STUDYING FACULTY MEMBERS' AND STUDENTS' PERSPECTIVE IN AN AFFILIATED UNDERGRADUATE ENGINEERING INSTITUTION

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ABSTRACT

The study aims to examine the relationship between parameters affecting the quality of Education in affiliated Under Graduate Engineering institution from the faculty members' and students' perspective. It is a descriptive research. The data has been collected with the help of 'Questionnaire Based Survey'. The sample size for the study is 110 comprising of the faculty respondents and 500 comprising of student respondents. The sample has been taken on the random (Probability) basis and the questionnaire was filled by the faculty members (teaching B.Tech) and students (pursuing B.Tech) chosen on the random basis from an affiliated undergraduate engineering institution in NCR, Haryana. For data analysis and conclusion of the results of the survey, statistical tool like correlation was performed in MS Excel. It can be inferred that for the faculty members' perspective "selection process" is negligibly impactive factor on "academic excellence", "infrastructure", "personality development & industry exposure" and "management & administration". For the students' perspective "selection process" is negligibly impactive factor on "academic excellence", "infrastructure", "personality development & industry exposure", "placements" and "management & administration". And "academic excellence" is poorly impactive factor on "infrastructure".

Keywords: Engineering, Management, Personality Development, Technical, Undergraduate

INTRODUCTION

Given that we need to compete globally in the 21st century, our education system should adopt certain benchmarking techniques for improving instruction models and administrative procedures in Universities/colleges to move forward. We need a thorough study and evaluation of models implemented elsewhere and work out strategies to adopt such models in our system. Benchmarking would provide benefits to our education system in terms of re-engineering, setting right objectives, etc. The country is showing consistency in economic growth pattern, leading the world in terms of information and technology, modernization, various economic activities and pushing for higher share of industries and services sectors of the economy, but there is one area which needs reform is "Education system". While it is true that some investments are taking place in the country's higher education system, we are yet to establish world class research facilities, recruiting profound academicians in universities/colleges/research

institutions, etc. to sustain and forge lead in economic development. It is important to understand that countries like China, Singapore, South Korea, etc. are moving fast in investing in education system. Therefore, it is imperative that our educational institutions are equipped with the desired quality and standards which are essential for transforming the younger workforce into productive ones. Needless to reiterate that in the higher education system focus on use of technology for effective learning by students also need to be encouraged to have cutting edge over our competitors in the globalised world.

In India, if education has to reach all deserving students, it should be made affordable. The fee structure in Government owned/sponsored institutions is inexpensive in India. However, in some private sector institutions, which have the freedom to prescribe fee structure and despite broad guidelines from certain state governments, fees are beyond the capacity of poor and deserving students. Ideally, the fee structure should vary for such economically weaker students. The educators can keep

in mind that education should not become prohibitively expensive and ensure that no deserving candidate is denied admission just for the fact that he or she does not possess the necessary financial resources.

The most important objective of any educational institution is to equip the students with ethical values besides imparting knowledge and skills. Today, this basic human quality is slowly eroding. Illustratively, while the RBI (Reserve Bank of India) as well as Government of India is formulating progressive policies to ensure funds that do not pose a major problem for education, there can be observed some disturbing trend in respect of repayment of loans by students. It may be noted that if the loans are not repaid after it falls due, the non-performing assets of banks will increase and in the process, banks are likely to be skeptical in sanctioning educational loans. It is, therefore, important that the repayment schedules are adhered to by those students who have taken loans. It is understood that to encourage banks to give educational loans to all deserving students, the Government is looking into the issue of setting up of a system of insuring educational loans. To reduce default of education loans, the School Alumni Association of students can become active in inculcating ethics and values among students. They can provide the required synergies and linkages in addressing challenges relating to non-payment of outstanding education loans. In the same coin, as education has to be made affordable to all deserving and poor students, there is a strong need for educational institutions not to over-commercialize education but to uphold ethics in the business of education as well. Over exploitation should be avoided. Profit cannot be the sole motive for undertaking this business. It must be driven by an unflinching commitment to society which in turn will benefit the business in the long run.

Literature Review

Sharma & Goswami's (2013) study concluded that FDI will be an important tool for development quality and its sustenance in the realm of higher education, particularly for the developing and the poor nations as well as the developed states all over the globe. FDI (Foreign Direct Investment) also brings international cooperation,

develop friendship between two nations and in nutshell brings peace to the humanity.

Khamkar's (2013) study concluded that, the quality of education does not only depend upon the infrastructure, curriculum, its goal, mission, aims and objectives, but it largely depends upon the use of creating, shaping human capital into socially responsible, accountable, reliable individuals responsible to the society on the whole.

Sakran & Mesanovic's (2013) study concluded that, no doubt that if students' understanding of the concepts of teaching and learning are not congruent with instructors' concepts, this will make students disengage and see teaching as irrelevant. This is something that calls for immediate action on the part of instructors; that is, they need to negotiate and share with students the true meanings of these concepts to avoid any possible mismatch in understanding.

Bairagi and Shrivastava's (2013) objective of the study was to facilitate the creation of a right framework which may be used to evaluate all existing policies, schemes and judicial decisions. It was an evaluative study which was based on the secondary sources of the data. The study concluded that starting from the period around the freedom struggle, there has been a consistent demand for FCE. However, in order to maintain uniform standards across India and to create a 'common language', it is imperative to enact skeletal central-level legislation in such a manner that it allows room for local need based innovations.

Gafoor and Khabeer's (2013) study focuses on the first two criterions identified by NAAC to serve as the basis for its assessment procedure: Curricular Aspects Criterion, Teaching Learning and Evaluation. The procedure of the study uses the techniques of research and development with the following steps: (i) Development of ICT model (ii) Analysis of the model, (iii) Impact on the performance of the affiliated colleges. The study concluded that the ICT is the need of the hour for quality assurance in Higher Education as it fastens the process of assessment and audit with greater transparency. It is a model that can be

used in assessing the quality of education in colleges of the University.

Shinde & Inamdar's (2013) study concluded that, PBL (Problem Based Learning) has been found to be a useful way to engage students in learning and to achieve Los (Learning Outcomes), considering this was authors first experiment in implementing PBL in an institute in India which has practised traditional instruction based pedagogy since decades. And it has been successfully implemented. The authors have recommended that for more concrete conclusions, few more experiments need to be conducted.

Naik's (2005) study concluded that, if India dreams to become a superpower by 2020, it will have to throw away the old shackles and adopt a new approach, as suggested in the study. HEI (Higher Education Institutions) have now come in global competition, where survival of the fittest is the law .With the will and skill Indian Institutes can certainly win.

Bhushi et al's. (2005) study concluded that CEP should provide facilities in terms of continuation of research by providing funds and necessary infrastructure and the system should have accountability measures in terms of design of curriculum, publication of papers, patents etc.

Balakrishnan's (2005) study has highlighted some features for the future betterment of the candidates entering into the Educational system through CBES (Competency Based Education System). These are as follows: theory blended with the societal required practical approach, improving the students to the substance learning instead of subject learning alone, and employability of candidates into the industry and improving the performance and output of industry.

Objective of the study

To examine the relationship between parameters affecting the quality of education in affiliated undergraduate engineering institution from the faculty members' and students' perspective.

Research Methodology

Sampling

It is a descriptive research. The data has been collected with the help of 'Questionnaire Based Survey'. The sample size for the study is 110, comprising of the faculty respondents and 500 comprising of student respondents. The sample has been taken on the random (Probability) basis and the questionnaire was filled by the faculty members (teaching B.Tech) and students (pursuing B.Tech) chosen on the random basis from an affiliated undergraduate engineering institution in NCR, Haryana.

Database Collection

The primary data was collected with the help of questionnaire and personal interview method from the affiliated technical institute chosen randomly. And the secondary data was gathered through the study of earlier studies and research work.

Scope of the study

The area for the study is National Capital Region (NCR) and the institution to be studied is an affiliated technical Educational institution in NCR. The respondents are the faculty members (teaching B.Tech) and students (pursuing B.Tech) who were selected randomly from the above said geographical area.

Statistical tools to be used

For data analysis and conclusion of the results of the survey, statistical tool like correlation was performed in MS Excel.

Data Analysis and Interpretations

Correlation (Faculty members' sample): Interpretations

Selection Process & Academic Excellence:

		Correlation; r
Selection Process & Others	Academic Excellence	0.649
	Infrastructure	0.306
	Personality Development & Industry Exposure	0.363
	Management & Administration	0.384
Academic Excellence & Others	Infrastructure	0.419
	Personality Development & Industry Exposure	0.474
	Management & Administration	0.489
Infrastructure & Others	Personality Development & Industry Exposure	0.819
	Management & Administration	0.818
Personality Development and Industry Exposure & Others	Management & Administration	0.879

Table 1. Showing the correlation; r for the different parameters for the faculty members' respondents

The correlation coefficient between the two variables is 0.649 as shown in Table 1. It means that the "selection process" and "academic excellence" are found to be positively correlated. An increase / decrease in the quality of one variable would result in the increase / decrease in quality of other variable. As $0<r\le0.6$, one can infer that there is a very weak correlation between the two variables i.e. the cloud (scatter) of points is away from the straight line. One can infer that "selection process" is negligibly impactive factor on "academic excellence".

Selection Process & Infrastructure:

The correlation coefficient between the two variables is 0.306 as shown in Table 1. It means that the "selection process" and "infrastructure" are found to be positively correlated. An increase / decrease in the quality of one variable would result in the increase / decrease in quality of other variable. As $0<r\le0.6$, one can infer that there is a very weak correlation between the two variables i.e. the cloud (scatter) of points is away from the straight line. One can infer that "selection process" is negligibly impactive factor on "infrastructure".

Selection Process & Personality Development and Industry Exposure:

The correlation coefficient between the two variables is 0.363 as shown in Table 1. It means that the "selection process" and "personality development and industry exposure" are found to be positively correlated. An increase / decrease in the quality of one variable would result in the increase / decrease in quality of other variable. As $0<r\le0.6$, one can infer that there is a very weak correlation between the two variables i.e. the cloud (scatter) of points is away from the straight line. One can infer that "selection process" is negligibly impactive factor on "personality development & industry exposure".

Selection Process & Management and Administration:

The correlation coefficient between the two variables is 0.384 as shown in Table 1. It means that the "selection process" and "management and administration" are found to be positively correlated. An increase / decrease in the quality of one variable would result in the increase / decrease in quality of other variable. As $0<r\le0.6$, one can

infer that there is a very weak correlation between the two variables i.e. the cloud (scatter) of points is away from the straight line. One can infer that "selection process" is negligibly impactive factor on "management & administration".

Academic Excellence & Infrastructure:

The correlation coefficient between the two variables is 0.419 as shown in Table 1. It means that the "academic excellence" and "infrastructure" are found to be positively correlated. An increase / decrease in the quality of one variable would result in the increase / decrease in quality of other variable. As $0<r\le0.6$, one can infer that there is a very weak correlation between the two variables i.e. the cloud (scatter) of points is away from the straight line. One can infer that "academic excellence" is negligibly impactive factor on "infrastructure".

Academic Excellence & Personality Development and Industry Exposure:

The correlation coefficient between the two variables is 0.474 as shown in Table 1. It means that the "academic excellence" and "personality development and industry exposure" are found to be positively correlated. An increase / decrease in the quality of one variable would result in the increase / decrease in quality of other variable. As $0<r\le0.6$, one can infer that there is a very weak correlation between the two variables i.e. the cloud (scatter) of points is away from the straight line. One can infer that "academic excellence" is negligibly impactive factor on "personality development & industry exposure".

Academic Excellence & Management and Administration:

The correlation coefficient between the two variables is 0.489 as shown in Table 1. It means that the "academic excellence" and "management and administration" are found to be positively correlated. An increase / decrease in the quality of one variable would result in the increase / decrease in quality of other variable. As $0<r\le0.6$, one can infer that there is a very weak correlation between the two variables i.e. the cloud (scatter) of points is away from the straight line. One can infer that "academic excellence" is negligibly impactive factor on "management &

administration".

Infrastructure & Personality Development and Industry Exposure

The correlation coefficient between the two variables is 0.819 as shown in Table 1. It means that the "infrastructure" and "personality development and industry exposure" are found to be positively correlated. An increase / decrease in the quality of one variable would result in the increase / decrease in quality of other variable. As $0.75 < r \leq 0.85$, one can infer that there is a moderate correlation between the two variables. One can infer that "infrastructure" is moderately impactive factor on "personality development & industry exposure".

Infrastructure & Management and Administration

The correlation coefficient between the two variables is 0.818 as shown in Table 1. It means that the "infrastructure" and "management and administration" are found to be positively correlated. An increase / decrease in the quality of one variable would result in the increase / decrease in quality of other variable. As $0.75 < r \leq 0.85$, one can infer that there is a moderate correlation between the two variables. One can infer that "infrastructure" is moderately impactive factor on "management & administration".

Personality Development and Industry Exposure & Management and Administration

		Correlation;r
Selection & Others	Academic Excellence	0.628
	Infrastructure	0.501
	Personality Development & Industry Exposure	0.518
Academic Excellence & Others	Placements	0.456
	Management & Administration	0.451
Infrastructure & Others	Infrastructure	0.654
	Personality Development & Industry Exposure	0.635
	Placements	0.518
	Management & Administration	0.614
Personality Development and Industry Exposure & Others	Personality Development & Industry Exposure	0.64
	Placements	0.563
	Management & Administration	0.648
	Placements	0.693
Placements & Others	Management & Administration	0.725
	Management & Administration	0.616

Table 2. Showing the correlation; r for the different parameters for the student respondents

The correlation coefficient between the two variables is 0.879 as shown in Table 1. It means that the "personality development and industry exposure" and "management and administration" are found to be positively correlated. An increase / decrease in the quality of one variable would result in the increase / decrease in quality of other variable. As $0.85 < r \leq 1$, one can infer that there is a strong correlation between the two variables i.e. the points are scattered along a straight line. One can infer that "personality development & industry exposure" is highly impactive factor on "management & administration".

Correlation (Students' sample) : Interpretations

Table 2 shows the correlation for the different parameters.

Selection Process & Academic Excellence

The correlation coefficient between the two variables is 0.628. It means that the "selection process" and "academic excellence" are found to be positively correlated. An increase / decrease in the quality of one variable would result in the increase / decrease in quality of other variable. As $0 < r \leq 0.6$, one can infer that there is a very weak correlation between the two variables i.e. the cloud (scatter) of points is away from the straight line. One can infer that "selection process" is negligibly impactive factor on "academic excellence".

Selection Process & Infrastructure

The correlation coefficient between the two variables is 0.501. It means that the "selection process" and "infrastructure" are found to be positively correlated. An increase / decrease in the quality of one variable would result in the increase / decrease in quality of other variable. As $0 < r \leq 0.6$, one can infer that there is a very weak correlation between the two variables i.e. the cloud (scatter) of points is away from the straight line. One can infer that "selection process" is negligibly impactive factor on "infrastructure".

Selection Process & Personality Development and Industry Exposure

The correlation coefficient between the two variables is 0.518. It means that the "selection process" and "personality development and industry exposure" are

found to be positively correlated. An increase / decrease in the quality of one variable would result in the increase / decrease in quality of other variable. As 0<r≤0.6, one can infer that there is a very weak correlation between the two variables i.e. the cloud (scatter) of points is away from the straight line. One can infer that "selection process" is negligibly impactive factor on "personality development & industry exposure".

Selection Process & Placements

The correlation coefficient between the two variables is 0.456. It means that the "selection process" and "placements" are found to be positively correlated. An increase / decrease in the quality of one variable would result in the increase / decrease in quality of other variable. As 0<r≤ 0.6, one can infer that there is a very weak correlation between the two variables i.e. the cloud (scatter) of points is away from the straight line. One can infer that "selection process" is negligibly impactive factor on "placements".

Selection Process & Management and Administration

The correlation coefficient between the two variables is 0.451. It means that the "selection process" and "management and administration" are found to be positively correlated. An increase / decrease in the quality of one variable would result in the increase / decrease in quality of other variable. As 0<r≤ 0.6, one can infer that there is a very weak correlation between the two variables i.e. the cloud (scatter) of points is away from the straight line. One can infer that "selection process" is negligibly impactive factor on "management & administration".

Academic Excellence & Infrastructure

The correlation coefficient between the two variables is 0.654. It means that the "academic excellence" and "infrastructure" are found to be positively correlated. An increase / decrease in the quality of one variable would result in the increase / decrease in quality of other variable. As 0.65<r≤ 0.75, one can infer that there is a weak correlation between the two variables i.e. the cloud (scatter) of points is not closed to a straight line. One can infer that "academic excellence" is poorly impactive factor on "infrastructure".

Academic Excellence & Personality Development and Industry Exposure

The correlation coefficient between the two variables is 0.635. It means that the "academic excellence" and "personality development and industry exposure" are found to be positively correlated. An increase / decrease in the quality of one variable would result in the increase / decrease in quality of other variable. As 0<r≤0.6, one can infer that there is a very weak correlation between the two variables i.e. the cloud (scatter) of points is away from the straight line. One can infer that "academic excellence" is negligibly impactive factor on "personality development & industry exposure".

Academic Excellence & Placements

The correlation coefficient between the two variables is 0.518. It means that the "academic excellence" and "placements" are found to be positively correlated. An increase / decrease in the quality of one variable would result in the increase / decrease in quality of other variable. As 0<r≤ 0.6, one can infer that there is a very weak correlation between the two variables i.e. the cloud (scatter) of points is away from the straight line. One can infer that "academic excellence" is negligibly impactive factor on "placements".

Academic Excellence & Management and Administration

The correlation coefficient between the two variables is 0.614. It means that the "academic excellence" and "management and administration" are found to be positively correlated. An increase / decrease in the quality of one variable would result in the increase / decrease in quality of other variable. As 0<r≤ 0.6, one can infer that there is a very weak correlation between the two variables i.e. the cloud (scatter) of points is away from the straight line. One can infer that "academic excellence" is negligibly impactive factor on "management & administration".

Infrastructure & Personality Development and Industry Exposure

The correlation coefficient between the two variables is 0.64. It means that the "infrastructure" and "personality

development and industry exposure" are found to be positively correlated. An increase / decrease in the quality of one variable would result in the increase / decrease in quality of other variable. As $0 < r \leq 0.6$, one can infer that there is a very weak correlation between the two variables i.e. the cloud (scatter) of points is away from the straight line. One can infer that "infrastructure" is negligibly impactive factor on "personality development & industry exposure".

Infrastructure & Placements

The correlation coefficient between the two variables is 0.563. It means that the "infrastructure" and "placements" are found to be positively correlated. An increase / decrease in the quality of one variable would result in the increase / decrease in quality of other variable. As $0 < r \leq 0.6$, one can infer that there is a very weak correlation between the two variables i.e. the cloud (scatter) of points is away from the straight line. One can infer that "infrastructure" is negligibly impactive factor on "placements".

Infrastructure & Management and Administration

The correlation coefficient between the two variables is 0.648. It means that the "infrastructure" and "management and administration" are found to be positively correlated. An increase / decrease in the quality of one variable would result in the increase / decrease in quality of other variable. As $0 < r \leq 0.6$, one can infer that there is a very weak correlation between the two variables i.e. the cloud (scatter) of points is away from the straight line. One can infer that "infrastructure" is negligibly impactive factor on "management & administration".

Personality Development and Industry Exposure & Placements

The correlation coefficient between the two variables is 0.693. It means that the "personality development and industry exposure" and "placements" are found to be positively correlated. An increase / decrease in the quality of one variable would result in the increase / decrease in quality of other variable. As $0.65 < r \leq 0.75$, one can infer that there is a weak correlation between the two variables i.e. the cloud (scatter) of points is not closed to a straight

line. One can infer that "personality development & industry exposure" is poorly impactive factor on "placements".

Personality Development and Industry Exposure & Management and Administration

The correlation coefficient between the two variables is 0.725. It means that the "personality development and industry exposure" and "management and administration" are found to be positively correlated. An increase / decrease in the quality of one variable would result in the increase / decrease in quality of other variable. As $0.65 < r \leq 0.75$, one can infer that there is a weak correlation between the two variables i.e. the cloud (scatter) of points is not closed to a straight line. One can infer that "personality development & industry exposure" is poorly impactive factor on "management & administration".

Placements & Management and Administration

The correlation coefficient between the two variables is 0.616. It means that the "placements" and "management and administration" are found to be positively correlated. An increase / decrease in the quality of one variable would result in the increase / decrease in quality of other variable. As $0 < r \leq 0.6$, one can infer that there is a very weak correlation between the two variables i.e. the cloud (scatter) of points is away from the straight line. One can infer that "placements" is negligibly impactive factor on "management & administration".

Conclusions

It can be inferred that, for the faculty members' perspective "selection process" is negligibly impactive factor on "academic excellence", "infrastructure", "personality development & industry exposure" and "management & administration". While "academic excellence" is negligibly impactive factor on "infrastructure", "personality development & industry exposure" and "management & administration". And "infrastructure" is moderately impactive factor on "personality development & industry exposure" and "management & administration". While "personality

development & industry exposure" is highly impactive factor on "management & administration".

For the students' perspective "selection process" is negligibly impactive factor on "academic excellence", "infrastructure", "personality development & industry exposure", "placements" and "management & administration". And "academic excellence" is poorly impactive factor on "infrastructure". While "academic excellence" is negligibly impactive factor on "personality development & industry exposure", "placements" and "management & administration". And "infrastructure" is negligibly impactive factor on "personality development & industry exposure", "placements" and "management & administration". And "personality development & industry exposure" is poorly impactive factor on "placements" and "management & administration". While "placements" is negligibly impactive factor on "management & administration".

Recommendations

- The results of the study have to be read in light of faculty and students' expectations about different parameters.

- Similar studies could be conducted by studying the opinions and perceptions of other stakeholders' like management, industry, society and parents about the role of various parameters which affect the quality of undergraduate engineering education.

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