



**TEACHER'S PERCEPTION REGARDING FACTORS
AFFECTING BBA & BCOM COLLEGE STUDENTS SUCCESS IN
MATHEMATICS COURSE: SAURASHTRA REGION**

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ABSTRACT

This paper emphasizes the perception of teachers towards the factors affecting the success of college students in Mathematics subject. Using descriptive research design and convenience non-probability sampling method, data was collected from 70 professors of Saurashtra University teaching in BCOM and BBA faculty. Factor analysis is used in the study. Student attitude, Comfort in the class, Parent's Involvement, Student's interest in the subject and teacher's attitude are the factors that affect the success of BCOM and BBA college students in Mathematics subject in the Saurashtra region.

Key words: Factors, Success, Mathematics

INTRODUCTION

Since ancient times, Mathematics has been a subject which solves every problem in studies as well in life. It has been the most important subject accepted globally. Its symbols, techniques, methods, etc. have always been a protective covering. Mathematics being a subject helps students to open up their feathers and fly smoothly in any Industry they like.

Being an interesting subject, there is a lack of confidence seen in student's attitudes towards the subject. Lack of Interest towards the subject, no courage to give it a try, laziness towards solving, procrastination, time consuming to solve mathematics problems, getting confused in the middle of the sum and many other problems are faced by students globally.

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Teacher perceptions are related to emotions, attitude, thinking and beliefs. Teachers are the most important resource that can influence students' performance academically. A good relationship between the teacher and the students gives fruitful results in academics. The teacher understands the student logically and emotionally. A teacher can be a friend, and a guide and give appropriate solutions to the problems that students deal with.

REVIEW OF LITERATURE

Peter (2010) studied the factors that affect performance in Mathematics and solving problems. Abilities towards mathematics help a lot in daily life. Many students have a feeling of solving Mathematics with step-by-step procedures. Word problems are not very important for them. Positive belief and negative belief exist with gender differences. Positive beliefs are considered to be more important towards the thinking of the subject, usefulness of the subject and solving the problems.

Acharya (2017) studies the factors that affect the students while learning Mathematics and the difficulties they face. A triangle of teachers, parents and students gives a dynamic result in the passing criteria of students. The bond between all three results in a clarity of concepts of Mathematics. Difficulties faced by students while learning Mathematics are their negative feelings towards the subject, their anxiety, background related to their economy and education, improper assessment done by the teachers and a lot more.

RESEARCH PROBLEM

Mathematics is an important subject in human life. But there is more percentage of failures in the subject. Many past researchers have focused on the subject and factors of subject failures. However, there is a need to focus on the teacher's perception of the factors that lead to success in BCOM and BBA students for Mathematics subjects in the Saurashtra region.

RESEARCH METHODOLOGY:

RESEARCH OBJECTIVES

- To find the factors affecting BCOM and BBA student's success in Mathematics Courses in the Saurashtra region through teachers' perception.

SCOPE OF THE STUDY:

The scope of the study includes identifying the factors that affect the success of students in Mathematics subject. Data is collected from professors teaching in Commerce and Management faculty.

DATA SOURCE:

The data is collected through a Questionnaire from the professors of the Saurashtra region teaching in Commerce and Management faculty for this study.

SAMPLING DESIGN:

SAMPLING UNIT: The sample unit is all the professors teaching in Commerce and Management faculty in the Saurashtra region.

SAMPLE SIZE: Data was collected from 70 professors.

SAMPLING METHOD: Non-probability convenience method sampling method was used.

LIMITATIONS OF THE STUDY:

- The time limit was the constraint for the study.
- Sample size is 70 professors
- Biasness may be present in the response of the respondent.

DATA ANALYSIS AND INTERPRETATION:

DEMOGRAPHIC DATA:

Particulars	Categories	Percentage (%)
Gender	Male	73
	Female	27
Age	21-25 years	13
	26-30 years	13
	31-35 years	33
	36-40 years	27
	41 years and above	14
Experience	Less than 5 years	13
	5-10 years	35
	11-15 years	33
	15-20 years	5
	21-25 years	4
	26 years and above	10

FACTOR ANALYSIS

Prior basic knowledge of Mathematics, Interest in the subject, Good attendance, Environment of lecture, Comfortable lecture rooms, Curious attitude towards the subject, student and teacher relationship, subject resources availability, unique teaching methods, subject load, student's confidence level, teacher's teaching experience, frequent test/assignments and parents involvement are the factors included in the research that affects students success in Mathematics course.

Table-1: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.668
Bartlett's Test of Sphericity	Approx. Chi-Square	374.329
	df	91
	Sig.	.000

From above Table 1, it is seen that the Kaiser-Meyer-Olkin Measure of Sampling Adequacy is large i.e. 0.668. It means that there exists enough correlation for factor analysis. From Bartlett's Test of Sphericity, it is seen that the significance value is 0.000 means it is significant.

Table-2: Communalities

	Initial	Extraction
Prior basic knowledge of Mathematics	1.000	.829
Interest in subject	1.000	.755
Good attendance	1.000	.704
Environment of Lecture	1.000	.727
Comfortable Lecture rooms	1.000	.804
Curious attitude towards subject	1.000	.529
Student and teacher relationship	1.000	.726
Subject resources available	1.000	.758
Unique teaching methods	1.000	.710
Subject load	1.000	.721
Students confidence level	1.000	.867
Teacher's teaching experience	1.000	.914
Frequent Tests/Assignments	1.000	.796
Parents Involvement	1.000	.710

Extraction Method: Principal Component Analysis.

Communalities of each factor are presented in Table 2. The total variance explained is presented in Table 3. The component Matrix result is presented in Table 4. Varimax rotated factor analytic results for all respondents are shown in Table 5.

Based on the latent root criterion, the decision for arriving at the number of factors was made which means variables having Eigenvalues greater than 1, it can be decided that there are five factors underlying nine other factors.

Table-3: Total Variance Explained

Component	Initial Eigen Values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.096	29.257	29.257	4.096	29.257	29.257	2.679	19.134	19.134
2	2.230	15.931	45.188	2.230	15.931	45.188	2.553	18.233	37.367
3	1.781	12.723	57.911	1.781	12.723	57.911	2.374	16.954	54.321
4	1.436	10.254	68.165	1.436	10.254	68.165	1.595	11.391	65.712
5	1.007	7.196	75.361	1.007	7.196	75.361	1.351	9.648	75.361
6	.786	5.617	80.977						
7	.648	4.631	85.608						
8	.484	3.457	89.065						
9	.449	3.204	92.269						
10	.353	2.522	94.791						
11	.232	1.655	96.446						
12	.202	1.445	97.891						
13	.172	1.225	99.116						

Extraction Method: Principal Component Analysis.

Table-4: Component Matrix

	Component				
	1	2	3	4	5
Prior basic knowledge of Mathematics	.659	-.113	.609	.032	-.103
Interest in subject	.073	.147	.030	.838	.157
Good attendance	.803	-.043	-.136	-.130	.145
Environment of Lecture	.607	.360	-.050	-.382	.283
Comfortable Lecture rooms	-.101	.839	-.013	-.202	.220
Curious attitude towards subject	.526	-.063	.491	-.086	-.006
Student and teacher relationship	.556	.622	-.087	-.143	-.044
Subject resources available	.770	.164	.065	.120	-.346
Unique teaching methods	.796	-.010	-.224	-.114	-.114
Subject load	.325	.493	.071	.603	.071
Students confidence level	.701	-.562	-.067	.212	-.099
Teacher's teaching experience	.428	-.602	-.381	-.075	.466
Frequent Tests/Assignments	-.019	-.095	.599	.057	.652
Parents Involvement	-.196	-.112	.757	-.236	-.176

Extraction Method: Principal Component Analysis.

- a. 5 components extracted.

Table-5: Rotated Component Matrix

	Component				
	1	2	3	4	5
Prior basic knowledge of Mathematics	.888	.105	.078	.087	.123
Interest in subject	-.019	.030	-.144	.852	.088
Good attendance	.389	.596	.433	.027	-.098
Environment of Lecture	.224	.266	.770	-.092	.065
Comfortable Lecture rooms	-.261	-.435	.723	.098	.114
Curious attitude towards subject	.687	.092	.146	-.015	.165
Student and teacher relationship	.225	-.006	.767	.164	-.247
Subject resources available	.623	.189	.312	.254	-.416
Unique teaching methods	.400	.519	.390	.019	-.359
Subject load	.152	-.076	.287	.780	-.036
Students confidence level	.516	.708	-.210	.122	-.200
Teacher's teaching experience	-.040	.931	-.050	-.128	.161
Frequent Tests/Assignments	.206	.001	-.010	.093	.863
Parents Involvement	.465	-.487	-.236	-.320	.314

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 22 iterations.

Table 3 shows that there are five factors with 75.361% of the total variance. Eigen values for all the five factors are 4.096, 2.230, 1.781, 1.436 and 1.007 respectively. An appropriate name has been given to the dimension extracted based on the variables. Each variable with its respective factor loading is presented in Table 4.

Factor 1 **Student's attitude**: This factor involves features like Student's confidence level, methods undertaken in the class, student's prior knowledge of the subject, good attendance, environment of the lecture, curious attitude towards the subject and resources availability of the subject. It consists of seven attributes with the total variance of 29.257% and Eigen value of 4.096.

Factor 2 **Comfort:** This factor involves features like there must be a good relationship between the student and the teacher and the lecture rooms must be comfortable. A comfort zone must be present for the student to score well in the subject. It consists of two attributes with a total variance of 15.931% and Eigen value of 2.230.

Factor 3 **Parents Involvement:** This factor involves the features of Privacy issues. It has a total variance of 12.723% and Eigenvalue of 1.781.

Factor 4 **Student's Interest:** This factor involves features like the student must have an interest in the subject and the load must be manageable by the student. It has a total variance of 10.254% and an Eigen value of 1.436.

Factor 5 **Teacher's attitude:** This factor involves features like the teaching experience of the subject teacher and tests/assignments taken frequently. It has a total variance of 7.196% and an Eigen value of 1.007.

FINDINGS:

- Student attitude, Comfort in the class, Student's interest in the subject, Parents' Involvement and Teacher's attitude are the factors that affect BCOM and BBA students' success in Mathematics Courses in the Saurashtra region.
- Teachers find students to have mood swings toward their interest in the subject.
- Teachers try to tackle the students by motivating them positively and negatively.
- Students' teenage was the major factor of disinterest towards the subject as they disliked to give more effort to the subject.
- BCOM and BBA student being business minded consider the subject units to be of no use in life which create disinterest towards the subject.

SUGGESTIONS:

- Students must be given more practical lectures which may increase their practice.
- Teachers must use modern techniques and explain practical implications of the subject in life.
- Teachers must give practical assignments which may increase the practice of the student.

IMPLEMENTATION OF THE STUDY:

- This research will help teachers to understand the factors that affect the student's success in Mathematics courses.
- This paper also reflects the areas that teacher and students should focus on.
- This paper can be further used by the researcher, academician and student to study in different areas and topics.

CONCLUSION:

This research concludes that Students' attitudes, Comfort in the class, Student interest in the subject, Parents' Involvement and Teachers' attitude are the factors that affect BCOM and BBA students' success in Mathematics Courses in the Saurashtra region. Teachers try to create interesting mind-set for students. Teachers take new initiatives to generate interest and make steps easier for solutions.

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