TEACHING EFFECTIVENESS IN ENGINEERING COLLEGES-A STUDY IN HYDERABAD

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ABSTRACT

Our education system needs to become non-conformist. All children face the teacher in a classroom. Maybe they would learn more if they interacted more and faced each other. Our teaching faculty needs a change in their ways of thinking. Today, there is only teaching in institutions, no learning. Teaching is not just a profession but a divine responsibility. The study highlights in finding out various factors affecting teaching effectiveness. A sample of 152 teachers non-random selected were participated in the study. Engineering colleges located in Hyderabad had been considered. At last, the study highlighted by giving suggestions to improve the performance of teachers.

INTRODUCTION

India holds the distinction of producing a large number of engineers every year but still industry leaders complain about the absence of quality engineers for their industries. Even though we have large number of State government engineering colleges but it has been observed that there is steep decrease in quality. The Current engineering education focuses only on teaching and discounts the value of learning. There exists a huge gap among students learning and teaching. The criteria of teaching effectiveness in engineering institutes is more centered around university results, another method commonly used by the institutes is the rating obtained from students feedback. Research in teaching effectiveness highlights the importance of using multiple sources & multiple approaches. Apart from the results of students rating other sources such as peer review, teaching portfolios, class room observation or self evaluation can be considered. Most of the engineering teachers are not competent, efficient, and knowledgeable in classroom assessment procedures in order to make correct decisions about students learning outcomes and also to improve teaching process. (Adedoyin, 2012)

LITERATURE REVIEW

It has been said that teaching is a divine responsibility. The influences and experiences that teachers share with students will remain with them for a lifetime. Teaching effectiveness is the impact that classroom factors such as teaching methods, teacher expectations, classroom organization and use of classroom resources have on student's performance (Campbell et.al, 2004).Over a half century ago Tyler pointed out that students learning depends upon the overall activity of students rather than just teaching .It is more like what they do, not according to their teacher does. Effective teaching in engineering also requires problem solving. The most accepted criteria for measuring good teaching is the amount of student learning that occurs.

It has been considered that problem solving is the backbone of engineering but still many students have much difficulty in problem solving & it is more difficult as to how we teach them to do it. Engineering requires creativity, teaching effectiveness should foster creativity among students. In order to increase the effectiveness of teaching their initial training will have to be effective. Apart from this structuring of content, curriculum planning, presenting with clarity and using technology and digital tools play a major role in enhancing teaching effectiveness of engineering institutes.

OBJECTIVES OF THE STUDY

1. To find out the factors affecting teaching effectiveness in engineering colleges.

2. To find out the most important factor affecting teaching effectiveness in engineering colleges.

RESEARCH METHODOLOGY

A non-randomized sample of 152 was taken for the study. The method of sampling was convenience. In this study, a questionnaire was used using 25 items. Tool used for the study was factor analysis.

LIMITATIONS OF THE STUDY

1. The study was limited to Ranga Reddy district of Andhra Pradesh. There are many colleges located district places and rural areas of Andhra Pradesh that are in an inferior condition. The findings can't be generalized based on the sample used for the study.

2. Engineering colleges affiliated to JNTU university considered for the study. But there are colleges affiliated to other universities, few are autonomous in status and with accreditation.

3. The present study did not considered learning outcome of the students.

FACTOR ANALYSIS

In order to study 12 engineering colleges were selected in Hyderabad at Ranga Reddy dist. The primary data were collected from 152 assistant professors were taken in to the consideration. Assistant professors of more than one year experience and in same college were only considered for the study. Assistant professors from EEE, CS, CIVIL, MECHANICAL departments were participated in engineering colleges.

The KMO and Bartlett's test of Sphericity are both tests of multivariate normality and sampling adequacy is applied to check the content and construct validity of the data. The KMO value is 0.762 which is greater than 0.7 is meritorious. Principal component analysis (PCA) with varimax rotation used in factor analysis. The procedure is factoring the original correlation to determine the number of factors for which the sum of squares(eigen value) of loading for all variables on each factor exceeds 1.0 separately.

In the present study 25 variables were considered. Hence, based on the eigen value (above 1), 5 factors were identified.

DETERMINANTS OF TEACHING EFFECTIVENESS

The variables based on the appropriateness for representing the underlying dimensions of a particular factor have been summarized into five factors. The factors were named as under:

1. Subject

2. Skills

3. Pedagogical tools

4. Management Policies

5. Individual goals

Also tested the reliability of items by computing the coefficient alpha, measuring the internal consistency of the items. The value was 0.86 which is higher than 0.7, indicating a good consistency among the items.

FACTOR RANKING

Factor	Mean	Factor Ranking
Subject	3.28	1
Skills	3.24	2
Pedagogical tools	2.9	5
Management policies	2.59	4
Individual goals	3.03	3

Source: Primary Data

Factor wise calculated the effectiveness of assistant professors is calculated using mean/average score. Mean value is calculated based on the average /mean value of all variables included under a particular factor. None of the factor score was 4.00 and above . That means moderate effectiveness for all the variables. Subject factor revealed high mean value but should be considered with pedagogical tool for learning experience in strategic point of view.

CONCLUSION

All 25 variables are categorized under 5 major factors that affect teaching effectiveness. Individual goals of teachers will have effect on teaching in terms of learning , improving skills. But teachers are of opinion management should support them in learning and need for proper management guidelines to be followed at college premises.

RECOMMENDATIONS

1. Stakeholders decisions should also consider in teaching effectiveness

2. All teachers should work on research papers or should allow to participate conferences /workshops that will make them competitive and update subject.

3. All teachers should allow to use different pedagogical tools and should be provided proper training to use that will to enhance teaching effectiveness.

4. Management should conduct competitions for faculty and should recognize, reward , appreciate them.

5. Retention policy should be adopted for teachers considering the opinions of stake holders committee.

6. Continuous feedback of 360 degree appraisal system make teachers confident, committed, and will allow them to improve and learn more about subject.

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