

Infrastructural Developments in the Private Technical Educational Institutions

Dr. Neeraj Kumari

Associate Professor, Department of Applied Sciences, Faculty of Engineering & Technology, Manav Rachna

International Institute of Research and Studies, Faridabad, Haryana, India

Email: neerajnarwat@gmail.com

Article History

Received: July 7, 2021

Revised: August 11, 2021

Accepted: August 13, 2021

Published: August 15, 2021

Abstract

The study measures the effectiveness of infrastructure in private technical educational institutions. It is a descriptive research. A structured questionnaire has been used to collect the primary data. The sample size is 85 consisting of the faculty members of a well reputed institute in National Capital Region, Haryana, India. The sampling technique used is random probability sampling. The data analysis and interpretations has been carried out using Microsoft Excel (graphical representation) based on the frequency of responses, Correlation and Regression analysis techniques. The institute has a quality infrastructure as it is based on AICTE model to a large extent. The study concludes that the institute provides all the necessary and sufficient facilities to the faculty members like a well equipped and standardized communication cell, satisfactory recreational facilities, spacious & well furnished faculty / staff rooms, facilities for doing their academic work, well equipped library, hygienic toilets, spacious parking facility, while the institute's Wi-Fi facility needs to be well channelized for the faculty members.

Keywords: Education; Infrastructure; Quality; Standards; Technical.

1. Introduction

Getting ready for the effective future requires a vigorous and adaptable learning foundation fit for supporting new sorts of commitment and giving universal admittance to the innovation instruments that permit the studies to make, plan, and investigate. [Hinings et al. \(2017\)](#), contend that adopting the strategy of dissecting the institutional framework of fields gives an approach to think about across fields, and effects openings and pathways for institutional change that can hone our theorizing. The investigation additionally contends that in looking at across fields that we are probably going to discover setups of institutional infrastructural components. It has proposed that the components that make up institutional framework give us an important beginning stage for looking at fields and building up whether there are a predetermined number of designs of these components.

The fundamental segments of a foundation equipped for supporting transformational learning encounters incorporate the following:

- High-quality computerized learning content-Advanced learning substance and apparatuses that can be utilized to plan and convey connecting with and significant learning encounters
- Ubiquitous availability- Industrious admittance to high velocity Web all through the campus
- Powerful learning gadgets- Admittance to cell phones that associate students and instructors to the huge assets of the Web and encourage correspondence and coordinated efforts
- Responsible Use Policies (RUPs)- Rules to protect students and guarantee that the framework is utilized to help learning process

The quality of education can be improved if we consider the following:

- Guarantee students and instructors have broadband admittance to the Web and sufficient remote availability.
- Guarantee that each student and teacher has at least one Web access gadget and fitting programming and assets for research; correspondence, interactive media content creation, and coordinated efforts for use within the institute. [Adshead et al. \(2019\)](#) The investigation tends to future vulnerabilities around the vital drivers of private populace and the travel industry development on the island by displaying infrastructure needs for substitute situation projections. Arrived at the midpoint of across the four areas, these necessities range from -14% (low) to +5% (high) corresponding to the moderate projection. The investigation gives the initial move towards an useful method for using framework to convey the SDGs, utilizing quantitative pointers to support successful decision making.
- Backing the turn of events and utilization of straightforwardly authorized instructive materials to advance inventive and innovative freedoms for all students and quicken the turn of events and reception of new open

innovation based learning devices and courses. Kumari (2018) The workers are very little clear about their objectives and the motivation behind the organization. The representatives are not happy with the current design and the division of the work in the organization, and furthermore with the current prize instrument of the organization. Anyway the representatives are happy with their chiefs and their administration styles.

- Draft manageability plans for infrastructure issues that incorporate overhauls of wired and remote access just as gadget invigorate plans and practical subsidizing sources while guaranteeing the security and insurance of students’ information. Thacker et al. (2019) Infrastructure can likewise make destructive social and ecological effects, increment weakness to cataclysmic events and leave an impractical weight of obligation. Interest in infrastructure is at an unequalled high all around the world, consequently a consistently expanding number of choices are being made since it would secure examples of advancement for people in the future.
- Make an extensive guide and data set of network, gadget access, utilization of straightforwardly authorized instructive assets, and their uses the nation over. Manual of Accreditation (2004), The All India Council for Technical Education (AICTE) was vested with legal forces by a demonstration of Parliament in 1987 with the order to arrange, plan, and manage specialized schooling in the country. Note, nonetheless, that the IITs are outside the domain of the AICTE. The AICTE endorsement measure for new establishments or new degree programs depends on a few rules including the validity of the institutional administration and program suppliers; confirmation of consistence to AICTE standards and principles; endorsement by the state government; and market affectability of the program yield, in order to maintain a strategic distance from the lopsidedness of supply of qualified labor.

Dutta (2008), presumed that the nature of training doesn't just rely on the infrastructure, educational program, its objective and mission but it depends to a great extent on the utilization of making, forming human resources into socially dependable, responsible, reliable individuals capable to the general public overall. According to the guidelines given in the approval handbook, AICTE, 2012-2013, there are few factors which must be taken care of by any college which is approved by AICTE. The questionnaire for the study has been designed taking into consideration all of these factors with reference to the faculty of the institute. These factors can be grouped in the following categories:

1. Academic Excellence
2. Selection process
3. Self Development and Business Exposure
4. Infrastructure
5. Governance

2. Research Methodology

Objective: To measure the effectiveness of infrastructure in the private technical educational institution.

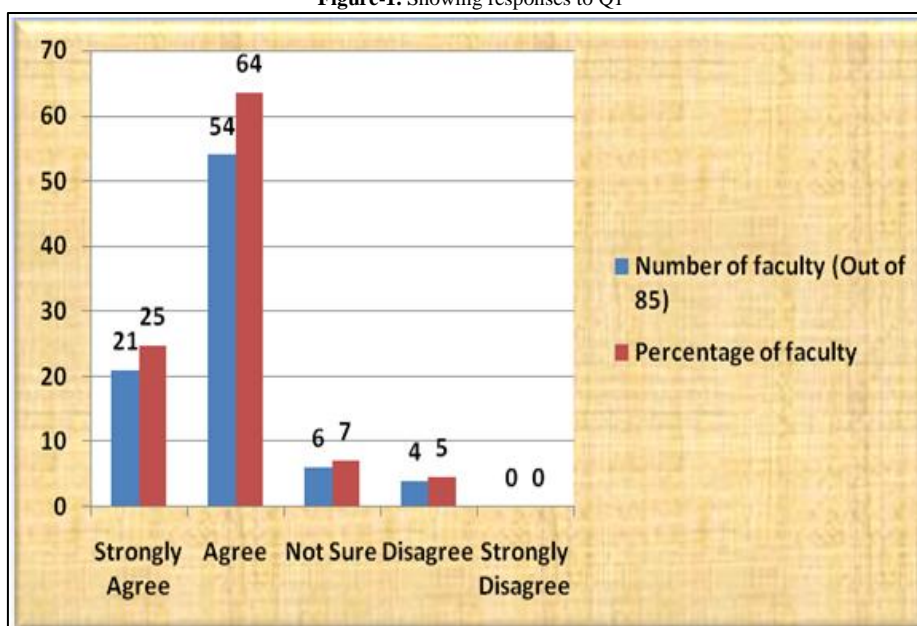
Hypothesis: Infrastructure and quality of institutes are positively related.

Sampling and data collection: It is a descriptive research. A structured questionnaire has been used to collect the primary data. The sample size is 85 consisting of the faculty members of a well reputed institute in National Capital Region, Haryana, India. The sampling technique used is random probability sampling.

Statistical tools to be used: Hypothesis testing, MS Excel, Correlation and Regression analysis.

3. Data Analysis and Interpretations

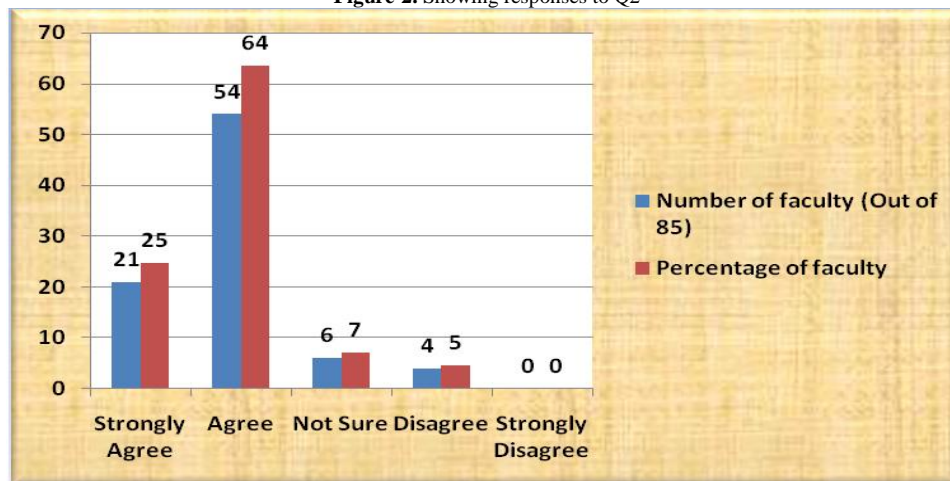
Figure-1. Showing responses to Q1



Source: Self constructed

Interpretations: About 89 % of the respondents are in favour of the statement that the institute has a well resourced and standardized communication cell for external and internal transmission towards staff, students, faculty and stakeholders. While about 5 % of the respondents are against this statement. And about 7 % of the respondents have no say in this regards.

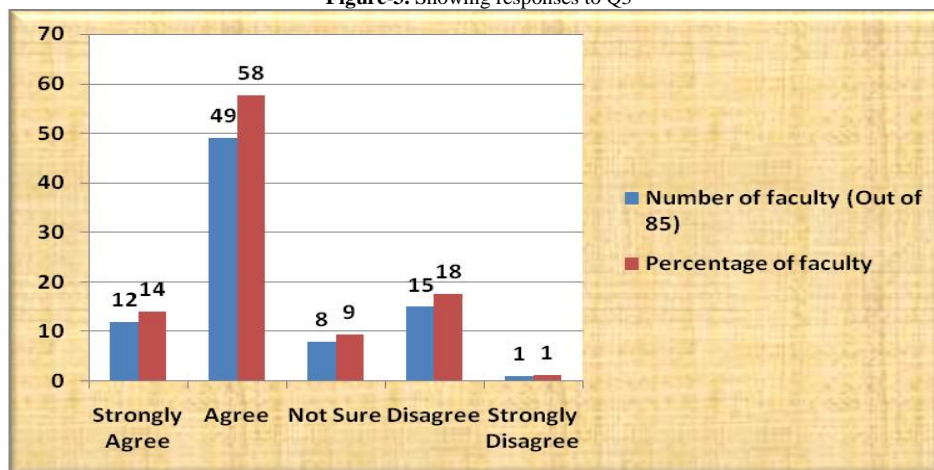
Figure-2. Showing responses to Q2



Source: Self constructed

Interpretations: About 79 % of the respondents find the recreational facilities like canteen, residential and hostel satisfactory. On the contrary, about 15 % of the respondents are in disagreement with the statement that the recreational facilities provided by the institute are satisfactory.

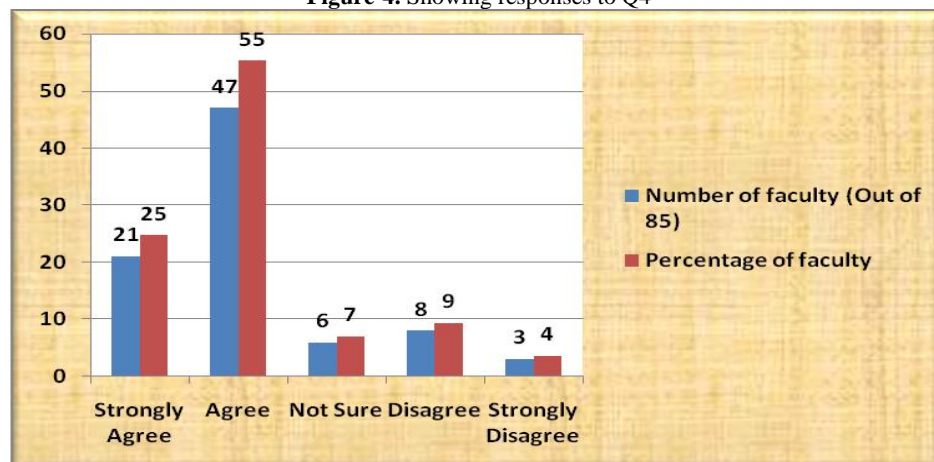
Figure-3. Showing responses to Q3



Source: Self constructed

Interpretations: A majority of the respondents i.e. about 72 % have said that the staff sitting arrangements is adequate in number and they are well furnished and spacious. About 9 % of the respondents have no say in this regard. While about 19 % of the respondents are against the above statement.

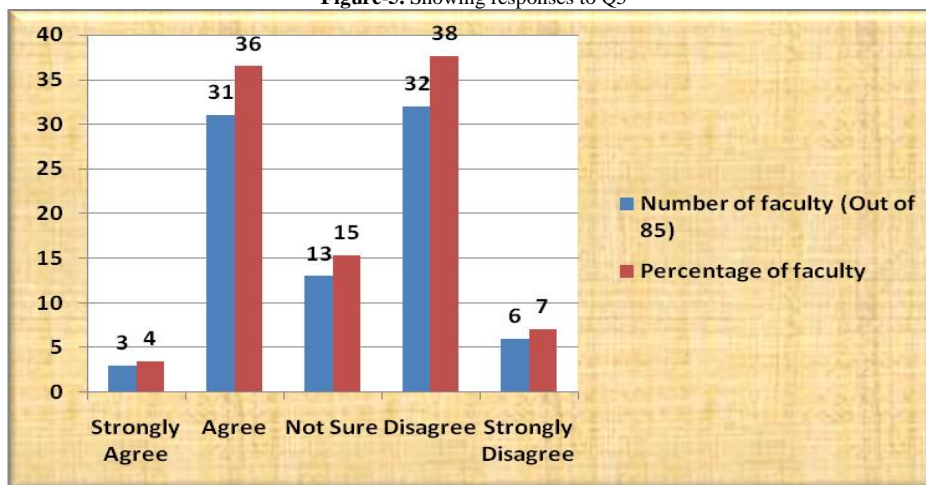
Figure-4. Showing responses to Q4



Source: Self constructed

Interpretations: About 80 % of the respondents are in favour of the above statement that the teachers are equipped with essential facilities in order to complete their academic work. While about 13 % of the respondents are against this statement. About 7 % of the respondents have no say in this regard. Kumari (2014), stated that the apparent decency of performance evaluation conduct assumes a fundamental part in hierarchical working and execution. This would consequently give a superior a better clarity about the connection between individual's performance and apparent decency of performance evaluation.

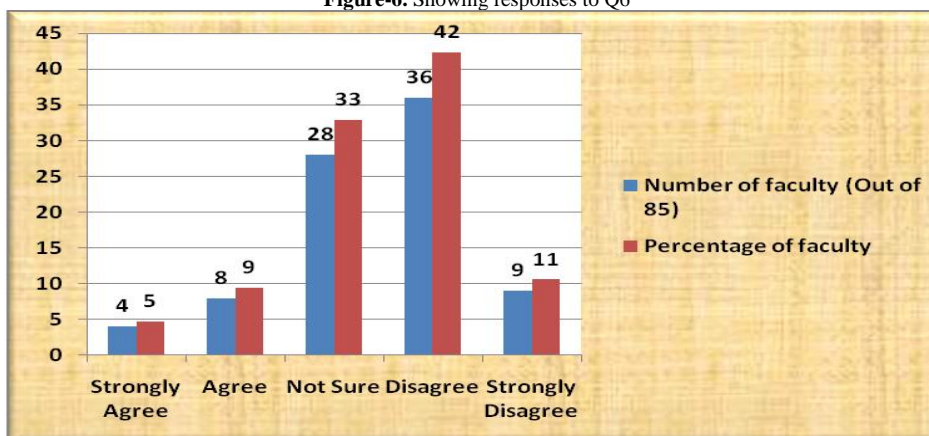
Figure-5. Showing responses to Q5



Source: Self constructed

Interpretations: About 40 % of the respondents are in favour of the statement that the departments have enough printers needed for work in the institute. While about 53 % of the respondents feel that the departments within the institute does not have an adequate number of printers.

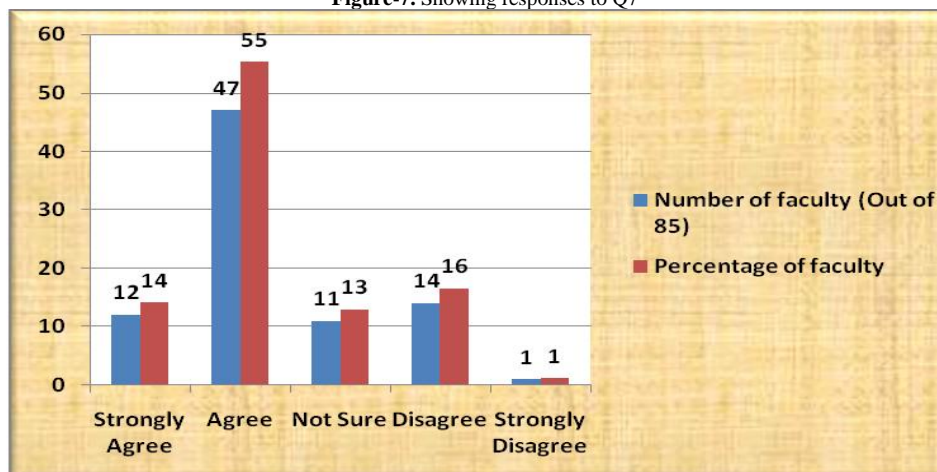
Figure-6. Showing responses to Q6



Source: Self constructed

Interpretations: Only about 14 % of the respondents are in favour of the statement above that the institute has a well channelized and secured Wi-Fi facility for the teachers. While the majority of the respondents i.e. about 53 % of the respondents feel that the institute does not provide the above mentioned facility to the teachers.

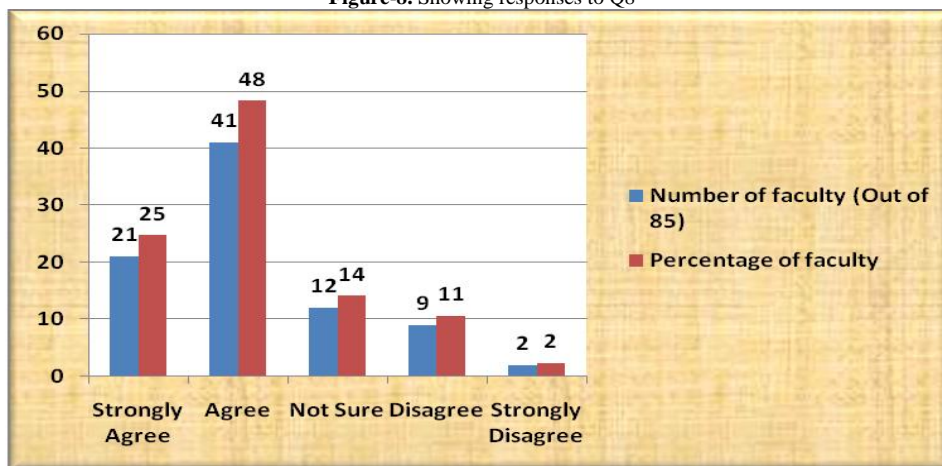
Figure-7. Showing responses to Q7



Source: Self constructed

Interpretations: The majority of the respondents i.e. about 69 % have said that the institute has a library as a facility which is well resourced with internet facility, International/National Journals & books for the teachers for the purpose of research & development. While about 17 % of the respondents are in the disagreement of this statement.

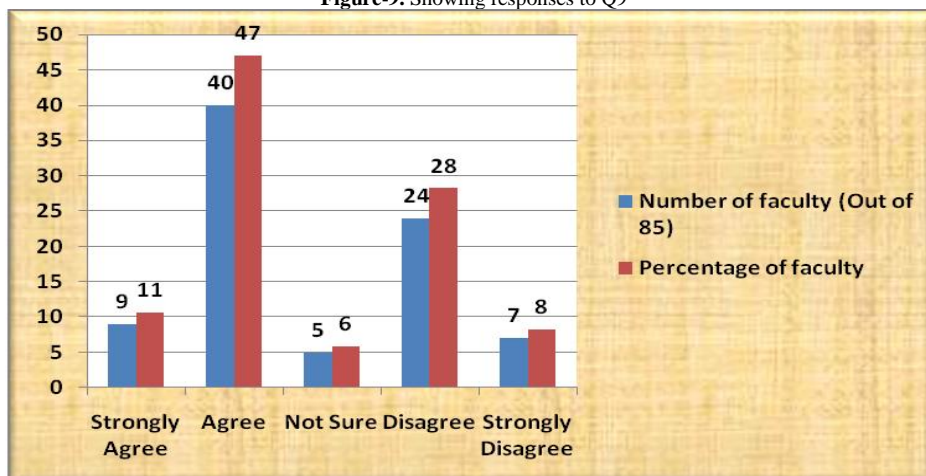
Figure-8. Showing responses to Q8



Source: Self constructed

Interpretations: About 73 % of the respondents feel that the teachers can avail the library facilities with ease even during the weekends, holidays and off hours. While about 13 % of the respondents are in disagreement of the said statement.

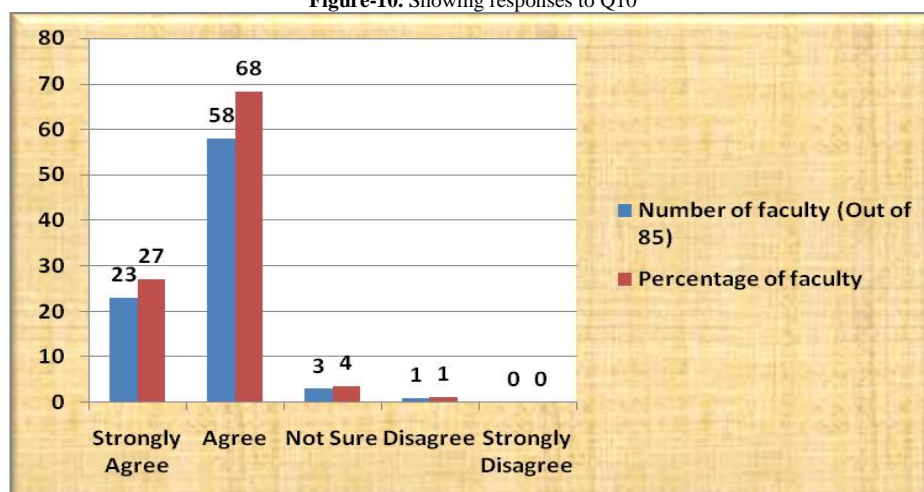
Figure-9. Showing responses to Q9



Source: Self constructed

Interpretations: About 58 % of the respondents have said that the toilets for the teachers (for both the genders) are in enough required number and hygienic in the institute. On the contrary, about 36 % of the respondents have negated the above statement.

Figure-10. Showing responses to Q10



Source: Self constructed

Interpretations: In this question we can see that the maximum percentage of the respondents i.e. about 95 % has said that the institute is equipped with a spacious parking facility for their vehicles. Only a small percentage i.e. about 1 % of the respondents does not find the parking facility spacious.

3.1. Correlation and Regression Analysis

According to the guidelines given in the approval handbook of AICTE for the period 2012-2013, any institute would be a quality institute if it focuses on infrastructure, selection process, self development and business exposure, academic excellence & governance in totality.

To find the correlation between infrastructure and quality of an institute, we would take all the parameters except “infrastructure” in order to represent “quality” parameters for an institute. So the parameters representing the “quality” of the institute would be infrastructure, selection process, self development and business exposure, academic excellence & governance in totality.

Table-1. Showing the correlation and regression value between infrastructure & quality of the institute

	Infrastructure & Others
Correlation; r	0.707
Regression; R	0.706

Interpretations: The “infrastructure” and “quality of an institute” are positively related by 70.7%. This means that a change in the “infrastructure” of a private technical institute would affect the “quality” of that institute by 70.7%. An increase in the quality of “infrastructure” of a private technical institute would result in the increase in quality of “other parameters” of that private technical institute. And a decrease in the quality of “infrastructure” of a private technical institute would result in the decrease in quality of “other parameters” of that private technical institute. As the regression value between the two of them is 0.706 it means that 1% change in the “infrastructure” would lead to 0.706% change in the “quality of the institute”.

4. Conclusion

For any technical and professional educational institution the most likely and vital deciding factor is its wide infrastructure and it’s carefully architecture design. Most of the institutions suffer with poor public image because of its inadequate and unimpressive body outline. The study conducted found that the institute has a quality infrastructure as it is based on AICTE model to a large extent. The institute provides all the necessary and sufficient facilities to the faculty members like a well equipped and standardized communication cell, satisfactory recreational facilities, spacious & well furnished faculty / staff rooms, facilities for doing their academic work, well equipped library, hygienic toilets , spacious parking facility. While the institute’s Wi-Fi facility needs to be well channelized for the faculty members.

The hypothesis is found to be true for the study. The “infrastructure” and “quality of the institute” are positively related by about 70.7%. This means that a change in the “infrastructure” of a private technical institute would affect the “quality” of that institute by 70.7%. An increase in the quality of “infrastructure” of a private technical institute would result in the increase in quality of “other parameters” of that private technical institute. And a decrease in the quality of “infrastructure” of a private technical institute would result in the decrease in quality of “other parameters” of that private technical institute. This means that if the infrastructure of a private technical institute is good then it would be a quality institute and it would also be focusing on the enhancement of its students’ self development and business exposure, selection process, academic excellence, and governance in totality.

References

- Adshead, D., Thacker, S., Fuldauer, L. I. and Hall, J. W. (2019). Delivering on the sustainable development goals through long-term infrastructure planning. *Global Environmental Change*, 59(11): 101975.
- Dutta, P. K. (2008). Quality technical education in india, new delhi, indian society for technical education. *The Indian Journal of Technical Education*, 31(1): 41-51.
- Hinings, C. R., Logue, D. M. and Zietsma, C. (2017). *Fields, institutional infrastructure and governance*. The Sage handbook of organizational institutionalism.
- Kumari, N. (2014). Using performance appraisal as an effective tool for motivating the employees performance: A live study. *Business Perspectives and Research*, 2(2): 37-46.
- Kumari, N. (2018). Organizational diagnosis: A case of infosys, India. *The Journal of Asian Finance, Economics and Business (JAFEB)*, 5(1): 53-62.
- Manual of Accreditation (2004). *National board of accreditation*. All India Council for Technical Education: New Delhi, India.
- Thacker, S., Adshead, D., Fay, M., Hallegatte, S., Harvey, M., Meller, H. and Hall, J. W. (2019). Infrastructure for sustainable development. *Nature Sustainability*, 2(4): 324-31.