Research Paper

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Assessment of Performance of Teachers in Higher Educational Institutes

Management

KEYWORDS : teaching effectiveness, class room behavior

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ABSTRACT

This study is conducted to assess the performance of teachers in higher educational institutes. The objectives of the study are to analyze the class room behavior of teachers in higher educational institutes and to determine the variables that influence their teaching effectiveness. The research has also tried to identify the class room and teaching effectiveness that affect performance of teachers. 96 teachers from an engineering college in Kerala State participated in the study. The study revealed facts regarding student encouragement and participation in classroom discussions, use of English language as a medium of communication by teachers, discipline and disciplinary measures, student-teacher relation, clarification of doubts, teaching plan and implementation, summarization of portions at the end of every semester and imparting additional information apart from the syllabus modules.

Introduction

Periodical assessment and related discussions about performance of teachers in higher educational institutes have been on the higher side over the past decade, mainly due to the increasing number of colleges and more students opting for higher studies. Performance assessment continues to occupy a major place due to the importance on the quality of outcome. With a result-oriented system and emphasis on placements, performance of teachers is a major cause of concern among the management and other stakeholders of these institutes. Hence, assessment of their performance on various criteria like classroom performance, post-exam result analysis, pedagogy, instructional methods, relationship with students, doubt clarification, discussions of old question papers as part of equipping students before the commencement of exams etc. have gained more prominence in the recent past. This study is an attempt to look into the assessment of the performance of teachers on various criteria.

Statement of the problem

In India, during the last few decades, efforts have been made to study the classroom behaviour of teachers which equips them to change their teaching behavior. Efforts were also made to identify teaching skills for teaching different subjects. The microteaching technique was researched for improving upon general teaching competence. This led the researchers to explore the use of various methods and techniques in an integrated fashion which resulted in the development of new instructional strategies. The study is therefore aimed to evaluate the class room behaviour and teaching effectiveness.

Literature review

The aspects of classroom and student behaviour management continue to be of major concern to teachers and so research should be relevant to individual needs. Arthur and Nancy (2003) identified that a great deal of attention has been paid over the past decade to effective teaching practices and classroom management. Swartz et al., (1990) judged the teachers' performance on five teaching functions: instructional presentations, instructional monitoring, instructional feedback, management of instructional time and management of students' behavior. Jahangir (1988) evaluates teachers' performance on a rating scale pertaining to the four broad categories of teaching behavior: intellect, personality, teaching techniques and interaction with students. The teacher is considered the most crucial factor in implementing all educational reforms at the grassroots level. It is a fact that the academic qualifications, knowledge of the subject matter, competence and skills of teaching and commitment of the teacher have effective impact on the teaching learning process (Ahmed, 2000). An effective learning environment will also have a wide range of accessible resources. These will include books, other print material, audiovisual equipment, and computers. Again, where these resources are positioned in the classroom should be negotiated with the students (Arthur and Nancy, 2003). Veer (2004) described about specific studies, in which he has highlighted factors affecting teachers' performance. These factors included measures of teacher aptitudes, attitudes, subject mastery, expertise in teaching methodology and the characteristics of the environment of teaching.

Objectives of the study

The objectives of the study are as follows;

1. To analyze the class room behavior of teachers in higher educational institute.
2. To determine the variables that affects teaching effectiveness of teachers.
3. To identify the factors that affects performance of teachers in the class room.
4. To identify and differentiate departments based on class room and teaching effectiveness.

Methodology

The study was conducted at one of the self-financing engineering colleges in Ernakulam district, Kerala State, India during the academic period of 2011-2012 to identify the class room behavior and teaching effectiveness of teacher resources. Data was collected through a structured questionnaire which was distributed to the faculty members across seven departments. The sample is collected at random from 96 teachers. Hypothesis testing is done with the help of Chi-square to analyse the significance of factors.

Results and Discussion

I. Classroom behavior

Class room behavior was measured by the following variables; participating students in class, teaching in English, controlling the discipline, penalizing the students, discussing doubts and clarifications, friendliness and maintaining a formal relationship with students.

Table 1.1 Encouraging students to participate

Department	Always	Sometimes	Never	Total
Civil	14 (100%)	0	0	14
Mechanical	15 (100%)	0	0	15
Electrical	8 (80%)	2 (20%)	0	10
Electronics	18 (90%)	2 (10%)	0	20
Computer Science	12 (86%)	1 (7%)	1 (7%)	14
Information Technology	7 (58%)	5 (42%)	0	12
Science	11 (100%)	0	0	11
Total	85 (89%)	10 (10%)	1 (1%)	96

Teachers across the departments are actively involved in encouraging students to participate in discussions (89%). The percentage score of teachers from Information Technology (58%), Electrical Engineering (80%), and Computer Science (86%) are less than the overall score (89%). It is inferred that the teachers of Information Technology department has not actively encouraged students to participate. 7% of the teachers from Computer Science engineering department never encourage students to participate in discussions. Ho: Teachers in Information Technology Department lacks in encouraging and participating students than other departments. The calculated value of $\chi 2$ (24.23) is greater than the table value (21.02) at 5% confidence level with 12 degrees of freedom. It is concluded that there is no significant difference between departments in actively encouraging and participating students.

Table 1.2 Take classes in English

Department	Always	Sometimes	Total
Civil	11 (79%)	3 (21%)	14
Mechanical	11 (73%)	4 (27%)	15
Electrical	8 (80%)	2 (20%)	10
Electronics	15 (75%)	5 (25%)	20
Computer Science	13 (93%)	1 (7%)	14
Information Technology	5 (42%)	7 (58%)	12
Science	8 (73%)	3 (27%)	11
Total	71 (74%)	25 (26%)	96

The average percentage of teachers who prefer to engage in English is only 74%. Teachers from Computer Science, Electrical, Civil and Electronics Engineering teach in English medium which is above the average score. But only 42% of the teachers from Information Technology department always teach in English medium, which is deplorably a poor sign. It is observed that only 74% of the teachers always communicate in the class in English, which has to be enhanced to maintain the standard of the teachers and the students.

1.3 Difficult to control the discipline

Department	Sometimes	Very rarely	Never	Total
Civil Engineering	0	13 (93%)	1 (7%)	14
Mechanical	2 (13%)	11 (73%)	2 (13%)	15
Electrical	3 (30%)	6 (60%)	1 (10%)	10
Electronics	2 (10%)	11 (55%)	7 (35%)	20
Computer Science	8 (57%)	4 (29%)	2 (14%)	14
Information Technology	3 (25%)	7 (58%)	2 (17%)	12
Science	0	7 (64%)	4 (36%)	11
Total	18 (19%)	59 (61%)	19 (20%)	96

Table 1.3 highlights the difficulty that the teachers face to control the discipline. 19% of the staff members opined that they find difficulty to control the discipline of the class sometimes. Majority (61%) of the teachers find difficult to control the class very rarely and 20% of the teachers never face this problem at all. Civil engineering and Science departments are better in controlling the discipline compared with other departments. Disciplinary problems are more in Computer Science, Electrical and Information Technology departments. Ho: Civil and Electronics engineering departments are better in controlling discipline than other departments. The calculated value of $\chi 2$ (28.95) is greater than the table value (21.02) at 5% confidence level with 12 degrees of freedom. There is no significant difference between departments in controlling the discipline of the students.

Table No 1.4 Punishing the students for non- submission of assignment

Department	Always	Sometimes	Very rarely	Never	Total
Civil Engineering	3 (22%)	9 (64%)	2 (14%)	0	14
Mechanical	5 (33%)	7 (47%)	3 (20%)	0	15
Electrical	4 (40%)	6 (60%)	0	0	10
Electronics	8 (40%)	11 (55%)	0	1 (7%)	20
Computer Science	0	13 (93%)	0	1 (7%)	14
Information Technology	1 (8%)	9 (75%)	2 (17%)	0	12
Science	1 (9%)	9 (82%)	1 (9%)	0	11
Total	22 (23%)	64 (67%)	8 (8%)	2 (2%)	96

Table 1.4 shows the actions taken by the teachers when the students do not submit the assignment. Only 23% of the teachers regularly take action against the students when they fail in their assignment. This is more in Mechanical, Electrical and Electronics Engineering departments. Even though these departments always punish the students when there is a default, it is also inferred that students of these departments delay in doing their assignment given to them.

Table 1.5 Discuss doubts and clarifications

Department	Always	Sometimes	Very rarely	Total
Civil	1 (7%)	11 (79%)	2 (14%)	14
Mechanical	4 (27%)	8 (53%)	3 (20%)	15
Electrical	0	8 (80%)	2 (20%)	10
Electronics	2 (10%)	16 (80%)	2 (10%)	20
Computer Science	10 (71%)	4 (29%)	0	14
Information Technology	2 (17%)	9 (75%)	1 (8%)	12
Science	0	10 (91%)	1 (9%)	11
Total	19 (20%)	66 (69%)	11 (11%)	96

Table 1.5 reveals whether students meet their faculties to discuss and clarify their doubts. 20% of the teachers of engineering college stated that students always discuss and clarify their doubts with the teachers. 69% of the teachers stated that students approach them some times and 11% of them opined that students meet them very rarely. Students are not eager in clearing their doubts or the teachers are not encouraging them to clear their doubts. Participation of the students is much better in Computer Science (71%). Students are not encouraged in Civil Engineering, Electrical, Science, and Information Technology departments. Ho: Teachers in Computer Science department are better in discussing doubts and clarifications to the students than other departments. The calculated value of $\chi 2$ (34.43) is greater than the table value (21.02) at 5% confidence level with 12 degrees of freedom. It is concluded that there is no significant difference between departments in discussing doubts and clarifications with students.

Table 1.6 Friendly with the students

Department	Always	Sometimes	Very rarely	Total
Civil	5 (36%)	9 (64%)	0	14
Mechanical	8 (53%)	6 (40%)	1 (7%)	15
Electrical	7 (70%)	3 (30%)	0	10
Electronics	8 (40%)	10 (50%)	2 (10%)	20
Computer Science	11 (79%)	3 (21%)	0	14
Information Technology	6 (50%)	6 (50%)	0	12
Science	2 (18%)	9 (82%)	0	11
Total	47 (49%)	46 (48%)	3 (3%)	96

Table 1.6 shows the friendliness of the staff members with their students. 49% of the teachers are always friendly with their students and 48% of the staff members maintain a friendly rela-

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tionship sometimes. This balance shows a healthy relationship between teachers and students. It is found that teachers in Computer Science (79%) and Electrical Engineering (70%) departments are more friendly with their students. Whereas teachers from Civil (36%), Electronics (40%) and Science departments (18%) are not friendly with the students compared with the overall average score of 49%. H0: Teachers from Computer Science and Electrical engineering are friendly with the students than other departments. The calculated value of $\chi 2$ (18.33) is less than the table value (21.02) at 5% confidence level with 12 degrees of freedom. It is proved and concluded that teachers from Computer Science and Electrical engineering are more friendly with the students.

Table 1.7 Maintain formal relationship with students

Department	Always	Sometimes	Very rarely	Total
Civil	11 (79%)	3 (21%)	0	14
Mechanical	10 (67%)	5 (33%)	0	15
Electrical	6 (60%)	4 (40%)	0	10
Electronics	12 (60%)	8 (40%)	0	20
Computer Science	8 (57%)	5 (36%)	1 (7%)	14
Information Technology	8 (67%)	4 (33%)	0	12
Science	6 (55%)	4 (36%)	1 (9%)	11
Total	61 (64%)	33 (34%)	2 (2%)	96

A formal relationship with students always helps to maintain discipline, dignity and respect among the teachers. 64% of the teachers always maintain a formal relationship with the students. The departments that maintain a very good formal relationship with students are Civil Engineering, Mechanical Engineering and Information Technology where their average is greater than the overall average of the college (64%). The formal relationship between teachers and students are lower in Electrical, Electronics, Science and Computer Science Engineering departments. H0: Civil engineering, Information Technology and Mechanical department maintain a formal relationship with students than other departments. The calculated value of $\chi 2$ (7.60) is less than the table value (21.02) at 5% confidence level with 12 degrees of freedom. Thus it is proved that Civil engineering, Information Technology and Mechanical engineering teachers maintain a formal relationship with students compared with other departments.

II. Teaching effectiveness

Teaching effectiveness was measured by the following attributes; planning ahead and finishing of portions, preparation of teaching plan, summarising portions after each semester, providing additional materials for exam preparation, discussing the question papers before examination, discussing additional topics that are informative.

Table 2.1 Planning the portions

Department	Ahead	On time	Extra classes	Total
Civil	1 (7%)	12 (86%)	1 (7%)	14
Mechanical	3 (20%)	10 (67%)	2 (13%)	15
Electrical	1 (10%)	8 (80%)	1 (10%)	10
Electronics	3 (15%)	16 (80%)	1 (5%)	20
Computer Science	0	14 (100%)	0	14
Information Technology	0	11 (92%)	1 (8%)	12
Science	0	11 (100%)	0	11
Total	8 (8%)	82 (86%)	6 (6%)	96

From Table 2.1 it is found that 86% of the teachers complete their course on time. Only 6% take some extra classes to support and prepare the students for their examinations. It is found that 8% of the teachers finish their portions ahead of the schedule. This is much significant in Mechanical, Electrical and Electronics Engineering departments where the average is greater than the overall average. H0: Teachers in Computer Science and Science departments plan and complete the portions on time than other departments. The calculated value of χ^2 (11.19) is less than the table value (21.02) at 5% confidence level with 12 degrees of freedom. Computer Science engineering and Science departments are better in planning and completing the portion on time than other departments.

Table 2.2 Preparation of teaching plan

Department	Always	Sometimes	Very rarely	Total
Civil	5 (36%)	9 (64%)	0	14
Mechanical	14 (93%)	1 (7%)	0	15
Electrical	5 (50%)	5 (50%)	0	10
Electronics	15 (75%)	4 (20%)	1 (5%)	20
Computer Science	9 (64%)	5 (36%)	0	14
Information Technology	12 (100%)	0	0	12
Science	11 (100%)	0	0	11
Total	71 (74%)	24 (25%)	1 (1%)	96

A teaching plan always enhances the effectiveness of delivering the course offering. Table 2.2 shows that 74% of the teachers always prepare a teaching plan in their academic accomplishment of tasks. 25% of the staff members prepare teaching plan sometimes. Teachers in Information Technology and Science departments always prepare a teaching plan. Preparation of teaching plan is not that much effective in Civil, Electrical, and Computer Science Engineering staff members. This shows the inefficiency, lack of planning and implementation by teachers in other departments. H0: Information Technology and Science departments are better in preparing teaching plan. The calculated value of $\chi 2$ (30.14) is greater than the table value (21.02) at 5% confidence level with 12 degrees of freedom. There is no difference among the departments in preparing the teaching plan.

Table 2.3 Summarize portions after each semester

Department	Always	Sometimes	Very rarely	Total
Civil	9 (64%)	5 (36%)	0	14
Mechanical	7 (47%)	7 (47%)	1 (6%)	15
Electrical	4 (40%)	6 (60%)	0	10
Electronics	16 (80%)	4 (20%)	0	20
Computer Science	8 (57%)	5 (36%)	1 (7%)	14
Information Technology	5 (42%)	7 (58%)	0	12
Science	8 (73%)	3 (27%)	0	11
Total	57 (59%)	37 (39%)	2 (2%)	96

A summary of the major portions after the completion of the course will help the students to clarify the concepts and make them prepare for the examination. This will increase the effectiveness of the teaching- learning process. Table 2.3 shows that 59% of the teachers of this college always summarize the portions after each semester. 39% of the staff members summarize the topics sometimes. It is found that staff members of Civil Engineering, Electronics, and Science departments are successful in accomplishing this task. H0: Teachers in Electronics, Civil engineering and Science departments summarise the portions after each semester regularly. The calculated value of $\chi 2$ (13.01) is less than the table value (21.02) at 5% confidence level with 12 degrees of freedom. It is proved that teachers in Electronics, Civil engineering and Science departments summarise the portions after each semester regularly than other departments.

Table 2.4 Provide additional materials for exam preparation

Department	Always	Sometimes	Very rarely	Total
Civil Engineering	7 (50%)	7 (50%)	0	14
Mechanical	12 (80%)	3 (20%)	0	15
Electrical	6 (60%)	4 (40%)	0	10
Electronics	10 (50%)	10 (50%)	0	20
Computer Science	4 (29%)	10 (71%)	0	14
Information	5 (42%)	4 (33%)	3 (25%)	12
Science	4 (36%)	7 (64%)	0	11
Total	48 (50%)	45 (47%)	3 (3%)	96

Providing additional materials for exam preparation includes preparatory notes, handouts or any manuscript that helps the students to prepare for examination successfully. It is found that 50% of the teachers always provide additional materials to their students. 47% of the teachers provide materials sometimes. The departments that are successful in providing additional materials to their students are Civil, Mechanical, Electrical and Electronics Engineering departments where the percentage scores are higher than the overall percentage score of 50%. Computer Science, Information Technology and Science departments are not that much effective and successful in accomplishing this factor. H0: Mechanical engineering department provide additional materials to the students than other departments. The calculated value of $\chi 2$ (31.17) is greater than the table value (21.02) at 5% confidence level with 12 degrees of freedom. It is concluded that there is no significant difference among departments in providing additional materials for exam preparation.

Table 2.5 Discuss the previous question papers before examination

Department	Regularly	Depend on the availability of time	If necessary, otherwise not	Total
Civil	8 (57%)	6 (43%)	0	14
Mechanical Engineering	11 (73%)	4 (27%)	0	15
Electrical Engineering	4 (40%)	5 (50%)	1 (10%)	10
Electronics Engineering	11 (55%)	7 (35%)	2 (10%)	20
Computer Science Engineering	4 (29%)	9 (64%)	1 (7%)	14
Information Technology	6 (50%)	6 (50%)	0	12
Science	11 (100%)	0	0	11
Total	55 (57%)	37 (39%)	4 (4%)	96

Discussion of previous question papers is a means by which institutes equip their students to build confidence and prepare for examinations. It is clear from table 2.5 that 57% of the staff members of the college regularly work out on previous question papers of the University and equip the students for examination. 39% of the teachers do this exercise according to their availability of time. Only 4% of the staff members do it according to their judgment. Mechanical, Civil and Science departments are successful in accomplishing this task. The effectiveness of this exercise is less in Electrical, Electronics, Computer Science and Information Technology departments. H0: Mechanical engineering and Science departments are regular in discussing previous question papers compared with other departments. The calculated value of $\chi 2$ (19.83) is less than the table value (21.02) at 5% confidence level with 12 degrees of freedom. It is concluded that Mechanical engineering and Science departments are regular in discussing previous questions papers than other departments.

Table 2.6 Discuss additional topics that are informative

Department	Always	Sometimes	Very rarely	Total
Civil	3 (22%)	9 (64%)	2 (14%)	14
Mechanical	4 (27%)	11 (73%)	0	15
Electrical	3 (30%)	7 (70%)	0	10
Electronics	9 (45%)	11 (55%)	0	20
Computer Science	7 (50%)	7 (50%)	0	14
Information Technology	4 (33%)	6 (50%)	2 (17%)	12
Science	2 (18%)	9 (82%)	0	11
Total	32 (33%)	60 (63%)	4 (4%)	96

An additional dissemination of knowledge will definitely increase the overall standard of the institute. This will also enhance the knowledge base of the students. Table 2.6 reveals that only 33% of the teaching staff discuss additional topics in the class that are informative. 63% of the staff members discuss it sometimes. The departments that are successful in disseminating additional information to the students are Electronics (45%) and Computer Science (50%) departments where the percentage is greater than the overall percentage of 33%. 17% of the teachers of the Information Technology department very rarely discuss additional topics that are informative. Teachers from Civil Engineering, Mechanical, Electrical and Science departments are not effective in providing additional information to their students. H0: Computer Science and Electronics engineering teachers always provide additional informative topics compared with other departments. The calculated value of $\chi 2$ (16.29) is less than the table value (21.02) at 5% confidence level with 12 degrees of freedom. Hence it is proved that Computer Science and Electronics engineering teachers always provide additional topics apart from the syllabus that are informative to the students compared with other departments. This also shows the efficiency of the staff members and updating of knowledge by teachers from these two departments. It is also revealed that other departments are ineffective in their knowledge sharing.

Findings of the study

1. All the departments are not actively encouraging and participating students in the class. Only 89% of the teachers encourage the students.
2. Only 74% of the staff members always communicate in the class in English, and 26% of teachers speak English sometimes.
3. 19% of the staff members find difficulty to control the discipline of the class sometimes and 61% of the teachers find it difficult to control rarely.
4. 23% of the teachers of the college regularly take action against the students when they fail in their assignment. 67% of the teachers punish the students sometimes.
5. 20% of the teachers of engineering college stated that students always discuss and clarify their doubts with the teachers. 69% of the teachers stated that students approach them some times.
6. Computer Science and Electrical engineering teachers are friendly with the students than other departments.
7. Civil engineering and Mechanical engineering teachers maintain a formal relationship with students compared with other departments.
8. Computer Science engineering and Science departments are better in planning and completing the portion on time than other departments. Science department is better than other departments in preparing the teaching plan and complete it on time.
9. Electronics, Civil engineering and Science departments summarise the portions after each semester compared with other departments. Mechanical engineering and Science departments are regular in discussing previous questions papers than other departments.
10. Computer Science and Electronics engineering teachers

always provide the students additional information apart from the syllabus than other departments.

Conclusion

The findings of the study reveal details about classroom behaviour and teaching effectiveness. The research discloses a great deal about the main attributes of classroom behaviour including participating students in class, teaching in English, controlling the discipline, penalizing the students, discussing doubts and clarifications, friendliness and maintaining a formal relationship with students. The research also exposes the main attributes of teaching effectiveness including planning ahead and finishing of portions, preparation of teaching plan, summarising portions after each semester, providing additional materials for exam preparation, discussing the question papers before examination, discussing additional topics that are informative.

Recommendations

1. The management of higher educational institutes should give enough professional autonomy to teachers.
2. Insisting a uniform pattern of teaching methodology may not work in a higher educational institute because of the variety of subjects handled.
3. Teachers, in consultation with their respective heads of the departments, may work out the most effective plan and pedagogy at the beginning of each semester.
4. To avoid any embarrassments at the end of a semester, the heads may sit with respective teachers during mid-semester and check whether classes are being handled as planned.
5. The heads may even take an internal audit confidentially about the conduct of teaching and completion of portion from students.

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