RISING - A Journal of Researchers
Vol.1 Issue 2 (July 2017)
ISSN No: 2456-7752

A STUDY ON STUDENTS' BEHAVIOUR WITH SPECIAL REFERENCE TO MATHEMATICS IN HIGHER EDUCATION

Nita Solanki
HOD - Department of Law
Research Scholar
Rai University, Ahmedabad

Kajal Prajapati
Assistant Professor (Department of Science)
Rai University, Ahmedabad

ABSTRACT

As we known at present, India has highest young population. So India has highest numbers of students who are studying. And we have seen that students have different idea to select different fields that will help them in their future. But we all know that mathematics formulas and their applications are being used differently in different areas in higher education. So we have found that the student' attitudes regarding mathematics subject is very different for student in higher education. Some student scores highest marks in all subjects except mathematics moreover, some score highest marks in mathematics except all subjects. So in this paper we have tried to search students' attitude and behaviour in mathematics in higher education. The present paper attempts to find reasons for students' behaviour. It also attempts to identify possible measures to improve students' behaviour. If possible, measures would implement by us that will surely give us positive results.

Keywords: *Student behaviour, Mathematics, Higher education, Attitude*

RISING - A Journal of Researchers
Vol.1 Issue 2 (July 2017)
ISSN No: 2456-7752

A STUDY ON STUDENTS' BEHAVIOUR WITH SPECIAL REFERENCE TO MATHEMATICS IN HIGHER EDUCATION

INTRODUCTION

India has highest young population, so India has highest numbers of students in present era. As we all are know that day by day competition is increasing in all fields. And more number of students is participating in highest ratio in present era. We have seen that all students are preparing for different subjects. But we have found due to some striking data some students score highest marks in all other subjects except mathematics. So, we have tried to identify some reasons for this problem and tried to attempt possible measures to solve the problem.

Mathematics as a subject in different streams

The first thing you should have to learn mathematics is interest. Without interest you cannot learn mathematics. If you have interest then it is very easy to learn. The next step in learning mathematics is learning its basics. Try to practice the basic formulae, important theorems etc. Then try to do as many problems as you can on your own. As you are preparing for competitive exams, then learn the short cuts for the problems you are preparing. Make them as notes and try to remember them. Slowly you will improve and get success. Mathematics frequently involves the solution of both verbal and nonverbal problems through the application of previously acquired information (Mercer & Miller, 1992).

In higher studies mathematics is divided into two branches applied mathematics and pure mathematics. Pure mathematics is major subject for that students who are appearing for Ph. D in mathematics, applied mathematics is minor subject for engineering, commerce & arts students. Applied mathematics is helpful subjects for all streams.

Mathematics is a wide discipline and has many forms. In the various engineering fields, different forms of math may be applied to achieve a specific solution. In engineering, math is used to design and develop new components or products, maintain operating components, model real-life situations for testing and learning purposes, as well as build and maintain structures. Mathematics lies at the heart of commerce as all the processes of economics depend on an understanding of the ways numbers work, how they interact with reality and how certain equations which would normally have a simple solution, are never-ending. Accurately drawing a

3D object on a 2D piece of paper requires understanding (maybe just intuitively) some ideas from projective geometry.

LITERATURE REVIEW

Tahar Fadilah, et.at. (2010) has found interest in mathematics, anxiety towards mathematics, self-efficacy, motivation and self-concept are the criteria very useful for teachers' to measure students' attitude in mathematics. He has also found that attitude towards mathematics affects students' achievement in the class and whether it can be used to predict students' performance in the course.

Mata Maria (2012) has found that the relationship between math achievement and attitudes towards mathematics are consistent with research showing that good achievers develop more positive attitude than lower achievers. Achievement is usually related to self-belief in competence and self-belief in competence can be related to attitudes towards math, which suggest that when students succeed at a math task, it increases their sense of competence and this may promote more positive attitudes. Gender related to attitudes is identical.

Farooq Muhammad (2008) has found that there is no affect of gender on students' attitude towards mathematics at secondary school level. There is no significance difference in confidence of male and female students towards mathematics at secondary school level.

Mutai Jackson (2010) has found that students' attitudes acquired from previous experience in the subject, teachers, parents and peers influence affected their learning of the subject. Teachers must be aware that there are certain aspects of students' learning in mathematics that need to be improved. Students' should be given more opportunities to work on non-routine and challenging mathematics problems. The subjects should not be limited to theoretical teaching and focused on passing examination only. Mathematics should be demonstrated in a more practical way.

Kannan Senthamarai (2015) has found that there is no significant difference between urban and rural secondary students attitude towards mathematics. There is no significant difference between English and Tamil medium secondary students attitude towards mathematics.

Kuranchie, et.al (2013) has found that the attitude of the mathematics was related to the attitude of the students towards the subjects. A significant relationship was found between teacher attitude and students' attitude towards mathematics. This connotes that irrespective of the

mathematics capability of students if teachers attitude display negative attitude towards mathematics students may not develop positive attitude towards the subject and vice versa. Teacher's attitude towards mathematics is seen as important factor in the information of student's attitude towards the learning of the subject.

CONTRIBUTION OF THE RESEARCH PAPER

In this research paper researcher has tried to find out various factors affecting students' behaviour in higher education. As the importance of the mathematics subject is increasing day by day the research has tried to analyze the reasons behind students less interest in mathematics and tried to give possible measures.

OBJECTIVES

1. To study students' behaviour in higher education with special reference to mathematics.
2. To find out reasons behind students behaviour.
3. To identity possible measures to increase students' participation in mathematics.

HYPOTHESIS

H_{01}: There is positive behaviour in higher education with special reference to mathematics.

H_{02}: There is no significant effect of gender on students' attitude towards mathematics at secondary school.

RESEARCH METHODOLOGY

Problem Statement

It is found that students behave differently while studying mathematics so the researcher has effort to find out; a study on students' behaviour with special reference to mathematics in higher education.

Research Design

Researcher has used descriptive research design.

Data Collection Method

The secondary data were collected from various sources such as journals, magazines, websites and dissertations from libraries of reputed educational institutions. The primary data which is the

centric point of the study is collected through well defined questionnaire. The researcher used structured disguised questionnaire for the survey.

Sampling Plan

Universe/population: The population of the research is Students of Ahmedabad city.

Sampling techniques: Non probability convenient sampling technique is used to get samples.

Sample size: The total sampling size is 100.

DATA INTERPRETATION AND ANALYSIS

The respondents are from various streams from Science -35, Art- 10, and commerce-29 other-26.

TO STUDY STUDENTS' BEHAVIOUR

H_{01}: There is positive behaviour in higher education with special reference to mathematics.

Table: 1 (Pearson Correlation Coefficient Test)

		Attendance	Enjoyment
Attendance	Pearson Correlation	1	1.000**
	Sig. (2-tailed)		.
	N	2	2
Enjoyment	Pearson Correlation	1.000**	1
	Sig. (2-tailed)	.	
	N	2	2

**. Correlation is significant at the 0.01 level (2-tailed).

From the above test we conclude that there is significant relationship between behaviour in higher education with special reference to mathematics. As the value of Pearson correlation coefficient is one. So, we accept the null hypothesis.

TO FIND OUT REASONS BEHIND STUDENTS BEHAVIOUR

H_{02}: There is no significant effect of gender on students' attitude towards mathematics at secondary school level.

Table: 2 (Pearson Correlation Coefficient Test)

		Gender	Enjoyment
Gender	Pearson Correlation	1	1.000**
	Sig. (2-tailed)		.
	N	2	2
Enjoyment	Pearson Correlation	1.000**	1
	Sig. (2-tailed)	.	
	N	2	2

**. Correlation is significant at the 0.01 level (2-tailed).

From the above test we conclude that there is significant relationship between gender on students' attitude towards mathematics at secondary school level. As the value of Pearson correlation coefficient is one. So, we accept the null hypothesis.

Major issue in mathematics subject today are not theoretical concepts only, calculations, sound basic concepts, practically explanations needed, hard to understand. Most of the teachers are not using active pedagogical strategies while teaching mathematical concepts.

FINDINGS

We have found that 68 percent attending regular mathematical lectures; where as 32 percent are not attending regular mathematical lectures. The most important reasons are Students enjoy mathematics class. 32 percent respondents enjoy mathematics because it is easy to remember, 25 percent respondents feel that mathematics include more calculations, 25 percent respondents feel that mathematics is logical and 18 percent respondents feel that mathematics can easily identity errors. So we conclude that only 32 percent students enjoy mathematics as a subject. 42 percent respondent feels that mathematics is hard to remember, 25 percent respondent feels that mathematics include tough calculations, 15 percent respondent feels that mathematics is logical and 18 percent respondent feels that mathematics is tough to identify errors. So we conclude that more than 42 percent students enjoy mathematics as a subject.

There is less number of the students who attend mathematics subject classes regularly and out of them less are enjoying the mathematics as a subject. As male and female both are attending the mathematics lectures and enjoying in the same proportion. So, gender has no relationship with mathematics subject.

CONCLUSION

From the above study we conclude that less number of students enjoy mathematics as a subject. The reasons for not interest in mathematics subject are hard to remember, tough calculations, logical, tough to identify errors. Major issue in mathematics subject today are not theoretical concepts only, calculations, sound basic concepts, practically explanations needed, hard to understand. Most of the teachers are not using active pedagogical strategies while teaching mathematical concepts.

RECOMMENDATIONS

The following recommendations are made from the study

1. As students of higher education needs knowledge of mathematics teachers should follow innovative methods to teach mathematics.
2. Teachers should try to understand the level of students grasping power and try to make mathematics subject interesting.
3. Teachers should follow traditional method for mathematical teaching learning process.
4. Mathematics teachers should wisely utilize available learning resources to enhance positive attitudes, reinforce neutral attitudes, if any, and neutralize any negative attitude towards learning and performance in mathematics.

LIMITATIONS OF THE STUDY

1. This study is limited to students belonging to higher studies only.
2. This study is limited to student's behaviour regarding mathematics subject in Ahmedabad only

SCOPE OF THE FURTHER STUDY

1. A study can be done for student behaviour regarding other subject.
2. A study can be done of student behaviour for mathematics in Primary studies.

REFERENCES

1. Muhammad, F. (2008). Students' attitude towards mathematics. *Pakistan Economics and social review, 46*, 75-83.
2. Senthamarai, K. (2015). Attitude of secondary school students towards mathematics. *IJMRME, 1(2)*, 211-216.
3. Kuranchie, et.at. (2013). Students attitude towards mathematics and performance: Does the teacher attitude matter? *IISTE, 4(3)*, 130-139.
4. Mata, M. (2012). Attitude towards mathematics: Effects of individual, motivational, and social support factors. *Child development Research 2*, article id 876028 retrieved on 15-07-2017.
5. Mutai, J. (2010). Attitude towards learning and performance in mathematics among students in selected secondary schools in Bureti. E55/10148/2007, retrieved on 15-07-2017.
6. Tahar ,F., et.at. (2010). Students' attitude toward mathematics: The use of factors analysis in determine the criteria, *ICMER, 8*, 476-481.

WEBLIOGRAPHY

1. www.amazonaws.com/academia.edu.documents/30725914/Kroesbergen_en_Van_Luit_2003
2. www.countrymeters.info/en/India
3. http://dx.doi.org/10.1155/2012/876028
4. http://eds-courses.ucsd.edu//tep129/InterviewQuestions.htm
5. www.wikipedia.org/wiki/Applied_mathematics
6. http://www.mdrc.org/sites/default/files/full_519.pdf
7. www.rdmodernresearch.org
8. www.reference.com/math/math-used-engineering-4d0741bd7b1afacd