL



The Table 5 shows the mean score difference in significant study the interest in Mathematics and its relation to academic achievement in mathematics among higher secondary students between the groups based on Type of Schools (Government/Private). The calculated t value is statistically high value, a significance at 0.05 to 0.6814 levels and hence the hypotheses 3 is accepted. It can be concluded that there is no significant mean score difference in study the interest in Mathematics and its relation to academic achievement in mathematics among higher secondary students between the groups based on Type of Schools.

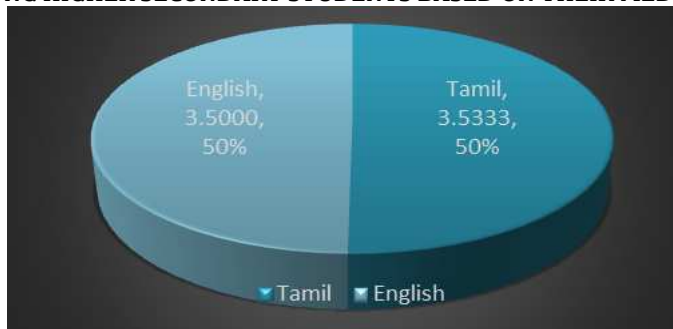
Hypotheses: 4

There will not be a significant level of study the interest in Mathematics and its relation to academic achievement in mathematics among higher secondary students based on their Medium of instruction.

TABLE 6 Mean Score difference and t- value of factors related to significant study of level of study the interest in Mathematics and its relation to academic achievement in mathematics among higher secondary students based on their Medium of Instruction

S. No	Medium of Instruction	N	Mean	Df	t-Value	P-value	Result
1	Tamil	150	3.5333	298	0.24441	0.8073	Accept
2	English	150	3.5000				

CHART 4 LEVEL OF STUDY THE INTEREST IN MATHEMATICS AND ITS RELATION TO ACADEMIC ACHIEVEMENT IN MATHEMATICS AMONG HIGHER SECONDARY STUDENTS BASED ON THEIR MEDIUM OF INSTRUCTION



The Table 6 shows the mean score difference in significant study the interest in Mathematics and its relation to academic achievement in mathematics among higher secondary students between the groups based on Medium of Instructions (Tamil/English). The calculated t value is statistically low value, a significance at 0.05 to 0.8073 levels and hence the hypotheses 4 is Accepted. It can be concluded that there is no significant mean score difference in study the interest in Mathematics and its relation to academic achievement in mathematics among higher secondary students between the groups based on Medium of Instruction.

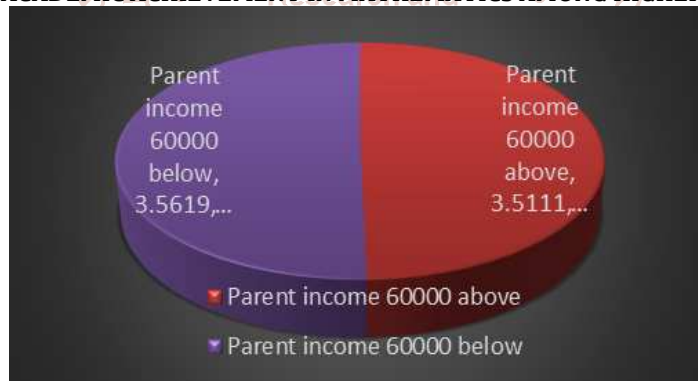
Hypotheses: 5

There will be a significant mean score difference in study the interest in Mathematics and its relation to academic achievement in mathematics among higher secondary students between the groups based on Parents Income.

TABLE 7 Mean Score difference and t- value of factors related to significant study of level of study the interest in Mathematics and its relation to academic achievement in mathematics among higher secondary students based on their Parents Income.

S. No	Parents Income	N	Mean	Df	t-Value	P-value	Result
1	Below 60000	90	3.5111	162	0.3541	0.7237	Accept
2	Above 60000	210	3.5619				

CHART 5 RELATIONSHIP BETWEEN STUDENTS MATHS TUITION AND STUDY THE INTEREST IN MATHEMATICS AND ITS RELATION TO ACADEMIC ACHIEVEMENT IN MATHEMATICS AMONG HIGHER SECONDARY STUDENTS



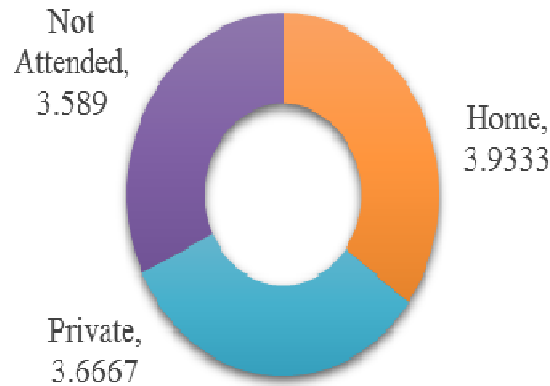
The Table 7 shows the mean score difference in significant study the interest in Mathematics and its relation to academic achievement in mathematics among higher secondary students between the groups based on Parents Income (Below 60000/ Above 60000). The calculated t value is statistically high value, a significance at 0.05 to 0.7237 levels and hence the hypotheses 5 is accepted. It can be concluded that there is no significant mean score difference in study the interest in Mathematics and its relation to academic achievement in mathematics among higher secondary students between the groups based on Parents Income.

Hypotheses: 6

There will be a significant mean score difference in study the interest in Mathematics and its relation to academic achievement in mathematics among higher secondary students between the groups based on Maths Tuition.

TABLE 8 Mean Score difference and t- value of factors related to significant study the interest in Mathematics and its relation to academic achievement in mathematics among higher secondary students between the groups based on Maths Tuition.

S. No	Maths Tuition	N	Mean	r value	F value	Result
1	Home	45	3.9333	0.16	3.03	Reject
	Private	36	3.6667			
2	Not Attend	219	3.589			

CHART 6 RELATIONSHIP BETWEEN STUDENTS MATHS TUITION AND STUDY THE INTEREST IN MATHEMATICS AND ITS RELATION TO ACADEMIC ACHIEVEMENT IN MATHEMATICS AMONG HIGHER SECONDARY STUDENTS

The Table 8 shows the mean score difference in significant study the interest in Mathematics and its relation to academic achievement in mathematics among higher secondary students between the groups based on Maths Tuition (Attend/Not Attend). The calculated t value is statistically low value, a significance at 0.05 to 4.34E-13 levels and hence the hypotheses 5 is rejected. It can be concluded that there is no significant mean score difference in study the interest in Mathematics and its relation to academic achievement in mathematics among higher secondary students between the groups based on Maths Tuition.

Summary of the Findings

A study the interest in Mathematics and its relation to academic achievement in mathematics among higher secondary students between the groups that there is a significant with respect to Maths Tuition, but no significant to the Locality and Parents Income, Gender, Type of School and Medium of Study.

Conclusion

This study was to discover whether students' mathematics self-efficacy beliefs make an independent contribution to the prediction of mathematics performance when motivation variables shown to predict math-related outcomes are controlled. Mathematics self-efficacy was the only motivation variable to predict mathematics performance both at beginning and end of year, resolving this substantive issue. This finding is consistent with those obtained by other researchers but is notable because of the number of variables used as controls. We believe that this was, in part, due to the particularized assessment of self-efficacy, which was operationalized as the task-specific beliefs of capability to solve the problems on which performance was based. We expect that, as performance tasks increase in generality, broader self-beliefs such as self-concept would increase in prediction. These are striking findings in light of the rigorous test of the influence of self-efficacy that inclusion of achievement assessments provide in investigations of academic performances.

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