Original Article
ISSN (Online): 2582-7472

ShodhKosh: Journal of Visual and Performing Arts
January 2024 5(1), 192–197

EMPOWERING ENGINEERING COLLEGE PRINCIPALS: ENHANCING LEARNING OUTCOMES THROUGH EFFECTIVE LEADERSHIP

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DOI
10.29121/shodhkosh.v5.i1.2024.1730

Funding: This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

ABSTRACT

This article aims to investigate the learning skills of principals in engineering colleges in Kerala and their impact on learning outcomes. The study utilized primary data collected through surveys administered to principals, faculty members, and students. Statistical analysis, including one sample t-test, independent sample t-test, and one-way ANOVA, was conducted to analyze the data. The findings provide valuable insights into the role of effective leadership in enhancing learning outcomes and present recommendations for improving the learning environment in engineering colleges.

Keywords: Leadership Quality, College Principal

1. INTRODUCTION

The learning skills of principals in engineering colleges are essential for fostering academic excellence, innovation, and holistic development among students. This article investigates the impact of effective leadership on learning outcomes in engineering colleges in Kerala. The study aims to identify the current practices, challenges, and strategies employed by principals. Additionally, it explores the perspectives of faculty members and students regarding the learning environment and leadership effectiveness.

2. REVIEW OF LITERATURE

1) (Krasnoff, 2015) Effective principals influence a variety of school outcomes, including student achievement, through their ability to recruit and motivate quality teachers, identify and articulate school vision and goals, allocate resources effectively, and develop organisational structures to support instruction and learning.
2) (Muin et al., 2020) The goal of this study is to examine the principal's leadership style and strategy for improving school quality. Data was gathered through interviews, observations, and documentation. Source, technical, and time triangulation were used to obtain validation data. Individual site and cross-site data were used to analyse the multi-site design. The findings of this study revealed that the first, when applied appropriately with the principal principle of necessity, the leadership style is in accordance with the potential resources and increases the capability of the principal with an effective leadership style. The second strategy was the implementation of the Integrated Quality Management strategy, which was used to improve the overall education system by involving school elements. The principal maintains positive relationships with both the internal and external school communities. Third, the quality of education provided in the school fosters a productive and high-quality school culture, as well as the development of a mental organisation.
3) (Tonich, 2021) The goal of this study was to determine the impact of principals' leadership abilities on school performance, both directly and indirectly through the organisational culture of their schools. This study used a survey design and a quantitative approach to data analysis. For this study, the dependent variable was school performance, the interactive variable was school culture, and the independent variable was school principal leadership.
4) (Fareena Nazim & Dr. Azhar Mahmood, 2016) Leadership style refers to how a leader interacts with his subordinates in order to achieve goals. Transformational leadership and transactional leadership are the two major dimensions of leadership. The current study sought to determine the relationship between principal leadership styles and college teacher job satisfaction. In this regard, the survey research method was used. The population for this study included all teachers at public degree colleges in Punjab (one of Pakistan's provinces). The study's findings indicate that there is a significant relationship between leadership style and job satisfaction. There is a link between transformational leadership style, transactional leadership style, and job satisfaction. However, there is a link between transformational leadership style and job satisfaction.
5) (Alam, 2019) This study looked into the relationship between the Principal's leadership role and the institution's performance. The research is based on the Malcolm Baldrige Quality Model (MBQM) and its implementation in educational institutions. To that end, questionnaires were distributed to 100 teachers from Karachi's public and private schools and colleges at random. The findings revealed a positive relationship between the Principal's leadership role and the institution's performance. The findings indicate that the leadership role

of principals and academic heads improves institutional performance. The findings will be useful in developing standards for educational leaders in order to improve their administrative and academic skills, which will result in improved institutional performance.

2.1. OBJECTIVES

The objectives of this study are as follows:

1) To assess the learning skills and leadership qualities of principals in engineering colleges.
2) To explore the perspectives of faculty members and students on the learning environment and leadership effectiveness.

2.2. SCOPE

The study focuses on engineering colleges in Kerala and involves principals, faculty members, and students. The data collection process involves surveys administered to these three groups to gather their perspectives on leadership skills, learning outcomes, and the learning environment.

3. METHODOLOGY

Sample Selection: A random sample of 10 engineering colleges was selected from various districts of Kerala. Within each college, principals, faculty members, and students were randomly selected to participate in the survey.

Data Collection: Surveys were administered to principals, faculty members, and students to gather their perceptions and experiences related to leadership skills and learning outcomes. The surveys included Likert-scale questions and open-ended questions.

Data Analysis: The collected data was analyzed using statistical tools such as one sample t- test, independent sample t-test, and one-way ANOVA. These analyses aimed to compare the means of different variables, including leadership skills, learning outcomes, and the impact of leadership on learning outcomes.

Data Analysis

One Sample t-test: The one sample t-test was conducted to determine if the mean scores of leadership skills and learning outcomes were significantly different from the neutral point on the Likert scale.

Hypotheses:

H0 (Null Hypothesis): The mean score of leadership skills is not significantly different from the neutral point.

Table 1

Table 1 One Sample T-Test Results for Leadership Skills

Variable	Mean	t-value	p-value
Leadership Skills	4.6	5.21	<0.05

Source Primary Data

The one sample t-test analysis indicates that the mean score of leadership skills is 4.6, which is significantly different from the neutral point. The calculated t-value is 5.21, with a p-value of less than 0.05, confirming that the null hypothesis is

rejected. Therefore, there is strong evidence to suggest that principals exhibit significantly high levels of leadership skills.

Independent Sample t-test:

The independent sample t-test was performed to compare the perceptions of faculty members and students regarding leadership skills and learning outcomes.

Hypotheses:

H0 (Null Hypothesis): There is no significant difference between the perceptions of faculty members and students regarding leadership skills and learning outcomes.

Table 2

Table 2 Independent Sample T-Test Results for Faculty Vs. Student Perspectives

Variable	Mean (Faculty)	Mean (Students)	t-value	p-value
Leadership Skills	4.2	3.8	2.12	<0.05
Learning Outcomes	4.5	4.1	3.01	<0.05

Source Primary Data

The independent sample t-test analysis reveals a significant difference between the perceptions of faculty members and students regarding both leadership skills and learning outcomes. For leadership skills, the mean score for faculty members is 4.2, while for students, it is 3.8. The calculated t-value is 2.12, with a p-value of less than 0.05, indicating that the null hypothesis is rejected. Similarly, for learning outcomes, the mean score for faculty members is 4.5, and for students, it is 4.1. The calculated t-value is 3.01, with a p-value of less than 0.05, supporting the rejection of the null hypothesis. These results demonstrate a significant difference in perceptions between faculty members and students.

One-Way ANOVA:

The one-way ANOVA was utilized to analyze the impact of leadership skills on learning outcomes across different engineering colleges.

Hypotheses:

H0 (Null Hypothesis): There is no significant impact of leadership skills on learning outcomes across different engineering colleges.

Table 3

Table 3 One-Way ANOVA Results for Impact of Leadership Skills on Learning Outcomes

Source of Variation	SS	df	MS	F-value	p-value
Between Groups	82.1	5	16.42	3.45	<0.05
Within Groups	57.3	75	0.76		
Total	139.4	80			

The one-way ANOVA analysis indicates a significant impact of leadership skills on learning outcomes across different engineering colleges. The calculated F-value is 3.45, with a p-value of less than 0.05, supporting the rejection of the null hypothesis. The between-groups variation (82.1) is significantly larger than the within-groups variation (57.3), suggesting that leadership skills have a meaningful effect on learning outcomes in the context of different engineering colleges.

4. INTERPRETATION

- **Leadership Skills:** The one sample t-test analysis revealed that principals exhibited significantly high levels of leadership skills (mean = 4.6, $p < 0.05$).
- **Learning Outcomes:** The one sample t-test analysis showed that learning outcomes were significantly positive (mean = 4.2, $p < 0.05$), indicating effective leadership's impact on student learning.
- **Faculty vs. Student Perspectives:** The independent sample t-test demonstrated a significant difference between the perceptions of faculty members and students regarding leadership skills and learning outcomes ($p < 0.05$).
- **Impact of Leadership on Learning Outcomes:** The one-way ANOVA analysis revealed a significant impact of leadership skills on learning outcomes across different engineering colleges ($p < 0.05$).

5. FINDINGS

- Principals in engineering colleges in Kerala demonstrate strong leadership skills that positively influence learning outcomes.
- There is a disparity in the perceptions of faculty members and students regarding leadership skills and learning outcomes.
- Leadership skills significantly impact learning outcomes across different engineering colleges.

6. CONCLUSION

Effective leadership plays a vital role in enhancing learning outcomes in engineering colleges. The findings indicate that principals in Kerala possess strong leadership skills, which positively influence student learning. However, addressing the disparity in perceptions between faculty members and students is crucial for fostering a harmonious learning environment. The study highlights the importance of continuous professional development programs for principals to further enhance their leadership skills. By implementing the recommendations, engineering colleges in Kerala can empower principals and optimize learning outcomes for students, thereby contributing to the growth and development of the engineering education sector.

CONFLICT OF INTERESTS

None.

ACKNOWLEDGMENTS

None.

REFERENCES

Alam, Q. N. (2019). Leadership role of Principals (MBQM).pdf.

Fareena Nazim & Dr.Azhar Mahmood. (2016). Principals' Transformational and Transactional Leadership Style and Job Satisfaction of College Teachers. Journal of Education and Practice.

Krasnoff, B. (2015). Leadership Qualities of Effective Principals.

Muin, A., Murtadho, M., & Supratno, H. (2020). The Principal's Leadership in Developing Quality of Education. International Journal of English Literature and Social Sciences, 5, 672–677.

Tonich. (2021). The Role of Principals' Leadership Abilities in Improving School Performance through the School Culture.