Chapter 3: Objectives and Hypotheses

3.1 Statement of the Research Problem
The students have a choice to join any institute in a State through a single window admission system. The students preferred to join such institutions which can offer jobs immediately on completion of their education. The industry (NASSCOM) feels that many engineers have a formal degree but do not satisfy their requirements for employability. To ensure the quality of technical education, the accreditation process have been defined and carried out by National Board of Accreditation (NBA) and National Assessment and Accreditation Council (NAAC). Many of these evaluation parameters for accreditation are applicable to the institutes which have completed at least five years. The challenge is to identify parameters for establishing and monitoring quality of education from the beginning of a newly established engineering institute. There is a need to look at the Teaching-Learning process which can impart adequate technical knowledge to the students to make them employable at the end of their program, especially with the newly established engineering institutes in the rural area.
On the other hand, managements of such institutes are facing many problems such as vacant seats, poor academic quality of students, shortage of faculty, attract and retain better teachers etc. It is observed that the effect of vacant seats is directly affects the economy of such private self financed institutes. Therefore management of such institutes is keen to resolve such issues. Statement of the Research Problem is based on these issues.

3.2 Objectives
The objectives of the research were defined as follows:
As university examination results are very important parameter to attract students while selecting a institute for admission,
1. Whether physical attendance of the students in a class room for theory classes helps them in university examinations?
2. Whether regular assessment of the subject knowledge acquired by the students is useful to improve their performance in the end semester university examination?
3. Whether student’s academic feedback about a teacher can indicate the university result of the subjects taught by the teacher?

In order to carry out this study and make of relevant in all adversities the research design was made for rural institutes where the researcher can exercise necessary control over academic activities. Hence the following steps were undertaken:

a) Identify newly established (during 2010-11) engineering institute in a rural area for experimentation.


c) Induction training to the recruited teachers immediately after recruitment for improving measurable qualities.

d) Implement teaching-learning process and mechanism to monitor the process on continuous basis (follow best practices like lesson plans, notes, solution to past university examination papers, formation of question bank for regular assessment of students).

e) Conduct regular tests and give their results immediately.

f) Collect student’s anonymous feedback about every teacher on fixed parameters to grade them.

g) Correlate the observations.

h) Analyze, conclude and suggest suitable model.

3.3 Definitions

As per UGC, Teacher is defined as a faculty/staff assigned the professional activities of instructing pupils, providing knowledge and giving guidance in the subject area of studies.[40]mhrd.gov.in/sites/upload_files/mhrd/files/ebook/ebook_files/annexures/Annexure-2.pdf


Qualified Teacher: One who has acquired minimum qualification as per norms of AICTE. [6]

Suitable Teacher/ Faculty:

The selection committee as per UGC/AICTE/University is constituted to select suitable teacher from amongst the qualified candidates. The selection committee may also find many qualified candidate as unsuitable for teaching position. As the
researcher has been often a part of selection committee, the term suitable teacher has been used. Suitability is generally a common consensus of the selection committee about the individual perception of the members about a candidate in respect of minimum qualification as per norms of AICTE, good communication skills, fundamental knowledge, confidence etc.

**Technical Education:** AICTE includes Engineering, Management, Master of Computer Applications (MCA), Architecture, Pharmacy and Hotel Management education in technical education. The focus in this research is on engineering education.

**Performance of a Teacher:** Perception of the students based on academic performance.

**Effective Teaching:** The effectiveness is % of the students passing in a subject taught by the teacher.

**Good Teacher/Faculty:** An effective teacher, one who brings out better results.

**Rural Area:** As defined for the classification of the engineering institutes by the Director, Technical Education, Maharashtra State.

However researcher has also referred the definition of rural area is “In the rural areas the smallest area of habitation, viz., the village generally follows the limits of a revenue village that is recognized by the normal district administration. The revenue village need not necessarily be a single agglomeration of the habitations. But the revenue village has a definite surveyed boundary and each village is a separate administrative unit with separate village accounts. It may have one or more hamlets. The entire revenue village is one unit.

Reference:
http://censusindia.gov.in/Data_Products/Library/Indian_perceptive_link/Census_Terms_link/censusterms.html

**Rural Urban Areas:** In the Census of India 2011, the definition of urban area adopted is as follows: (a) All statutory places with a municipality, corporation, cantonment board or notified town area committee, etc. (b) A place satisfying the following three criteria simultaneously:

(i) a minimum population of 5,000
(ii) At least 75 per cent of male working population engaged in non-agricultural pursuits; and
(iii) a density of population of at least 400 per sq. km. (1,000 per sq. mile).

For identification of places which would qualify to be classified as 'urban' all villages, which, as per the 2001 Census had a population of 4,000 and above, a population density of 400 persons per sq. km. and having at least 75 per cent of male working population engaged in non-agricultural activity were considered. An area is considered 'Rural' if it is not classified as 'Urban' as per the above definition.[10]

In Maharashtra majority of self financed engineering colleges are located in metropolitan cities viz Mumbai, Pune, Nagpur or very close to such cities and these Institute derive all the benefits of metropolitan cities. The researcher has considered institutes as rural institute which is out of metropolitan cities, which do not get advantages of the city, as well as on the basis of their postal address. The identified institutes are in the smaller village under control of grampanchayat.

3.4 Hypotheses of Study

Hypotheses:

On the basis of objectives of the study and activities to be carried out for such a study, following hypotheses have been formed.

H1: Students’ attendance in a class facilitates their performance in university examinations.

H2: Continuous assessment in terms of class test improves student’s performance in their university examination.

H3: Performance Index of teachers has a positive correlation with student’s performance in the university examination.

These hypotheses are to be tested with the data to be collected from selected rural institutes, after carrying out the steps mentioned earlier.