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## *Factors Affecting Academic Performance among Engineering Students in Chennai City*

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*Abstract: The purpose of this study is to examine the factors that affect Academic Performance of the students. The study focuses on certain factors such as Academic Competence, Test Competence, Anxiety, and Time Management among students that affect Academic Performance of the students. The student Cumulative Grade Point [GPA] was used as an instrument to measure Academic Performance of the students. The main method of data collection was a Structured Questionnaire administered to 205 engineering students from top most engineering colleges in Chennai city. The study result revealed Academic Performance was significantly associated with factors such as Academic Competence, Test Competence. A student with cumulative GPA of 3.0 is significantly differed in their level of test competence.*

*Keywords: Academic Performance, Academic Competence, Test Competence, Time management, engineering students.*

### I. INTRODUCTION

Grade Point Average is commonly used indicator of Academic performance. Many colleges set a minimum GPA maintained in order to create good Academic Performance of students, a GPA of 3.0 or higher is considered as an indicator of good Academic Performance. A high GPA is not only a factor associated with career success. Poor academic performance or high failure may result in high level of stress, attrition etc. Hence student's academic performance has been always the topic of interest for educators to evaluate the performance of students. Even many researchers have identified the Demographic, Socio-economic, family and financial factors contributing to student's academic performance.

According to study conducted by Cambridge University defined Academic Performance is characterized by the overall performance in each year which culminates Grade Point Average (GPA). The methods for calculating the GPA are as below:

$$\frac{\text{Sum of( Credits Units x Grade Points)}}{\text{Total number of modules taken by student}}$$

The minimum and maximum GPA scores are from 0 (Grade F) and 4.0 (Grade A) respectively. The GPA scores imply Higher the score better the performance of the students. So it is clear that GPA will be a good measure to measure students Academic Performance. Many factors could act as a barrier to students attaining and maintaining a high GPA that reflects on overall academic performance during the college tenure. Test Anxiety, Time Management, Academic Competence are some of the factors that affect individuals Academic Performance of the students.

Academic Competence is associated with students ability to manage their studies and curriculum. It has been shown to affect the academic performance and students with better academic competence would probably have better academic performance. Test competence is another factor that affects the academic performance of the students as it shows whether students cope with the amount of study material to cope during the examination for preparing them.

According to the study strategic studying techniques may help the students to achieve their GPA better. Students must always handle certain effective techniques to cope up with academic environment. Time management is another key factor associated with academic performance of the students. In today's scenario many students fail to adopt time management technique for effective academic success. Planning in advance, test preparation, prioritizing work, following certain schedules etc play a major role in time management. Test Anxiety is also a factor associated with poor academic performance it leads to depression, stress, nervousness, cognition, worry etc during test or any assessment. Stress Management program can be conducted to reduce the stress level of students during their academic career.

## II. LITERATURE REVIEW

**Yousefi, et.al (2010)** conducted a study on the relationship between Anxiety and Academic Achievement among adolescents and found there is significant correlation between Test Anxiety and Academic Achievement among students.

**Betsy & Finger (2006)** examined the relationship between depression and academic performance among college students. The study identified a negative correlation between depression and Grade Point Average (GPA).

**Bjorkman (2008)** conducted a study on Academic stress, social support & GPA. The study revealed Academic stress is relevant construct to consider when investigating potential correlates of emotional & behavioral problems.

**Sarmany (1994)** examined the loads of stress among college students. The results showed that students with low Grade Point Average (GPA) used less effective stress coping strategies and assumed test situation as being significantly more stressful.

## III. OBJECTIVES OF THE STUDY

- To identify the relationship existing between Demographic variables and factors of Academic Performance.
- To identify various factors affects Test Anxiety of engineering students.
- To examine the factors affecting Academic Competence of the students.
- To identify the factors affecting Test Competence of the students.
- To identify the factors determining time management of students.

## IV. METHODOLOGY

### Participants:

The study comprised of 205 engineering college students aged between 17-21 yrs. Top five engineering colleges in Chennai were considered for the present study. Among these 85 female students and 83 male students were participated in this study.

### Tools:

The tools used for the study was Grade Point Average (GPA) at the time of completed the questionnaire. Since GPA is the primary indicator (dependent variable) and was measured on scale ranging from 0 to 4 using open ended questionnaire. The instrument used to measure Test Anxiety was adopted was Test Anxiety Inventory (TAI). The scale consists of 10 items on 5 point rating scale. Academic Competence, Test Competence, Time Management and Strategic Studying were analyzed using a valid scale. The survey instrument also include demographic variables such as year of enrollment, sex, age, gender, race. Likert's five point scale were used to rate their agreement or disagreement towards factors.

Table:1 Descriptive statistics

VARIABLE	FIRST YEAR N=41	SECOND YEAR N=42	THIRD YEAR N=43	FOURTH YEAR N=79	OVER All N=205
Age	26.6	23.5	26.2	27.5	29.9
Gender: Male female	15.9 84.1	34.8 65.2	22.7 77.3	33.9 66.6	27.5 72.1
Part Time employment	27.7	24.4	32.0	22.9	34.9
Pursue higher studies	23.8	32.2	36.9	23.5	45.2
Cumulative GPA, Mean (SD)	3.2	2.8	3.2	3.1	3.4

TABLE:2 showing students response to determine test anxiety

VARIABLE	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree	Mean (SD)
Failure to perform better	9.8	37.1	32.9	13.4	32.6	2.7
Nervousness	17.3	23.8	12.7	13.8	43.7	2.6
Upset stomach	20.1	14.6	16.9	23.3	23.3	3.2
Depression	19.9	23.2	15.8	23.7	24.1	3.4
Worry	34.2	15.6	16.7	32.7	23.1	3.5
Anxious	23.2	23.9	24.7	15.8	16.7	2.5

TABLE:3 Showing responses to determine Academic Competence

variable	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree	Mean (SD)
Managing course load	22.5	53.0	45.9	9.9	4.9	3.9
Comprehension	6.3	35.6	15.8	3.8	3.8	2.3
Interest	10.7	59.8	17.8	24.9	2.0	3.7
Enjoyment	9.7	46.6	29.0	9.2	28.9	22.8
Efforts	24.1	34.4	23.1	7.7	7.9	3.3

Table: 4 showing students responses to determine Test Competence

variable	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree	Mean (SD)
Easily manage study material	6.1	32.1	29.4	2.5	4.6	3.1
Test preparation	4.1	22.4	23.6	4.9	34.8	3.2
coping with examination tension	10.7	28.2	23.9	19.4	23.9	3.7
Difficulty in managing study material	3.9	22.6	38.9	23.7	7.7	3.3

Table: 5 showing students responses to determine Time Management

variable	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree	Mean (SD)
Difficulty in studying	14.2	43.5	20.9	15.7	45.9	2.9
Studying regularly	12.2	34.3	18.9	23.4	32.8	2.9
Cramming for examination	43.9	23.9	21.9	32.1	34.9	3.8
Test preparation	2.1	34.8	23.9	34.9	23.3	2.9

## V. RESULTS

Two hundred and five students completed survey instruments. The mean cumulative GPA reported by students was 3.2. Descriptive statistics with respondents demographic characteristics can be viewed in table 1. The overall reliability for the scores for each of the four subscales Academic Competence (AC), Test Competence (TC), Strategic studying (SS), Time Management (TM). The reliability scores for each domain can be viewed in table 2,3,4,5. The Cronbach's coefficient alpha values measuring AC=0.7, TC=0.8, SS=0.7, TM=0.7 indicated acceptable reliability. Some students (33%) reported that they could manage time properly. Many students (47.9%) indicated that they end up in "Cramming" for examination. Few students (6.6%) agreed that they always started preparing for examination.

## VI. CONCLUSION AND RECOMMENDATION

Identifying the effects of various factors on student's academic performance is of great importance to educators. Results of this study underlined the importance of evaluating factors such as Academic Competence, Test Competence, Time Management and Strategic Studying in evaluating academic success. Focusing efforts to understand these factors further would be helpful for students in enhancing their academic performance. Efficient counseling services regarding these techniques with stress management program in achieving academic success.

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