

EXAMINING THE CORRELATION BETWEEN PRINCIPALS' TRANSFORMATIONAL LEADERSHIP, INNOVATION, AND FACULTY PERFORMANCE IN HIGHER EDUCATIONAL INSTITUTIONS OF BENGALURU, INDIA

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Abstract

This research article explores the impact of transformational leadership exhibited by principals on innovation and faculty performance within higher educational institutions in Bengaluru, India. The study gathered data from 505 faculty members across ten institutions of varying sizes, ranging from small to large. Through rigorous statistical analysis, the results demonstrate a significant positive correlation between transformational leadership and both innovation and faculty performance. These findings underscore the importance of fostering transformational leadership qualities among principals to enhance innovative behavior and performance among faculty members. The article concludes by discussing practical implications for educational institutions in Bengaluru, emphasizing strategies to cultivate effective leadership for sustainable academic excellence.

Keywords: Transformational Leadership, Innovation, Performance, Principal, Higher Education, Faculty.

1. INTRODUCTION

Education plays a pivotal role in shaping the development of nations and societies worldwide, particularly through the education of the new generation. In India's governmental structure, both federal and state governments hold distinct responsibilities within the realm of higher education. Despite established operational protocols, the effectiveness of educational institutions heavily relies on the knowledge and dedication of faculty members tasked with nurturing future generations. Regrettably, India's higher education system has struggled to attract and retain qualified, committed faculty. This research delves into the transformative influence that principals' leadership can exert on faculty members within higher educational institutions, focusing specifically on innovation and performance. Titled "The Impact of Principals' Transformational Leadership on Innovation and Performance among Faculty in Higher Educational Institutions in Bengaluru, India," the study aims to explore how effective leadership can enhance faculty members' professional lives and outcomes.

2. REVIEW OF RELATED LITERATURE

This research is grounded in a comprehensive review of existing literature, particularly focusing on transformational leadership, knowledge sharing, and organizational learning. The study centers around three pivotal variables: Transformational Leadership, Innovation, and Performance. Transformational Leadership encompasses idealized influence and inspirational motivation, compelling employees to exceed expectations and prioritize organizational

success. Innovation is characterized by novel and creative approaches to tasks, while Performance is evaluated based on the attainment of desired outcomes. These variables collectively form the framework through which the study examines their interrelationships and impacts within organizational contexts.

2.1. Transformational Leadership

Transformational leadership is a leadership approach designed to inspire and motivate employees. This style emphasizes establishing a clear organizational vision and inspiring workers to strive towards achieving this vision. It involves building strong relationships with employees, understanding their needs, and empowering them to reach their full potential. Research by Fitzgerald and Schutte (2010) highlights that transformational leadership can lead to positive organizational outcomes by fostering employee engagement and commitment to the organization's goals. This leadership style is characterized by charismatic leadership, inspirational motivation, intellectual stimulation, and individualized consideration (Bass, 1985).

2.2 Innovation

Innovation within an organization involves translating new ideas into actionable outcomes (Mumford et al., 2002, as cited in Khalili, 2016). The innovative work behavior of employees entails generating and implementing novel and beneficial concepts to achieve improved outcomes, services, or methods of operation (Afsar et al., 2014). A firm's innovativeness is defined by its capacity to introduce new products or services to the market, explore new markets, and integrate strategic orientation with innovative processes and behaviors (Durmusoglu et al., 2018). According to Afsar et al. (2019), innovative work behavior refers to an individual's ability to generate unique and potentially valuable ideas, as well as effectively implementing these ideas in practice (Birdi et al., 2016, as cited in Afsar et al., 2019).

2.3 Performance

Job performance encompasses observable, quantifiable, and multidimensional behaviors that employees demonstrate within a defined period in an organization (Masa'deh et al., 2016). Chu and Lai (2011) describe job performance as the actions and outcomes produced by employees in an organization, often evaluated based on their productivity and effectiveness in achieving organizational objectives (Campbell, 1983, as cited in Chu & Lai, 2011). Alrowwad et al. (2020) define organizational performance as the collective output of all activities undertaken by the organization. Job performance, as a construct, refers to an individual worker's competence in understanding, fulfilling, and achieving the duties, responsibilities, and goals assigned to them (June & Mahmood, 2011).

2.4 Relationship between the Variables and Research Hypotheses

2.4.1 Transformational Leadership and Innovation

Transformational leadership is said to be a driving force for innovation within the organizations (Al-edenat, 2018). In the words of Al-edenat (2018), transformational leaders can inspire the employees to work to achieve the vision of the organisation, which will produce vivid

imagination about the preferred level of work and the objectives to be reached. This vision enables the employees to look for ways to carry out the tasks in an ideal and innovative style and increases the prospect for more innovative behaviors. Some researches indicate that the transformational leadership style may be a crucial element in enhancing an organization's learning skills, which further improves the organization's ability to innovate (Arag on-Corra et al., 2007, as cited in Durmusoglu et al., 2018). MacKenzie et al. (2001, as cited in Durmusoglu et al., 2018) observed that transformational leaders look for follower's involvement by emphasizing the significance of collaboration in executing shared jobs and offering chances to learn from collective experience which in turn creates a work atmosphere where workers sense that they have the power to look for innovative methods to do their jobs without facing oppositions from outside. Parker and Wu (2014, as cited in, Durmusoglu et al., 2018) recommend that leaders can impact followers' imaginative skills and innovative work behavior by way of improving their motivation. To stay feasible and viable in the modern sudden changing and extremely competitive business situation, organisations should give importance to creativity and innovation (Khalili, 2016). Transformational leaders are vibrant and positive and have the skills to lead themselves as well as their followers to accept changes (Ahangar, 2009, as cited in Khalili, 2016).

H1: There is direct and significant relationship between transformational leadership and innovation

2.4.2 Transformational Leadership and Performance

Burke et al.(2006, as cited in Rao and Abdul, 2015) in an empirical study conducted in UAE found that team processes affected by transformational leadership can influence the accomplishment which in turn affects the triumph of the team and organisation. The research ultimately pointed out that transformational leadership has an obvious constructive connection with the output that a group or team produces, which suggests that organizations with dedicated leaders perform well. Wang et al. (2011, as cited in Chammas & Hernandez, 2019) speaks about a major connection between governance and the employee's performance. For a long time, transformational leadership has been thought of as a significant element for organisations to attain improved output (Chammas & Hernandez, 2019).

The research by Zach and Baldegger (2017, as cited in Chammas & Hernandez, 2019) confirms the observations of the previous studies that transformational leadership causes a considerable constructive influence on performance. A study by Yang et al., (2012, as cited in Indrayanto et al., 2014) regarding the para-police performance in Indonesia brought up the result that a leader's skill is an important component in affecting employees' performance. According to Wang et al. (2005, as cited in Indrayanto et al., 2014), the link between transformational leadership and employee performance is dependent on how an employee identifies oneself as a part of a team, group and ultimately an organisation with pride and are determined to provide extra contributions to the organisation. Transformational leaders can enhance employee satisfaction and self-belief by demonstrating their faith and confidence in the ability of the follower to accomplish the task in the best possible way as required and to acknowledge the follower's performance (Indrayanto et al., 2014).

A research in Jordan on the relationships among transformational leadership, transactional leadership, knowledge sharing, job performance, and firm performance pointed out that transformational leadership is costructively correlated to job performance of the employees. (Masa'deh et al., 2016). Wang et al. (2011, as cited in Chammas & Hernandez, 2019) tells that transformational leadership has been thought of as a significant component for organisations to attain better levels of output. In their research Rao and Abdul (2015) examined the positive effect of transformational leadership both on the team and the performance of every employee. They drew the conclusion that team processes are affected by transformational leadership which in turn has an impact on team success and performance (Rao & Abdul, 2015). All these researches of the past show that transformational leadership has an immediate constructive association with performance, which suggests that organizations possessing transformational leaders do better.

H2: There is direct and significant relationship between transformational leadership and performance.

2.4.3 Innovation and Performance

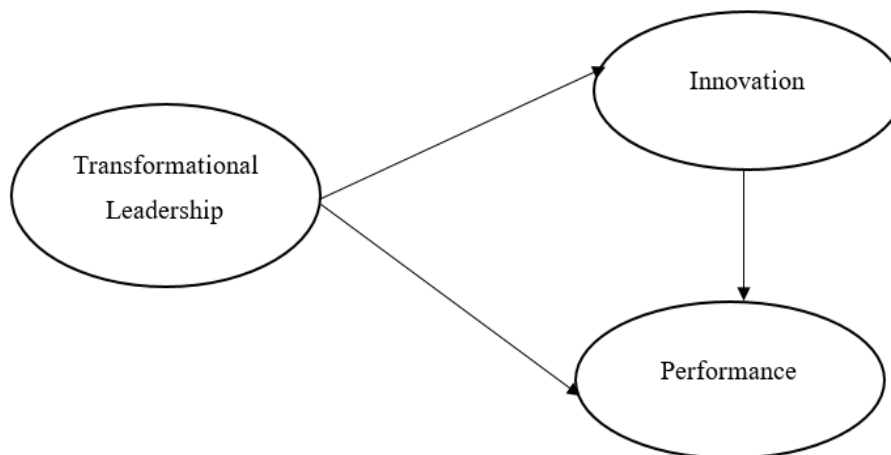
Innovation significantly influences the existence, competitiveness, and development of organizations. Innovation also has the ability to create financial value for the organization, which consequently increases their profits and enhances and improves their performance (Mart'inez-P'erez et al., 2016, as cited in Alrowwad et al., 2020). It was found that process innovation generates greater influence on conflict settlement among workers and product innovation looks to bring about a greater bearing on the performance of an organisation. Therefore, it is a proven fact that there is a correlation between innovation and performance (Green and Cluley, 2014, as cited in Alrowwad et al., 2020).

According to (Rofiaty, 2019) The capability of business innovation may influence business performance. Based on the justifications of previous researches Rofiaty (2019) proposed that innovation significantly affects organizational performance. It was noticed in the research that the capability of company invention can have an influence on the organisation's performance. According to Asif et al. (2019) past studies disclose that organizational innovation substantially supports organizational performance and it can be a help for an organization to obtain a competitive advantage. Thus, theory suggests that organizational innovation is an important factor that can affect organizational performance. Therefore, an organization that focuses on innovation achieves success in various facets of organizational performance, such as improved products or services, happy customers, expense reduction, competitive advantage, improved revenues, enhanced market share, etc., (Asif et al., 2019). Thus, it is evident that promoting a culture of innovation in an organization will strengthen its performance.

H3: There is direct and significant relationship between innovation and performance.

2.5 Research Framework

Based on the hypotheses formed in accordance with the above literature review of the previous studies the following conceptual framework is formed for the present research.



3. RESEARCH METHOD

This research adopts the survey method for data collection and employs quantitative research methods, complemented by statistical tools for rigorous data analysis. The survey involves selecting a substantial sample size from a defined population and gathering structured data through a questionnaire. Through the analysis of this sample, the researcher aims to make inferences about the broader population (Kelley, 2003). The survey questionnaire was distributed among 505 faculty members across ten higher educational institutions in Bengaluru, India. Quantitative research is chosen for its ability to efficiently establish relationships between variables. It offers advantages such as speed and minimal on-site time requirements during survey administration. Additionally, the numerical nature of quantitative data facilitates straightforward comparisons between different organizations or groups (Yauch and Steudel, 2003, as cited in Choy, 2014). To ensure the validity and reliability of the survey instrument, content validity was assessed using Item Objective Congruence (IOC), while reliability was evaluated through a pilot test employing Cronbach's Alpha. Subsequently, the collected data underwent quantitative analysis techniques, including confirmatory factor analysis and structural equation modeling. These methods were employed to test the formulated hypotheses and assess the fit of the statistical models used in the study.

3.1 Respondents and Sampling Procedure

3.1.1 Target Population

This study explores the influence of transformational leadership exhibited by principals on faculty members within higher educational institutions in Bengaluru, India. The research specifically targets faculty members employed across these institutions in Bengaluru. Transformational leadership, characterized by its ability to inspire and motivate through a shared vision and individualized support, is examined for its effects on faculty members' professional development, job satisfaction, and overall organizational outcomes within the context of higher education in Bengaluru.

3.1.2 Sampling Units

This study focuses on ten prominent higher educational institutions in Bengaluru, India, which serve as the accessible population. These institutions vary in their faculty sizes and are categorized into three types: large, medium-sized, and small institutions based on the number of faculty members they employ. Specifically, large institutions have more than 300 faculty members, medium-sized institutions have between 245 and 300 faculty members, and small institutions have fewer than 245 faculty members. For this research, three large institutions, four medium-sized institutions, and three small institutions were selected as sampling units.

3.2 Collection of Data and Data Collection Technique

This research utilizes a blend of secondary and primary data sources. Secondary data is gathered by systematically searching databases for existing literature using specific keywords relevant to the study's focus. Primary data collection involves a survey method employing a pre-designed questionnaire. This questionnaire was distributed among selected respondents from the total population identified for this research. The researcher identified ten higher educational institutions in Bengaluru, India, categorized as large, medium-sized, and small based on the number of faculty members they employ. The questionnaire was administered electronically using Google Forms, after obtaining consent from the respondents through prior telephone communication.

3.3 Variables, Scale Items, and Measurement Scale:

Three key constructs were assessed in this study: Transformational Leadership, Innovation, and Performance. These constructs were evaluated using Likert scales, which allow respondents to indicate their level of agreement on a scale ranging from Strongly Agree to Strongly Disagree. Each item's mean score was calculated to gauge the respondents' perceptions and attitudes towards these constructs accurately. The Likert scale, with its 5-level agreement format, provided a structured method to measure and analyze the data comprehensively.

3.3.1 Transformational Leadership:

My principal articulates a compelling vision for the future of the faculty, painting a clear picture of what lies ahead.

My principal demonstrates a deep understanding of our current position and direction.

My principal actively seeks out new opportunities to enhance the college's growth and success.

My principal inspires others with ambitious plans and visions for the future.

My principal effectively motivates the faculty to commit to and support his/her vision.

My principal leads through action, setting an example rather than relying solely on verbal instruction.

My principal serves as a positive role model that faculty members look up to.

My principal encourages collaboration and teamwork among different departments within the institution.

My principal fosters a unified team spirit and attitude among all faculty members.

My principal provides clear expectations and guidelines for faculty members.

My principal consistently expects and encourages high performance standards.

My principal consistently pushes for excellence and does not settle for anything less than the best.

3.3.2 Innovation

My principal actively fosters an innovative culture within our college, significantly enhancing job satisfaction among faculty members.

My principal actively supports and encourages the adoption of new teaching and evaluation methods.

My principal actively seeks new avenues for admissions to broaden our institution's reach.

My principal possesses the ability to introduce innovations that render existing courses, programs, and methods obsolete.

My principal has the capability to introduce innovations that fundamentally transform current courses, programs, and teaching methods.

My principal encourages faculty to develop creative solutions for challenging issues.

My principal actively explores new working methods, techniques, or tools to improve institutional practices.

My principal motivates faculty members to generate original solutions to problems.

My principal encourages faculty members to translate new ideas into practical applications.

My principal supports faculty members in systematically integrating new ideas into the work environment.

My principal assesses the effectiveness and practicality of new ideas proposed by faculty members.

3.3.3 Performance

My principal motivates faculty members to consistently meet deadlines for assigned tasks.

My principal actively supports faculty members in fulfilling their duties effectively.

My principal provides clear guidance on faculty responsibilities outlined in their job descriptions.

My principal advocates for faculty engagement in activities that directly impact their performance.

My principal emphasizes the importance of punctuality among faculty members for work, meetings, and training sessions.

My principal encourages faculty members to adapt targets, activities, and priorities efficiently in response to changing circumstances.

4. ANALYSIS AND INTERPRETATIONS

Descriptive statistics were utilized to assess the factors affecting respondents' views on transformational leadership. The standard deviations for all measurement items fell within a range of 0.94 to 0.98, suggesting minimal variation in responses. Mean values for the observed variables ranged from 3.75 to 3.84, indicating the average ratings provided by the participants. The table below, referred to in the analysis, offers additional information about the mean values and their significance in assessing each item to gain a more comprehensive understanding of each component.

Table 4.1: Table Displaying the Descriptive Statistics of Various Constructs under Study

Constructs	Items	Mean	Std. Deviation	Result
Transformational Leadership	TL_1	3.61	1.1	Agree
	TL_2	3.7	1.04	Agree
	TL_3	3.9	0.99	Agree
	TL_4	3.79	1.03	Agree
	TL_5	3.77	0.95	Agree
	TL_6	3.8	0.95	Agree
	TL_7	3.81	0.9	Agree
	TL_8	3.75	0.9	Agree
	TL_9	3.74	0.98	Agree
	TL_10	3.78	0.93	Agree
	TL_11	3.77	0.89	Agree
	TL_12	3.67	0.91	Agree
	TL	3.756	0.96	Agree
Innovation	Inn_1	3.62	0.97	Agree
	Inn_2	3.96	0.96	Agree
	Inn_3	3.95	0.94	Agree
	Inn_4	3.8	0.99	Agree
	Inn_5	3.86	1	Agree
	Inn_6	3.73	0.99	Agree
	Inn_7	3.8	0.93	Agree
	Inn_8	3.89	0.87	Agree
	Inn_9	3.88	0.94	Agree
	Inn_10	3.91	0.91	Agree
	Inn_11	3.9	0.92	Agree
	Inn_12	3.86	0.97	Agree
	Inn	3.846	0.94	Agree
Performance	Per_1	3.69	1.11	Agree
	Per_2	3.84	0.83	Agree
	Per_3	3.74	0.95	Agree
	Per_4	3.72	0.91	Agree
	Per_5	3.97	0.92	Agree
	Per_6	3.8	0.92	Agree
	Perf	3.793	0.94	Agree

The data analysis reveals that for all the construct under study the mean values for each item and the standard deviations for each item ranged within the permissive limits. This suggests that there is a general consensus among the respondents, with their responses falling within the "Agree" category.

4.1. Analysis of the Proposed Model in the Study Using Structural Equation Modelling

The study estimated the normality of data from 505 survey participants using skewness and kurtosis as measures. Values close to zero for both statistics reveal a distribution to that of a normal distribution. This tells that data is suitable for further statistical tests. Hence, it was found that the study ensures that the data is well-suited for further statistical analyses. The Confirmatory Factor Analysis (CFA) results demonstrated that the model reveals an excellent fit across many indicators. Especially, the CMIN/DF indicated a good fit, while the Goodness of Fit Index (GFI) and Adjusted Goodness of Fit Index (AGFI) both suggested satisfactory output with the data. Further, the Normed Fit Index (NFI) showed a superior fit, and both the CFI and TLI highlighted the model's adequacy and fit, respectively. The RMSEA, which measures the error of approximation, was found to be within acceptable bounds. These findings confirm that the model is in conformity with the empirical data.

4.2. Outer model/Measurement model

Table 4.2: Table displaying the outer model

	Innovation	Job performance	Transformational Leadership
Inn_1	0.751		
Inn_10	0.835		
Inn_11	0.813		
Inn_12	0.829		
Inn_2	0.806		
Inn_3	0.771		
Inn_4	0.748		
Inn_5	0.727		
Inn_6	0.751		
Inn_7	0.803		
Inn_8	0.810		
Inn_9	0.771		
Job_per_1		0.800	
Job_per_2		0.834	
Job_per_3		0.837	
Job_per_4		0.749	
Job_per_5		0.785	
Job_per_6		0.813	
TL_10			0.795
TL_11			0.785
TL_12			0.751
TL_2			0.777
TL_3			0.759
TL_4			0.829
TL_5			0.815
TL_6			0.788
TL_7			0.827
TL_8			0.789
TL_9			0.799
TL_1			0.731

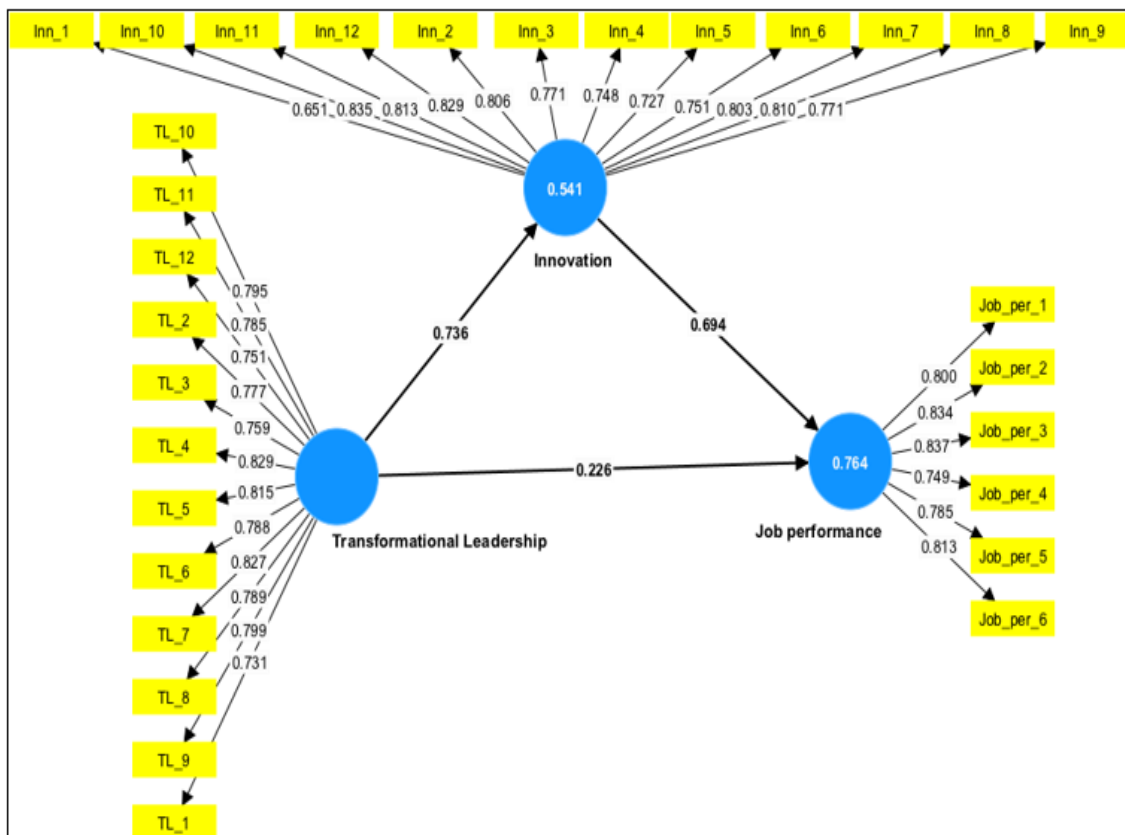


Fig 4.1: Outer Model/Measurement model

Table 4.3: Construct reliability and validity

	Cronbach's alpha	Composite reliability	Average variance extracted (AVE)
Innovation	0.940	0.941	0.605
Job performance	0.890	0.893	0.646
Transformational Leadership	0.944	0.945	0.620

Table 4.4: Fornell-Larcker criterion: Discriminant validity

	Innovation	Job performance	Transformational Leadership
Innovation	0.781		
Job performance	0.752	0.806	
Transformational Leadership	0.733	0.734	0.787

Table 4.5: R square values

	R-square	R-square adjusted
Innovation	0.541	0.540
Job performance	0.764	0.763

Structural Model

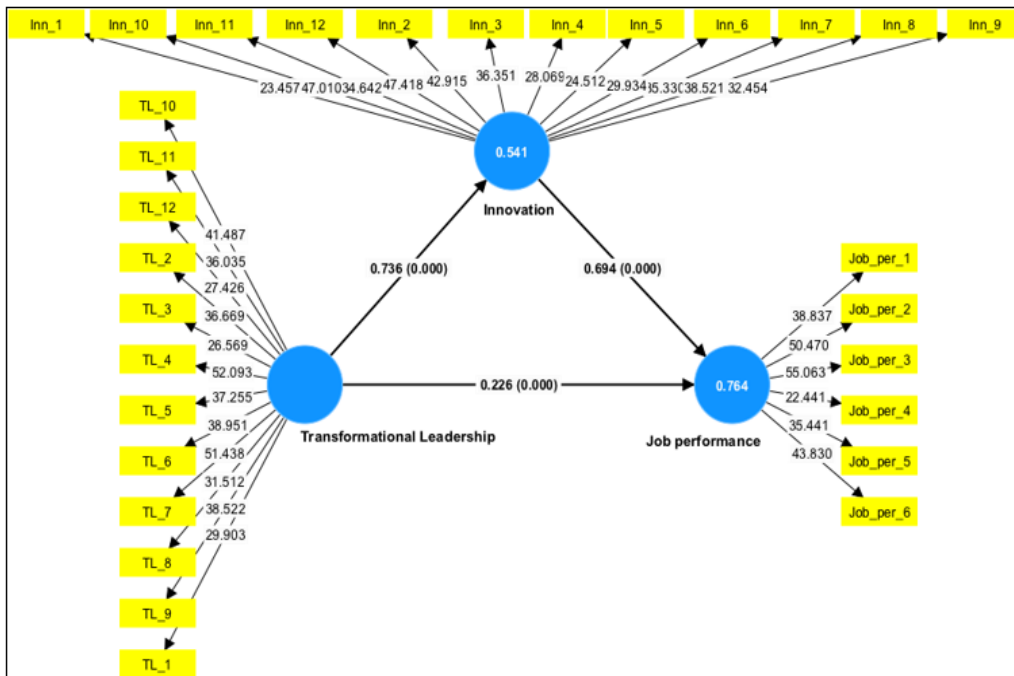


Fig 4.2: Bootstrapping results

Table 4.6: Path coefficient Values: Mean, STDEV, T values, p values

Direct effect of innovation, transformational leadership and on job performance.

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ((O/STDEV))	P values
Innovation -> Job performance	0.694	0.694	0.032	21.750	0.000**
Transformational Leadership -> Innovation	0.736	0.737	0.030	24.605	0.000**
Transformational Leadership -> Job performance	0.226	0.226	0.034	6.629	0.000**

**P<0.01, Significant

Specific indirect effect

Table 4.7: Mediating role of innovation between TL and JP

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ((O/STDEV))	P values
Transformational Leadership -> Innovation -> Job performance	0.510	0.511	0.029	17.403	0.000**

**P<0.01, Significant

5. TESTING OF HYPOTHESIS

Table 4.8: Table Displaying Hypotheses Testing Result of the Structural Model

Hypothesis	path coefficient (β)	t-value	p value	Testing result
H ₀ 1: There is direct significant relationship between transformational leadership and innovation.	0.20	4.56	0.00*	Supported
H ₀ 2: There is direct significant relationship between transformational leadership and performance.	0.23	6.76	0.00*	Supported
H ₀ 3: There is direct significant relationship between innovation and performance.	0.69	22.07	0.00*	Supported

Note: *= p -value<0.05

1. H₀: There is no direct significant relationship between transformational leadership and innovation.

H₁: There is direct significant relationship between transformational leadership and innovation.

The first hypothesis proposed in the study was to examine whether there is a direct and significant relationship between transformational leadership and innovation. The bootstrapping results were used once again to make statistical interpretations. The figures in the table above makes it clear for us that the t value is 4.56 and p value is 0.00. These figures indicate that the t value is greater than 1.96 and p value is less than 0.01, which also confirms that there is direct significant relationship between transformational leadership and innovation. Based on this result we accept the hypothesis H₁ as true.

2. H₀: There is no direct significant relationship between transformational leadership and performance.

H₁: There is direct significant relationship between transformational leadership and performance.

Next hypothesis proposed in the study was to determine the direct significant relationship between transformational leadership and performance. The bootstrapping results were considered to make statistical interpretations. From the above table we can understand that the t value was found to be 6.76 and p value was found to be 0.00. These figures indicate that the t value is greater than 1.96 and p value is less than 0.01. Since the p value is less than 0.01, the relationship is significant at 1% level of significance. Hence, we can infer that there is direct significant relationship between transformational leadership and performance.

3. H₀: There is no direct significant relationship between innovation and performance.

H₁: There is direct significant relationship between innovation and performance.

The third hypothesis proposed in the study was to determine the direct significant relationship between innovation and performance. The bootstrapping results were considered to make

statistical interpretations. From the above table we can understand that the t value was found to be 22.07 and p value was found to be 0.00. These figures indicate that the t value is greater than 1.96 and p value is less than 0.01. Since the p value is less than 0.01, the relationship is significant at 1% level of significance. Hence, we can infer that there is direct significant relationship between innovation and performance.

6. SUGGESTIONS AND RECOMMENDATIONS

As seen from the relationship between transformational leadership and innovation, leaders in educational settings can promote a culture of innovation. This can manifest in various ways, from innovative teaching methods and curricula. Transformational leaders can drive performance in educational institutions by setting clear goals, providing the necessary resources, and by recognizing and rewarding outstanding performance. This can lead to institutions consistently delivering high-quality education.

7. CONCLUSION

This study explores the profound impact of transformational leadership on innovation and performance within the faculty of higher educational institutions in Bengaluru, India. Principals who exhibit transformational leadership qualities create an inspiring environment that boosts faculty morale, stimulates innovation, and enhances overall performance. The findings underscore the importance of providing leadership training, particularly in transformational leadership, to educational leaders in Bengaluru. This research offers valuable insights for educational institutions aiming to cultivate a culture conducive to innovation and performance improvement among their faculty members.

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