

A STUDY ON CONSISTENCY OF PERFORMANCE OF STUDENTS IN COMBINED ENTRANCE EXAMINATION (ASSAM), BOARD EXAMINATIONS AND EXAMINATIONS IN BACHELOR OF ENGINEERING PROGRAMME

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ABSTRACT

Consistency refers to reliability or uniformity of successive result or events. Consistency of performance refers remarkable uniformity throughout a particular academic area. Consistency of performance indicates long range progress of academic achievements of individuals. It is generally assumed that the students who showed better or higher performance in the starting classes of their studies also performed better in future academic years. The present study is an attempt to find out the consistency of performance in the Combined Entrance Examination (Assam), Board examinations and Semester Examinations in Bachelor of Engineering Programme.

Key word: *Consistency of Performance, CEE, Board Examinations, B.E Programme*

1.1 INTRODUCTION

Consistency refers to reliability or uniformity of successive result or events. Consistency of performance refers remarkable uniformity throughout a particular academic area. Consistency of performance indicates long range progress of academic achievements of individuals. It can be measured with the help of coefficient of correlation. If the correlation between a test score and the future performance at any stage of learning is high then it indicates that the performance of the individual is consistent

It is generally assumed that the students who showed better or higher performance in the starting classes of their studies also performed better in future academic years.

Shanthamani (1979) studied about selection of students for engineering courses by means of entrance test. The main objective of the study was to see whether the tests given have any predictive validity of forecasting academic achievement, particularly in engineering courses. The study administered simultaneously in five centres which were- Madras, Bombay, Delhi, Varanasi and Bangalore. The major findings of the study revealed that Delhi centre has scored higher than the Bangalore and Madras centres in both Physics and Mathematics tests and the difference is significant at the .01 level in both the cases.

Javier Touran (1987) studied about high school ranks and admission tests as predictors of first year medical students' performance. The study revealed that Grade point average of both high school and admission tests are reliable predictors of academic success for students finishing their first year.

Jesse Rothstein (2004) studied about SAT scores, High schools, and Collegiate Performance Prediction. The study revealed that SAT scores are substantially more predictive of eventual student performance across high schools than within. The average SAT score at a student's school is substantially more informative about that students' eventual FGPA than in the students own score.

Ellen R. Julian (2005) studied about validity of the Medical College Admission Test (MCAT) for predicting Medical School performance. The main objective of the study was to find the relationship between Under Graduate Grade Point Average (uGPA), with MCAT and Medical school grades, United States Medical Licensing Examination (USMLE) step scores and academic distinction or difficulty. The study revealed that Grades were best predicted by a combination of MCAT scores and uGPA, with MCAT score providing a substantial increment over uGPA. MCAT scores were better predictors of USMLE step scores than were uGPA, and the combination did little better than MCAT scores alone. MCAT scores were strong predictors of scores.

Nathan R. Kuneel and others (2007) in their study entitled 'A meta analysis of the Predictive validity of the Graduate Management Admission Test (GMAT) and undergraduate Grade Point Average (UGPA) for Graduate students Academic Performance'. The study revealed that there was considerable support for the validity of the GMAT. Across all criteria and moderator groups examined, the result indicated that the GMAT was predictive of business school performance

Menifield & Others (2007) studied about waiving the Master of Public Administration (MPA) entrance Exam: Impact on performance. The study revealed that the Waiver students and the non-waiver students are very comparable overall. The study also revealed that both undergraduate and graduated GPA was slightly higher for non-waiver student in each category.

The present study is an attempt to find out the consistency of performance in the Combined Entrance Examination (Assam), Board examinations and Semester Examinations in Bachelor of Engineering Programme.

1.2 OBJECTIVES OF THE PRESENT STUDY

The major objective of the present study is to find out the consistency of performance of students in Combined Entrance Examination (Assam), Board Examinations and Bachelor of Engineering Programme. In order to fulfil this objective, the following objectives have been formulated:

1. To find out the extent of relationship between the scores obtained by the students in the Combined Entrance Examination (CEE) and the final examination of BE Programme.
2. To find out the correlation between the marks obtained by the students in class 10 examination and examination of BE programme.
3. To find out the correlation between the marks obtained by the students in class 12 examination and examination of BE programme.

1.3 HYPOTHESES OF THE PRESENT STUDY

In order to accomplish the above cited objectives, the following hypotheses are formulated:

Hypothesis 1 - There is a significant positive correlation between the scores obtained by the students in the Combined Entrance Examination (CEE) and Final examination of BE programme.

Hypothesis 2- There is a significant positive correlation between the marks obtained by the candidates in class 10 examination and examination of BE programme.

Hypothesis 3- There is a significant positive correlation between the marks obtained by the candidates in the class 12 examination and examination of BE programme.

1.4 DEFINITIONS OF THE TERMS USED IN THE PRESENT STUDY

1.4.1 Consistency of Performance:

Consistency of performance indicates long range progress of academic achievements of individuals. It can be measured with the help of coefficient of correlation. If the correlation between admission test score and the future performance at any stage of learning is high then it indicates that the performance of the individual is consistent.

1.5 DELIMITATION OF THE STUDY

Though the scope and purpose of the present study is very wide, the investigator had to delimit the present study in the following aspects:

- The study is confined to the engineering institutes of Assam only
- Data are collected only from the students enrolled during the sessions 2011-12, 2012-13, and 2013-14.
- The study is delimited to the first Degree of Bachelor of Engineering Examinations

1.6 METHODOLOGY

1.6.1 METHOD:

The major objective of the present study is to find out the consistency of performance of students in Combined Entrance Examination (Assam), Board Examinations and Bachelor of Engineering Programme. Hence, Survey method is considered to be the most appropriate method for the present study.

1.6.2 POPULATION:

The population of the present study comprises of all the students who enrolled in different Government and private Engineering institution of Assam. There are 4 (four) Government and 10 (ten) private institutions offering Engineering course in Assam (till January, 2015).

1.6.3 SELECTION OF THE SAMPLE

Considering the objectives and the nature of the data to be collected, purposive sampling technique has been adopted for the present study. There are a total of 4 (four) government engineering colleges in Assam. Out of these 4 institutions, 3 (three) institutions are selected using purposive sampling technique. Besides, there are 10 (ten) private Institute/Universities offering engineering programme in Assam. Out of these 10 private institutes/Universities, 1 (one) institute is selected using purposive sampling technique. A total of 384 students of these selected institutions constitute the effective sample of the present study. Thus, the effective sample of the present study is 384 student of BE programme.

1.6.4 TOOLS AND TECHNIQUES USED IN THE PRESENT STUDY

Tools and techniques used in a research study depend upon the purpose of the study and the nature of the data to be collected. The following tools and techniques were used for collection of the data in the present study:

- The marks obtained in the 1st, 2nd, 3rd, 4th, 5th, 6th, 7th and 8th semester examinations by the sampled students is used as academic performance.
- Documents are used as sources of data: Result-sheets of Semester examinations of BE programme.

1.6.5 COLLECTION OF DATA

- The data had been collected mainly from the result sheet of different Engineering institutions.

1.6.6 ANALYSIS OF DATA

Both qualitative and quantitative methods were adopted in analysing the data collected. Descriptive statistics such as Product moment coefficient of correlation were used in analysing the quantitative data.

1.7 ANALYSIS OF DATA

EXTENT OF RELATIONSHIP BETWEEN THE SCORES OBTAINED BY THE STUDENTS IN CEE AND FINAL EXAMINATION OF BACHELOR OF ENGINEERING PROGRAMME:

Product moment co-efficient of Correlation is used to study the relationship between the scores obtained by the students in CEE and Final examination of Bachelor of Engineering programme. Table-1 shows the extent of relationship between the scores obtained by the students in CEE and Final examination of Bachelor of Engineering programme.

Table-1

Extent of Relationship between the Scores obtained by the Students in CEE and Final Examination of Bachelor of Engineering Programme

Examination	Correlation with CEE	D.f	Significance
BE final examination	0.12	384	Significant at .05 Level

Regarding the relationship between the scores obtained by the students in CEE and Final examination of Bachelor of Engineering programme, the value of the product moment coefficient of correlation (r) is found to be 0.12 which is significant at .05 level for 384 degrees of freedom. Hence, the directional hypothesis that is “there is a significant positive correlation between the scores obtained by the students in the Combined Entrance Examination (CEE) and the final examinations of Bachelor of Engineering programme” is accepted. It means that those showing better performance in CEE are also showing better performance in the final examination of Bachelor of Engineering Programme. It reveals that the performance of students in final examination is consistent with the performance in CEE.

1.8 EXTENT OF RELATIONSHIP BETWEEN THE SCORES OBTAINED BY THE STUDENTS IN CLASS 10 EXAMINATION AND THE BACHELOR OF ENGINEERING PROGRAMME:

To study the extent of relationship between the scores obtained by the students in class 10 examinations and Bachelor of Engineering programme, product moment coefficient of correlation technique is used. Table- 2 shows the extent of relationship between class 10 examination and the Bachelor of Engineering programme.

Table-2

Relationship between the Scores obtained by the Students in class 10 examination and Bachelor of Engineering Programme

Examinations of BE	Correlation with Class	Df	Significance
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Programme	10 examination		
1 st semester	0.51	183	Significant at .01 level
2 nd semester	0.49		Significant at .01 level
3 rd semester	0.46		Significant at .01 level
4 th semester	0.25		Significant at .01 level
5 th semester	0.45		Significant at .01 level
6 th semester	0.43		Significant at .01 level
7 th semester	0.47		Significant at .01 level
8 th semester	0.45		Significant at .01 level

The scores the score obtained in obtained in class 10 examination and Bachelor of Engineering programme, the value of coefficient of correlation in 1st, 2nd, 3rd, 4th, 5th, 6th, 7th, and 8th semester is found 0.51, 0.49, 0.46, 0.24, 0.45, 0.43, 0.47 and 0.45 respectively. The product moment coefficient of correlation between class 10 examination and Bachelor of Engineering programme is found to be significant at .01 level for 183 degrees of freedom. So, the directional hypotheses “there is a significant positive correlation between the marks obtained by the candidates in class 10 examination and Examination of Bachelor of Engineering programme” is accepted. It means that those showing better performance in class 10 examination are also showing better performance in the Bachelor of Engineering Programme. It reveals that the performances of students in Bachelor of Engineering programme are consistent with the performance of class 10 examination.

1.9 EXTENT OF RELATIONSHIP BETWEEN THE SCORES OBTAINED BY THE STUDENTS IN CLASS 12 EXAMINATION AND THE BACHELOR OF ENGINEERING PROGRAMME:

To study the relationship between the scores obtained by the students in class 12 examinations and Bachelor of Engineering Programme, product moment coefficient of correlation (r) technique is used. Table- 3 shows the extent of relationship between class 12 examinations and Bachelor of Engineering programme.

Table-3

Relationship between the Scores obtained by the Students in class 12 Examination and Bachelor of Engineering Programme

Examinations of BE Programme	Correlation with Class 12 examination	Df	Significance
1 st semester	0.46	384	Significant at .01 level
2 nd semester	0.40		Significant at .01 level
3 rd semester	0.35		Significant at .01 level
4 th semester	0.17		Significant at .01 level
5 th semester	0.34		Significant at .01 level
6 th semester	0.30		Significant at .01 level
7 th semester	0.24		Significant at .01 level
8 th semester	0.25		Significant at .01 level

The scores obtained in class 12 Examination and Bachelor of Engineering programme, the value of the product moment coefficient of correlation (r) is found to be 0.46, 0.40, 0.35, 0.17, 0.34, 0.30, .24 and 0.25 respectively from 1st semester to 8th semester. . The product moment coefficient of correlation between class 12 examinations and Bachelor of Engineering programme is found to be significant at .01 level for 384 degrees of freedom. Hence, the directional hypothesis that is “there is a significant positive correlation between the scores obtained by the students in class 12 examination and the Bachelor of Engineering programme” is accepted. It means that those showing better performance in class 12 examinations are also showing better performance in the Bachelor of Engineering Programme. It reveals that the performances of students in Bachelor of Engineering programme are consistent with the performance of class 12 examination.

1.10 MAJOR FINDINGS OF THE STUDY

1.10.1 Relationship between the Scores obtained by the Students in CEE and Final Examination of Bachelor of Engineering Programme:

The study revealed a significant positive relationship between the scores obtained by the students in CEE and Final examination of B.E programme. The performance of students in BE final examination is consistent with the performance in CEE.

1.10.2 Relationship between the Scores obtained by the students in Class 10 Examination and the Bachelor of Engineering Programme:

To study reveals a significant positive relationship between the scores obtained by the students in class 10 examinations and Bachelor of Engineering programme. Those showing better performance in class 10 examination are also showing better performance in the Bachelor of Engineering Programme. It reveals that the performances of students in Bachelor of Engineering programme are consistent with the performance of class 10 examination.

1.10.3 Relationship between the Scores obtained by the Students in Class 12 and the Bachelor of Engineering Programme:

From the study, it is found that there is a significant positive relationship between the scores obtained by the students in class 12 examinations and the Bachelor of Engineering programme. The study reveals that those showing better performance in class 12 examinations are also showing better performance in the Bachelor of Engineering Programme. It reveals that the performances of students in Bachelor of Engineering programme are consistent with the performance of Class 12 examination.

1.11 CONCLUSION

The study reveals that there is a positive correlation between CEE and end semester examinations of Bachelor of Engineering programme. The study also reveals that there is a high positive correlation between class 10 examination, class 12 examination and final examination of Bachelor of Engineering programme.

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