International Journal of Innovation and Research in Educational Sciences
Volume 3, Issue 6, ISSN (Online): 2349–5219

The Correlation Between the Student Performance and the Faculty Teaching Evaluation in Education Institutions at College Level and Suggested Methods for Improvisation

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***Abstract* – This research explored the aspects that affect faculty performance evaluated by the students and found the direct relation to the academic performance of the students. This was based on questionnaire survey. A formal survey was conducted with a reputed educational institution for particular department. Analysis based on the filled questionnaires was done using Spearman rank correlation method. This research found a positive correlation between the faculty performance vs. the students performance. Also this data can be used to identify particular aspects which will improve the individual faculty member which interns improves the student academic performance in the exams yielding positive result for the institution. The outcome of this research can serve as a reference for any educational institution for its improvement plans & procedures.**

***Keywords* – Evaluation, Performance, Result, Scores, Students & Faculty, Teaching.**

I. Introduction

In today's competitive world one has to be equipped with the latest skills & technologies to survive and progress. An educational institution is the place where the student is moulded to become a good citizen and successful in his future life. A student will learn the moral values & life skills from home, society, friends and education. However to succeed personally in life one has to be academically bright for which his or her exam marks and percentage is very important in the early stage of professional life. When a student crosses the high school studies and enters the college or higher educational institution, the onus of getting marks is depends upon the individual. However the educational institution also takes some responsibility in delivering the best result. The pupil's academic achievement not only brings cheer to them but also brings laurels and credit to the institution itself. To accomplish this the faculty's role & involvement is very critical. General thumb rule is that if we have the good faculty we can get the best results. Nowadays education institutions though try to recruit the best faculty they often forget to look into their evaluation and their training aspects.

Here an attempt is made to find the correlation between the faculty's evaluation and the student's academic results. The evaluation of the faculty is done by the students themselves through a detailed questioner and suitable ranking are assigned for mathematical calculations. Also the percentage of marks is taken in a tabular form and given the appropriate ranking.

II. Scope of the Study

The Scope of the study is to identify whether any statistical relation exists between the faculty performance evaluation and the student's academic results. Also to list out the areas where an immediate intervention required improving the faculty performance which directly enhances the student's and institution's progress as a whole.

III. Sampling Design & Data Collection

The data is collected through questionnaire method. The questionnaire list contains well listed 14 pointers relating to the faculty's abilities perceived and experienced by the students who were taught by that particular faculty. The survey is done on 50 students from a particular department in a reputed college in the city of Bangalore.

IV. Tools and Techniques Applied for The Study

The tools used for the purpose of collecting the data are questionnaires and given the appropriate ratings based on the well established ranking scores. After tabulating the data and assigning the corresponding scores, spearman rank correlation method is used.

The most commonly used techniques for investigating the relationship between two quantitative variables are Correlation and Linear regression. Correlation quantifies the strength of the linear relation between a pair of variable where as regression expresses the relationship in the form of an equation. The Spearman's Rank Correlation Coefficient is used to discover the strength of a link between two sets of data and measures the direction of association between two ranked variables. In this case the two sets of data are the faculty evaluation & the student's academic results.

V. Limitations & Further Scope of the Study

1. The study is limited to only one department in the college in the city of Bangalore, Further it can be extended to other departments as well in the college.
2. Also the study can be extended to different colleges, regions, universities etc.

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Data Analysis & Calculations

Table 1.1 Ratings & Ranks assigned to the Faculty evaluation

Ratings	Score	Ranks
Poor	0 - 1	1
Fair	1 - 2	2
Good	2 - 3	3
Very good	3 - 4	4
Excellent	4 - 5	5

Table 1.2 Marks percentage & Ranks assigned to the Student's academic results

Ratings	Marks	Ranks
Poor	0-35	1
Fair	35-50	2
Good	50-70	3
Very good	70-90	4
Excellent	90-100	5

Table 1.3 Teacher's evaluation questionnaire & the ratings obtained

Q. No.	Parameters	Lecturer-1	Lecturer-2	Lecturer-3	Lecturer-4	Lecturer-5	Lecturer-6	Overall Rating
1	Clarity of explanation	2.5	2.8	4.57	4.1	3.2	3.18	2.91
2	Subject explained was easy to understand	2.1	2.5	4.45	4.32	3.01	3.02	2.77
3	Content quality	1.8	1.2	3.8	3.1	1.86	1.72	1.93
4	Answer to your questions in the class	2.09	3.41	4.7	3.41	3.31	2.81	2.82
5	Coverage of the topic on time	3.5	3.3	3.5	3.21	3.5	3.42	2.92
6	Usage of relevant examples	2.1	3.87	3.46	2.1	1.9	1.6	2.15
7	Lecturer preparation	3.67	3.7	3.67	3.72	2.87	3.45	3.01
8	Punctuality	4.51	4.53	4.72	4.32	2.87	3.3	3.46
9	Effective communication	2.08	3.48	3.01	3.01	2.1	2.61	2.33
10	Classroom management	4.2	4.31	4.48	4.19	1.81	1.87	2.98
11	Relevant assignment	3.87	4.1	3.87	3.88	1.86	2.43	2.86
12	Availability after class hours	1.2	1.28	1.56	1.42	1.27	1.12	1.12
13	Courtesy towards students	2.5	3.27	3.87	2.5	1.49	1.21	2.12
14	Overall satisfaction	2.8	3.42	3.56	3.3	1.6	1.18	2.27
	Average score	2.78	3.23	3.80	3.33	2.33	2.35	
		Good	Good	Very Good	Good	Fair	Fair	

Table 1.4 Student's academic percentage corresponding to the lecturer who taught that subject

	0-35	35-50	50-70	70-90	90-100	Total
Lecturer-1	11	25	8	4	2	50
Lecturer-2	5	23	12	6	4	50
Lecturer-3	6	14	16	9	5	50
Lecturer-4	2	15	21	9	3	50
Lecturer-5	1	24	16	8	1	50
Lecturer-6	4	28	14	3	1	50

Table 1.5 Ratings to the lectures assigned based on table 1.4

	Lecturer-1	Lecturer-2	Lecturer-3	Lecturer-4	Lecturer-5	Lecturer-6
0-35	11	5	6	2	1	4
35-50	50	46	28	30	48	56
50-70	24	36	48	63	48	42
70-90	16	24	36	36	32	12
90-100	10	20	25	15	5	5
Over all score	111	131	143	146	134	119
Over all Ranking	2.22	2.62	2.86	2.92	2.68	2.38
	Fair	Good	Good	Good	Good	Fair

Table 1.6 Tabulation for Spearman Rank correlation based on 1.3 and 1.5

Faculty	Evaluation Feedback	Evaluation marks	Feedback ranking	Marks ranking	deviation	square deviation
	F	M	F1	M1	d = F1-M1	d^2
Lecturer-1	2.78	2.22	4	6	-2	4
Lecturer-2	3.23	2.62	3	4	-1	1
Lecturer-3	3.8	2.86	1	2	-1	1
Lecturer-4	3.33	2.92	2	1	1	1
Lecturer-5	2.33	2.68	6	3	3	9
Lecturer-6	2.35	0.38	5	5	0	0
						16

Calculation Based on Spearman Rank Correlation

$$r = 1 - \frac{6\Sigma d_i^2}{n(n^2-1)}$$
$$r = 1 - \frac{6(16)}{6 \times 35}$$
$$r = 1 - 0.4571$$
$$r = 0.5429$$

Comment – Low degree positive correlation

CONCLUSION

From the above survey and the correlation method we observed a positive low degree correlation. This shows that if a faculty gets a better ranking in their performance evaluation by the students, the students of that particular subject taught by the faculty will also get better marks in their exams. Hence management shall look into the areas where the faculty need improvement and provide the appropriate training and guidance. For example availability of the faculty and courteousness are two major important areas where any institution to look into it with an immediate effect.

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