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Consistency Of Performance Among Government And Private Engineering College Students In Bachelor Of Engineering Programme: A Comparative Analysis

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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 assess the consistency of academic performance among Government and Private Engineering college students in Bachelor of Engineering (BE) programme of Assam.

Keyword: Consistency of Performance, B.E programme

1.1 INTRODUCTION

Education is considered as the backbone of any society. Higher education is regarded as a facilitator for the growth and development of a nation. Higher education in India is one of the largest and oldest system of education found anywhere in the world. Higher education Comprises of Graduate and Post-graduate courses, Research and Diploma or Certificate courses.

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. Everyone can be surprised with this assumption if it could be proved scientifically. From the last two decades it has been noticed significantly that there is great addition in research literature and review material relating to indicators of academic achievement with much emphasis on this dialogue, whether traditional achievement measures of academic performance are best determinants of future academic gain at university or higher level.

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.

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:

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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 assess the consistency of academic performance among Government and Private Engineering college students in Bachelor of Engineering (BE) programme of Assam.

1.2 OBJECTIVES OF THE PRESENT STUDY:

The major objective of the present study is to find out the consistency of performance among Government and Private Engineering college students in Bachelor of Engineering (BE) programme of Assam. In order to fulfil this objective, the following objectives have been formulated

- To find out the correlation between scores obtained by the students in the 1st, 2nd, 3rd, 4th, 5th, 6th, 7th, and 8th semester examinations respectively of BE programme.
- To compare the achievement of Government and Private engineering college students in BE final examination.
- To compare the achievement of male and female students in BE final examination.
- To study the level of Achievement of Government engineering college students in BE final examination.
- . To study the level of Achievement of Private engineering college students in BE final examination.

1.3 HYPOTHESES 0F THE PRESENT STUDY

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

Hypothesis1 – There is a significant positive correlation between the scores obtained by the students in the 1st, 2nd, 3rd, 4th, 5th, 6th, 7th, and 8th semester examinations respectively of Bachelor of Engineering programme

Hypothesis2--- There is no significant difference between Government and Private engineering college students of Assam as far as their achievement in BE final examination is concerned.

Hypothesis3 - There is no significant difference between male and female students studying in different engineering institutes of Assam as far as their achievement in BE final examination is concerned.

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.

1.4.2 Final examination of BE programme:

Final examination of BE programme refers the final result of Bachelor of Engineering Programme.

1.4.3 Achievement Test

The word achievement means successful performance with effort or skill. An achievement test is one designed to measure a student's grasp of some body of knowledge or his proficiency in certain skills (Ebel,1966). In the present study, all the end-Semester Examinations are considered to be the achievement tests and the scores obtained by the students in 1st, 2nd, 3rd, 4th, 5th, 6th, 7th and 8th Semester Examinations of Bachelor of Engineering programme is known as the achievement of students.

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 Bachelor of Engineering (BE) 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

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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 percentage, Mean, Standard Deviation, Skewness, Kurtosis, Product moment coefficient of correlation were used in analysing the quantitative data. Graphical representation was also used. Besides these, inferential statistics t-test was used.

1.6.7 STATISTICAL TREATMENT OF THE DATA

- 1. Mean, Median, Standard Deviation, Skewness and Kurtosis were computed for the descriptive analysis of the study.
- 2. To know the significance of difference between means t-test was applied
- 3. Karl Pearson's product moment method of correlation was used to determine the relationships between the variables of the study. To know the significance of the relationships, Garrett (2008) was followed.

1.7 ANALYSIS OF DATA:

1.7.1 Extent of Relationship between the Scores obtained by the Students in the 1st, 2nd, 3rd, 4th, 5th, 6th, 7th, and 8th Semester Examinations of BE Programme:

To study the extent of relationship between the scores obtained by the students in the 1st, 2nd, 3rd, 4th, 5th, 6th, 7th, and 8th semester examinations respectively of BE programme, Product moment co-efficient of Correlation is used. Table-1 shows the extent of relationship between the scores obtained by the students in the 1st, 2nd, 3rd, 4th, 5th, 6th, 7th, and 8th semester examinations respectively of Bachelor of Engineering programme.

Table-1: Extent of Relationship between the Scores obtained by the Students in the 1st, 2nd, 3rd, 4th, 5th, 6th, 7th, and 8th Semester Examinations respectively of BE Programme.

Exam	1st sem	Df	Significance
2nd sem	.73	278	Significant at .01 level
3rd sem	.66		Significant at .01 level
4th sem	.46		Significant at .01 level
5th sem	.59		Significant at .01 level
6th sem	.53		Significant at .01 level
7th sem	.51		Significant at .01 level
8th sem	.48		Significant at .01 level

From the table it is observed that the value of the product moment coefficient of correlation (r) is found to be .73, .66, .46, .59, .53, .51, and .48 respectively from 2nd semester to 8th semester. The product moment coefficient of correlation between 1st semester and 2nd, 3rd, 4th, 5th, 6th, 7th and 8th semester mark is found to be significant at .01 level for 278 degrees of freedom. Hence, the directional hypothesis that is "there is a significant positive correlation between the scores obtained by the students in the 1st, 2nd, 3rd, 4th, 5th, 6th, 7th, and 8th semester examinations

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respectively of Bachelor of Engineering programme" is accepted. It means that those showing better performance in 1st semester, are also showing better performance in all the semesters of Bachelor of Engineering Programme.

1.7.2 Comparison of the Achievement of Government and Private Engineering College Students in Final Examination of BE Programme

Scores obtained by the students in final examination is used to calculate Mean, Standard Deviation and t value. Table 2 shows the comparison of the achievement of Government and Private engineering college students in final examination of BE programme.

Table -2: Achievement of Government and Private Engineering College Students in Final Examination of BE Programme.

Category	N	Mean	SD	T	Df	Significance
Government College	278	68.47	8.47	0.719	384	Not significant at .05 Level
Private College	106	71.58	8.05			

To examine if there is any significant difference in achievement of male and female students in BE final examination, the null hypothesis was formulated as; "There is no significant difference between Government and Private engineering college students of Assam as far as their achievement in BE final examination is concerned". Here 't' value is found to be 0.719, which is not significant at .05 level. Hence the null hypothesis could be accepted at .05 level (table value =1.97). Thus there is no significance difference between Government and Private engineering college students of Assam as far as their achievement in BE final examination is concerned.

1.7.3 Comparison of the Achievement of Male and Female Students in the Final Examination of BE Programme

Scores obtained by the students in final examination is used to calculate Mean, Standard Deviation and t value. Table 3 shows the comparison of the achievement of male and female students in final examination of BE programme.

Table 3: Achievement of Male and Female Students in Final Examination of BE Programme.

Category	N	Mean	SD	T	Df	Significance
Boys	312	66.35	9.5	.719	384	Not significant at .05 Level
Girls	72	67.36	10.63			

To examine if there is any significant difference in achievement of male and female students in BE final examination, the null hypothesis was formulated as; "There is no significant difference between male and female students studying in different engineering institutes of Assam as far as their achievement in BE final examination is concerned". Here't' value is found to be 0.719, which is not significant at .05 level. Hence the null hypothesis could be accepted at .05 level (table value =1.97). Thus there is no significance difference between male and female students studying in different engineering institutes of Assam as far as their achievement in BE final examination is concerned

1.7.4 Level of Achievement of Government Engineering College Students in BE Final Examination

The scores obtained by the students (Government Engineering College) in BE final examination is used to calculate Mean, Standard Deviation, Skewness and Kurtosis. Table 4 shows the level of Achievement of students in BE final examination

Table – 4:Level of Achievement of Government Engineering College Students in Bachelor of Engineering Final Examination

Variable	No of Students	Mean	Median	SD	Skewness (Sk)	Kurtosis (Ku)
Achievement	278	50.00	51.33	9.96	-0.293	0.291

Regarding the achievement of students in BE final examination of Government Engineering College, the Mean, Median and Standard Deviation of the distribution of scores are found to be 50.00, 51.33 and 9.96 respectively. The value of Sk = -0.293. Thus the distribution is slightly negatively skewed i.e, the scores are massed slightly at the high end of the scale. It also means that more number of students score towards the higher end of the scale in comparison to the low end of the scale. The value of Kurtosis (ku) is .291 and the distribution is platykurtic by nature, i.e the peak of the curve is slightly flatter than the normal curve and it means that the scores are spread over a slightly long range than the normal curve. It also means that a few of the students obtained very low score and a few of

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the students obtained very high score in the final examination of BE programme

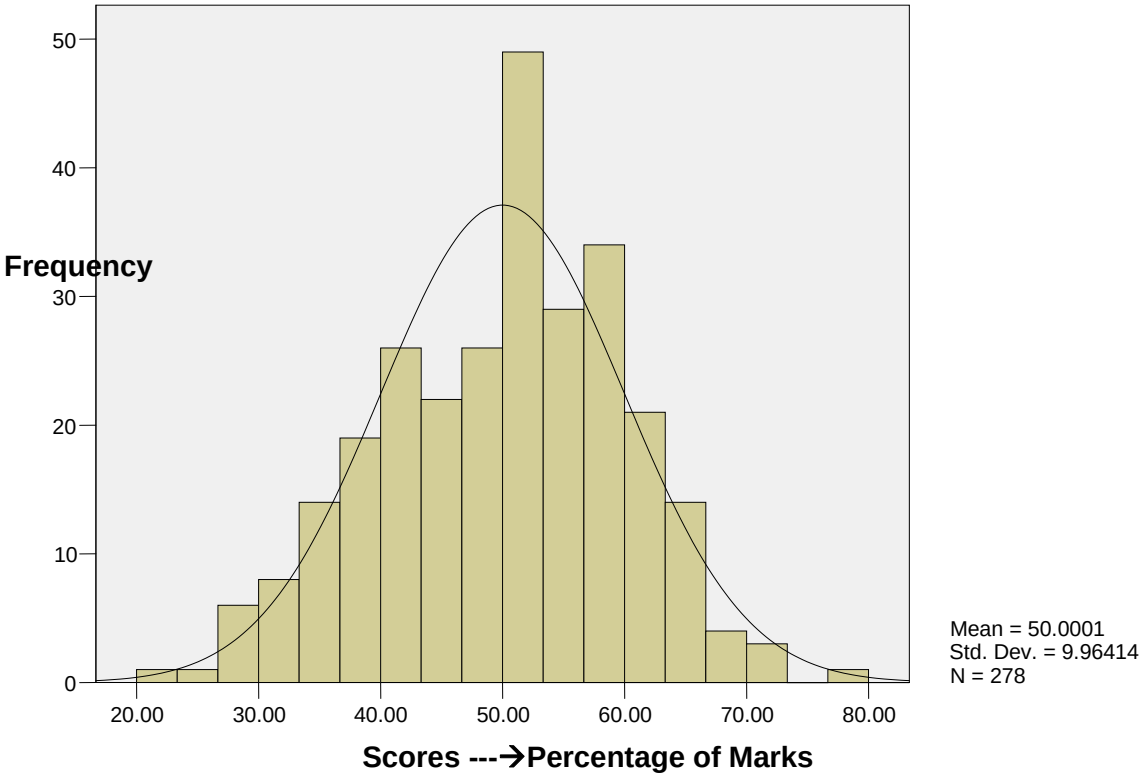

Fig- 1: Distribution of Students on the basis of their Percentage of Marks in The Final Examination of BE Programme (Government Institution)

From figure 1, it is clear that majority of the students (106) obtained the score range from 50to 60. Very less number of student (19) obtained the score range of 65-80 in the final examination of Bachelor of Engineering Programme (Government Institution). Approximately 68 students obtained below 40 percentages of marks.

1.7.5 Level of Achievement of Private Engineering College Students in BE Final Examination

The scores obtained by the students (Private Engineering College) in BE final examination is used to calculate Mean, Standard Deviation, Skewness and Kurtosis. Table 5 shows the level of Achievement of students in BE final examination

Table – 5: Level of Achievement of Private Engineering Students in Final Examination of BE Programme

Variable	No of Students	Mean	Median	SD	Skewness (Sk)	Kurtosis (Ku)
Achievement	106	50.00	51.06	9.99	-0.155	.288

Regarding the achievement of students in BE final examination of Private Engineering College, the Mean, Median and Standard Deviation of the distribution of scores are found to be 50.00, 51.06 and 9.99 respectively. The value of Sk = -0.155. Thus the distribution is slightly negatively skewed i.e, the scores are massed slightly at the

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high end of the scale. It also means that more number of students score towards the higher end of the scale in comparison to the low end of the scale. The value of Kurtosis (ku) is .288 and the distribution is platykurtic by nature, i.e the peak of the curve is slightly flatter than the normal curve and it means that the scores are spread over a slightly long range than the normal curve. It also means that a few of the students obtained very low score and a few of the students obtained very high score in the final examination of BE programme. (Private Institution).

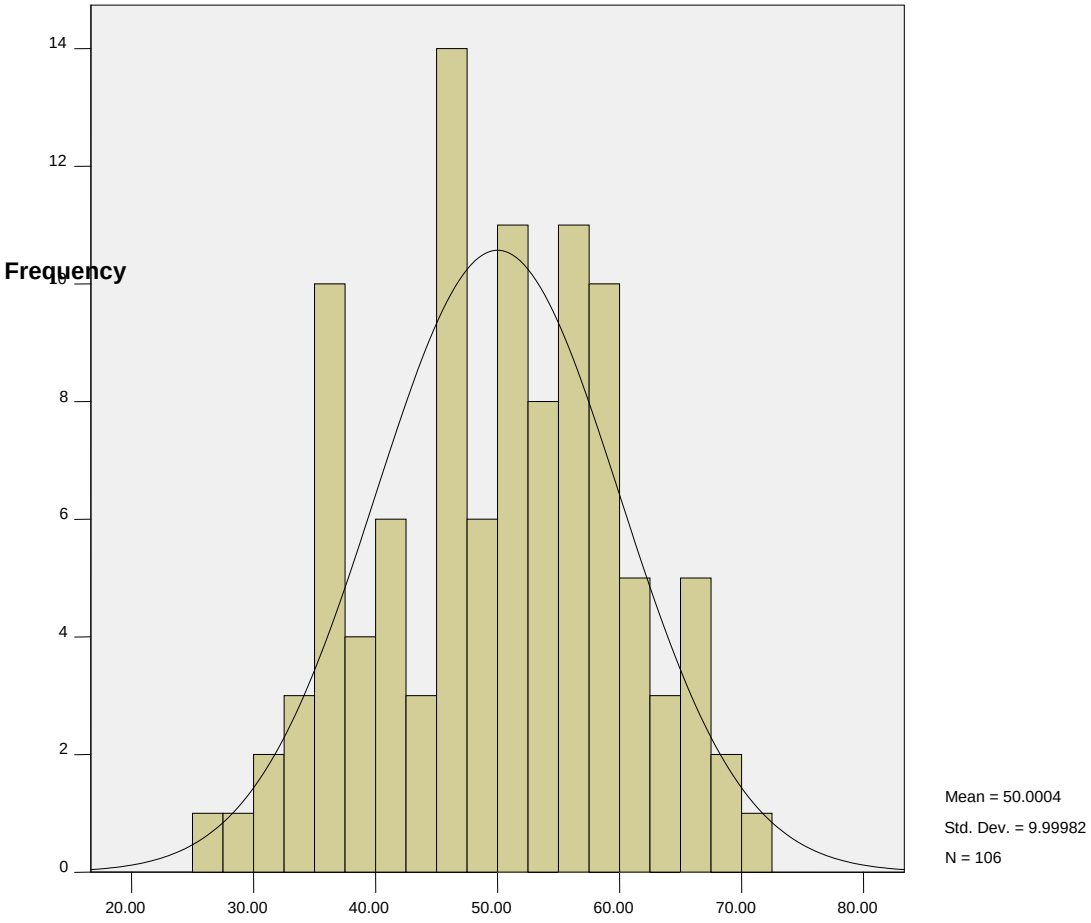

Fig- 2: Distribution of Students on the basis of their Percentage of Marks in The Final Examination of BE Programme

(Private Institution)

From figure 2, it is clear that majority of the students (40) obtained the score range from 50to 60. Very less number of student (16) obtained the score range of 65-74 in the final examination of Bachelor of Engineering Programme (Preivate Institution). Approximately 14 students obtained below 40 percentages of marks.

1.8 MAJOR FINDINGS OF THE STUDY

- The study revealed a significant positive relationship between the scores obtained by the students in the semester examinations of Bachelor of Engineering programme. in

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- There is no significance difference between Government and Private engineering college students of Assam as far as their achievement in BE final examination is concerned.
- There is no significance difference between male and female students studying in different engineering institutes of Assam as far as their achievement in BE final examination is concerned.
- The study revealed that majority of the Government Engineering college students secured the score range from 50 to 60. Very less percent of student secured the score range of 70-80 in the final examination of Bachelor of Engineering Programme. The value of Skewness is found -0.293. Thus the distribution is negatively skewed. The value of Kurtosis is found 0.291. Thus the distribution is platykurtic by nature.
- The study also observed that, in Private engineering institution, majority of the student secured the score range from 50 to 60 which is approximately same with Government engineering institutions.
- The performance of the students in all the semesters is found consistent.

1.9 Conclusion:

The study revealed that there is no significance difference between Government and Private engineering college students of Assam as far as their achievement in BE final examination is concerned. It is also observed that there is no significance difference between male and female students studying in different engineering institutes of Assam as far as their achievement in BE final examination is concerned. Moreover, the study reveals that there is a positive correlation of the score obtained by the students in the end semester xaminations of Bachelor of Engineering programme. Thus it can be concluded that performance of students in Bachelor of engineering (BE) programme is consistent.

Reference:

Best, J W and Kahn J V(1989). *Research in Education*. New Delhi: Prentice Hall of India Pvt

Ebel R.L. (1966). *Measuring Educational Achievement*. New Delhi: Prentice-Hall of India Private LTD)

Garrett, H.E. (2008). *Statistics in Psychology and Education.* New Delhi: Surjeet Publications.

Kothari, C.R (2009). *Research Methodology*. New Delhi: Vikas Publishing House Pvt. Ltd.

Koul, L. (2003). *Methodology of Educational Research.* New Delhi: Vikas Publishing House Pvt. Ltd.

Kuneel, NR, Crede M, Thomas LL (2007). A meta analysis of the Predictive validity of the Graduate Management Admission Test (GMAT) and undergraduate Grade Point Average(UGPA) for Graduate students Academic Performanc. *Academy of Management Learning and Education*, vol. 6, No 1, pp.51-68

Menifield EC, et al. (2007). Waiving the MPA entrance Exam: Impact Performance. *Journal of Public Affairs Education*, vol- 13, pp. 404-424

Shanthamani V.S (1979). Selection of Students for Engineering Courses by means of Entrance Test. *Indian Journal of Industrial Relation***,** vol.1, pp. 93-101

Touron, J (1987). High School Ranks and Admission Tests as Predictors of First Year Medical Students' Performance. *Higher Education*, vol.16, No. 3, PP.257-266.

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