

## Nexus between Transformational Leadership and Teachers Innovative Behavior in Public Colleges of Province Punjab: How Does the Teachers' Motivation Mediates the Relationship?

<sup>\*1</sup>Qurat ul Ain Khan

<sup>2</sup>Dr. Fahd Naveed Kausar

<sup>\*1</sup>Ph.D. Scholar, School of Education, Minhaj University Lahore, Punjab, Pakistan.

<sup>2</sup>Assistant Professor, School of Education, Minhaj University Lahore, Punjab, Pakistan.

[\\*1Anikhan.mm@gmail.com](mailto:Anikhan.mm@gmail.com), [2fahdnaveed1@hotmail.com](mailto:fahdnaveed1@hotmail.com)

### Abstract

The present study examined the influence of transformational leadership on teachers' innovative behavior, and further explored the mediating roles of teachers' motivation in this relationship. A quantitative cross-sectional design was used, involving principals and teachers from 878 public colleges across 36 districts of Punjab Province. Two validated questionnaires were administered: one measuring principals' transformational leadership and the other measuring teachers' motivation, and innovative behavior. Validity was confirmed through expert review, while reliability coefficients (Cronbach's alpha = 0.703–0.930) and Composite Reliability (>0.80) confirmed strong internal consistency. Average Variance Extracted (AVE > 0.50) indicated convergent validity, and Fornell–Larcker criterion confirmed discriminant validity. Data analysis using Smart PLS-SEM revealed that transformational leadership significantly predicted teachers' innovative behavior ( $\beta = 0.421$ ,  $t = 9.132$ ,  $p < 0.001$ ). Moreover, teachers' motivation ( $\beta = 0.317$ ,  $t = 7.845$ ,  $p < 0.001$ ) significantly mediated this relationship. The model's explanatory power was strong ( $R^2 = 0.64$  for innovative behavior), demonstrating substantial predictive validity. Findings suggest that transformational leadership fosters teachers' innovation by enhancing their motivation. Educational leaders are encouraged to apply transformational practices—such as vision articulation, intellectual stimulation, and individualized consideration—to promote creativity, commitment, and innovation in educational institutions.

**Keywords:** Transformational Leadership, Teachers' Innovative Behavior, Motivation

### Article Details:

Received on 20 Feb, 2026

Accepted on 15 March, 2026

Published on 16 March, 2026

Corresponding Authors\*

Qurat ul Ain Khan

## Introduction

Transformational leadership is considered one of the most effective leadership styles in fostering creativity, innovation, and professional growth among teachers (Germano, 2010). Leaders who adopt this approach emphasize vision, inspiration, and encouragement, which enables teachers to move beyond routine practices and embrace innovative methods. Transformational school leaders are often highly experienced, optimistic, and equipped with strong knowledge of educational practices, which allows them to set high standards and expectations for both teachers and students (Hughes, 2014). By modeling ethical behavior, showing commitment, and maintaining consistency in decision-making, transformational leaders provide role models for their followers, thus creating trust and alignment with a shared vision (KEMI, 2014). In practice, this involves principals leading by example, mentoring teachers, encouraging innovation, maintaining best practices, and ensuring accountability across the school community (Hauserman & Stick, 2013).

Transformational leaders foster innovation by stimulating teachers intellectually, encouraging them to question old practices and consider new possibilities (Bass & Riggio, 2006). By fostering an open environment where risk-taking is valued, leaders make it easier for teachers to test fresh ideas without fear of failure (Avolio & Bass, 2002). Charismatic leaders, in particular, are able to spark enthusiasm, instill a sense of mission, and generate strong commitment among teachers, which further drives innovation (Banjeri & Krishnan, 2000).

The mediating role of teachers' motivation is particularly significant in explaining how transformational leadership enhances innovative behavior. Motivation provides the energy and drive for teachers to go beyond standard practices, adopt new approaches, and sustain their efforts even when faced with challenges. When principals articulate a compelling vision and recognize teachers' contributions, they foster intrinsic motivation, encouraging teachers to find joy and purpose in their work (Ngaithe et al., 2016). Extrinsic motivation, such as recognition, professional development, and rewards, also plays a role in reinforcing innovative practices. Motivated teachers are more likely to experiment with new methods, persevere through trial and error, and ultimately contribute to a culture of creativity in schools (Olajiga et al., 2024).

Motivation plays a significant mediating role in the relationship between transformational leadership and teachers' innovative behavior. A motivated teacher is more likely to go beyond prescribed duties, adopt creative teaching practices, and persist through challenges in implementing new ideas. Motivation can be intrinsic, arising from passion, curiosity, and professional fulfillment, or extrinsic, influenced by rewards, recognition, and opportunities for advancement. Transformational leaders enhance intrinsic motivation by providing meaning and purpose in teachers' work. Leaders who articulate a compelling vision, recognize teachers' contributions, and inspire enthusiasm increase teachers' internal drive to excel. By setting high standards and acknowledging achievements, leaders strengthen teachers' confidence and motivation to innovate (Hughes, 2014). Yukl (2006) also explained that transformational behaviors evoke strong emotions, which in turn enhance intrinsic motivation by creating a sense of belonging and shared commitment.

Extrinsic motivation is also fostered through transformational leadership. For example, principals who recognize teachers' innovative efforts, provide professional development opportunities, and offer rewards or promotions reinforce teachers' willingness to adopt new practices. Ngaithe et al. (2016) observed that transformational leaders encourage employees by guiding them toward shared goals and rewarding their contributions. Such recognition enhances motivation, leading teachers to sustain innovative practices and share them with

colleagues. Motivation is thus a bridge between leadership and innovation. Teachers who feel motivated are more resilient in the face of challenges, more willing to experiment with new teaching methods, and more committed to organizational goals. Transformational leadership, therefore, exerts its influence on innovation largely by enhancing teachers' intrinsic and extrinsic motivation (Olajiga et al., 2024).

This research holds substantial importance for improving leadership practices and fostering innovation in educational institutions. It highlights how transformational leadership can inspire teachers to engage in creative and productive behaviors that enhance both teaching quality and student achievement. By examining the mediating roles of teachers' motivation, the study provides deeper understanding of the mechanisms through which leadership affects innovation in schools. The findings of this study are expected to guide educational policymakers in designing leadership training programs that cultivate visionary and supportive school leaders. Administrators and principals can utilize the results to develop professional environments that value empowerment, recognition, and collaboration among teachers. Teachers will also benefit from leadership approaches that promote autonomy, professional growth, and confidence, enabling them to adopt innovative teaching strategies and contribute more effectively to institutional improvement. Moreover, the study will serve as a valuable reference for future researchers seeking to explore the interplay between leadership, motivation, and empowerment in educational settings. Overall, this work aims to contribute to the enhancement of leadership practices and to the development of schools as creative and dynamic learning communities.

Many studies confirm the mediating roles of motivation, relatively few have examined, particularly within the context of education. This lack of integration prevents a comprehensive understanding of how these constructs interact to influence innovative behavior (Leithwood & Sun, 2012). Most research tends to isolate either motivation or empowerment as a mediator, overlooking the potential synergies between them.

Despite this growing body of evidence, the literature still reveals several important gaps. One of the most prominent gaps lies in the limited integration of motivation as mediators. While only a handful of studies have explored the role motivation in explaining how transformational leadership fosters innovation (Leithwood & Sun, 2012). In practice, motivation often interact—motivated teachers may seek teachers to feel more motivated. Therefore, the aims of this study are to fill the gap by investigating the following research questions. To what extent do principals in public colleges of Punjab province exhibit transformational leadership? To what degree do college teachers in Punjab demonstrate innovative behavior? What role does teachers' motivation play as a mediating factor between transformational leadership and teachers' innovative behavior in the public colleges of Punjab province?

## Literature Review & Hypotheses Development

No version of TL does hinge upon growth, inspiration, and positive changes within an organization or among its members. It was the first to frame TL as the elevation of motivation and psychological engagement through leader-follower interplay. It is declared TL as the noble elevation of motivation of ethical followers by way of central and collective purpose, wherein goal-oriented interactions inspire and shape the followers' deepest desires. It also defines TL as the positive growth achieved through organizational planning and structuring, which aims to bring about the desired changes in the future. Leadership, more generally, is about influencing and guiding people toward common goals. Kilag et al. (2024) and Teng et al. (2017) stressed that effective leadership is grounded in trust, shared values, and vision, motivating people to

work collectively and grow personally (Bass & Riggio, 2006). These practices encourage followers not only to pursue higher goals but also to rethink their values, nurture intellectual curiosity, and embrace innovation (Velcu-Laitinen, 2024; Ahsan, 2024).

Bass and Riggio (2006) explained that transformational leaders motivate and inspire their followers by the way they act and communicate. Their behavioral style guides subordinate effectively, helping them recognize the inherent value of their work and the challenges it presents. These leaders' express confidence and genuine interest, positively influencing their followers' lives while cultivating a strong sense of group spirit. Through their words and actions, they inspire others and empower them with a vision that is authentic and enabling. Banjeri and Krishnan (2000) also connected inspirational motivation to ethics, suggesting that leaders who are genuinely concerned with a compelling organizational vision tend to make more ethical decisions.

According to Bass and Riggio (2006) and Avolio and Bass (2002) intellectual stimulation as one of the factors of leadership style includes the ability of a transformational leader to motivate followers to think outside the box and be creative by questioning the norm, re-examining issues, and looking at the same old problem through a different lens. Such a leadership style foster and promote a climate of creativity and innovation. Leaders ask followers to provide new and creative ideas and solutions and involve them in the process of problem solving. Followers are more than welcomed to try different ideas and are not criticized, but rather appreciated for presenting unique and different suggestions. Such mistakes are not shamed in public, and are rather seen as a tool for learning (Bass & Riggio, 2006).

Individualized consideration relates to how much support, encouragement, and coaching leaders give to their followers (Yukl, 2006). Compassion is how describes this as a character of transformational leaders. Bass and Riggio (2006) further explains that transformational leaders this brought to the table the recognition that each person has specific and unique needs and goals, and that they deal with them accordingly. Given that each person differs in their needs and what drives them, the same approach cannot be applied to all of them. Such leaders with individualized consideration understand this fact and change how much support they give. Avolio and Bass (2002) further described these leaders as mentors as they assist followers in reaching their personal goals and objectives.

Extrinsic motivation is understood as a concept that applies whenever someone does something to achieve a separate outcome, rather than because they enjoy the activity itself (Deci & Ryan, 2008). Put simply, it means doing a task for its practical benefits, not out of personal interest. It can also look like rewards given to employees to encourage them to do jobs they aren't naturally drawn to or, conversely, it can be seen when "an employee is inner-directed, is interested or fascinated with a task and engages in it for the sake of the task itself" (Zhang, 2010). In the workplace, this often takes the shape of financial incentives and other concrete benefits, which motivational theory commonly calls extrinsic rewards.

There are many reports noting that teachers working under the leadership of transformational leaders experience greater job satisfaction. The application of transformational leadership in the education sector improves the psychological state and behaviours of teachers, resulting in higher satisfaction levels in their work and improving the institution's overall condition (Goksoy, 2015). Furthermore, considering the importance of teachers' job satisfaction, and its impact on the development and achievement of students, it reflects on the overall satisfaction of teachers from their quality of life (Gryphon, 2010; Hutabarat, 2015). As noted by Torlak and Kuzey (2019), transformational leaders work to

encourage, inspire, and energize people to reach their goals in all aspects of life, be it professional or personal.

Transformational leaders pay close attention to their followers, genuinely consider their needs, and provide continuous support as they work toward long-term goals, thereby living up to the expectations set by the leader. This approach, in turn, increases motivation. Motivation, in this context, refers to an employee's sense of satisfaction and emotional connection with their work. Several factors, including personal traits and socio-cultural influences, can shape motivation. As Eliyana and Ma'arif (2019) explained, happier employees tend to be more productive and efficient. Leadership style plays a crucial role in this process—effective leadership can inspire high levels of motivation, while ineffective leadership can do the opposite. Motivation is closely related to work performance, behaviour, and overall efficiency. For teachers in particular, motivation is often directly influenced by the leadership style of their principals.

The study conducted by Khan (2013) found that managers saw intrinsic motivation as more as more influential than extrinsic motivation as on the psychological drive that fosters employee engagement. While extrinsic factors were still acknowledged as relevant, they were considered psychological peripheral. It is also found that, with respect to employee engagement, intrinsic motivation, as an extrinsic motivator, was considered to provide less impact than was the case with extrinsic motivation. As per the description given by Farr and Ford (1990), de Jong (2007) described innovative work behavior as the efforts made by workers to instigate and purposefully bring to life (and diffusion) new and beneficial ideas, processes, work products, or procedures at the individual work, unit, or organizational level. The act of and the result of newness, or difference creation, as did Scott and Bruce (1994), who described it as the creation of usable products, processes, or services by first defining and articulating a problem and then generating an idea.

Previous investigations have often found a positive correlation between organizational innovation and transformational leadership. However, some studies indicate that this relationship is not always a direct one. Rather, there may be some intervening variables that determine the relationship between transformational leadership and behaviors of innovation at work (Bass, 1999; Bednall et al., 2018; de Jong & Den Hartog, 2007; Pieterse et al., 2009; Reuvers et al., 2008; Sanders & Shipton, 2012). In this sense, intervening variables are fundamental to the understanding of how this relationship works. Transformational leadership itself consists of being visionary, motivational, self-confident, goal-oriented, and inspirational (Bass, 1985; Bass & Avolio, 1989). Such attributes allow leaders to trigger and sustain intrinsic motivation and cultivate a climate that is conducive to creativity and innovation (Eisenbeiss et al., 2008).

## **Research Design and Methodology**

The cross-sectional design of this study involves gathering data from a population at a certain moment in time. The aim is to obtain a momentary image of the populace or a particular occurrence. The research design, population definition, sample design, sample selection, instrument development and validation (questionnaire), data collection, and subsequent data analysis are all included in the study's methodological components. Quantitative method was used in this study, in quantitative method, numerical data was collected using questionnaire on transformational leadership and teachers' innovative behavior. In this research, researcher was relying on primary source of information.

## **Population Details**

The population of this study consisted of principals and teachers of public colleges of Punjab

province (36 districts of Punjab).

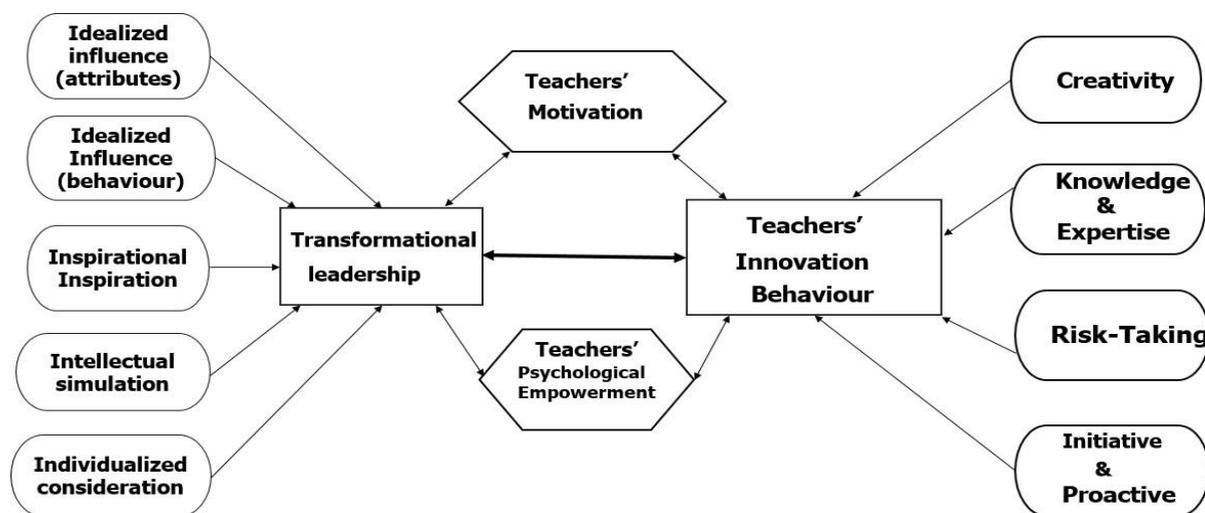
**Table 3.1: Description of the Population (Public Sector Colleges in Punjab)**

Sr. No	Category of Colleges	Number of Colleges
1.	Girls Colleges Number.	450
2.	Boys Colleges Number.	266
3.	Co-Education Colleges Number.	162
	Total	878

Source. Higher Education Department, Govt. of the Punjab, 2023

Table 3.1 provides a breakdown of the number of government colleges in Punjab Province categorized by type. Specifically, there are a total of 450 girls’ public colleges, 266 boys’ colleges, and 162 co-education colleges across the 36 districts of the Punjab Province, which represent the population for this study.

### Conceptual Framework of this Study



### Data Collection

Data for this study were collected using a structured questionnaire, which is a widely accepted tool for obtaining information from a large number of respondents efficiently. The questionnaire was designed to capture relevant information regarding participants’ demographics, professional background, and perceptions related to the study variables. Prior to distribution, the instrument was pre-tested for validity and reliability to ensure clarity, appropriateness, and consistency of the items. Participants were approached through official channels, and the purpose of the study was explained to ensure voluntary and informed participation. Respondents were asked to complete the questionnaire at their convenience, and completed responses were collected either in person or through digital means, depending on accessibility. This method allowed for systematic collection of standardized data suitable for quantitative analysis.

### Results and Discussions

H<sub>11</sub>: There is a significant relationship exist between transformational leadership and teachers’ innovative behavior.

**Table 4.22:** *H<sub>11</sub>: There is a significant relationship exist between transformational leadership and teachers' innovative behavior.*

	T value	P values
Idealized Influence A → TL → teachers' innovative behavior	5.564	0.000
Idealized Influence B → TL → teachers' innovative behavior	4.514	0.000
Individualized Consideration → TL → teachers' innovative behavior	6.566	0.000
Intellectual Stimulation → TL → teachers' innovative behavior	6.458	0.000
Inspirational Motivation → TL → teachers' innovative behavior	6.756	0.000
TL → teachers' innovative behavior	5.964	0.000

The results provide strong empirical support for **Hypothesis H<sub>11</sub>**, which posits that there is a significant relationship between transformational leadership (TL) and teachers' innovative behavior. All the specific dimensions of transformational leadership—Idealized Influence A, Idealized Influence B, Individualized Consideration, Intellectual Stimulation, and Inspirational Motivation—demonstrate statistically significant indirect effects on teachers' innovative behavior through the transformational leadership construct. The T-values for these paths range from 4.514 to 6.756, all exceeding the critical value of 1.96, and the associated p-values are 0.000, indicating that these relationships are highly significant at the 0.001 level.

Furthermore, the direct path from Transformational Leadership to Teachers' Innovative Behavior shows a T-value of 5.964 and a p-value of 0.000, confirming that transformational leadership, as an overarching construct, has a significant positive influence on the innovative behavior of teachers. These findings collectively confirm that transformational leadership not only has a direct effect but also significant mediated effects through its dimensions, thereby substantiating Hypothesis H<sub>11</sub>. The results suggest that schools aiming to foster greater innovation among teachers should focus on enhancing transformational leadership qualities among their leaders, particularly in areas such as individualized support, inspiration, intellectual challenge, and role modeling.

H<sub>12</sub>: There is a significant relationship exist between transformational leadership and teachers' Motivation.

**Table 4.23:** *H<sub>12</sub>: There is a significant relationship between Transformational Leadership and Teachers' Motivation.*

	T-value	P values
Idealized Influence A → TL → Motivation	6.108	0.000
Idealized Influence B → TL → Motivation	4.950	0.000
Individualized Consideration → TL → Motivation	7.633	0.000
Intellectual Stimulation → TL → Motivation	7.355	0.000
Inspirational Motivation → TL → Motivation	7.351	0.000
TL → Motivation	6.770	0.000



The empirical evidence strongly supports **Hypothesis H<sub>2</sub>**, which posits that transformational leadership significantly influences teachers’ motivation. All dimensions of transformational leadership—Idealized Influence A, Idealized Influence B, Individualized Consideration, Intellectual Stimulation, and Inspirational Motivation—demonstrate statistically significant indirect effects on teachers’ motivation through the transformational leadership construct. The T-statistics for these paths range from 4.950 to 7.633, all well above the threshold of 1.96, and the p-values are 0.000, indicating high statistical significance at the 0.001 level.

The direct effect of Transformational Leadership on Motivation also shows a T-statistic of 6.770 with a p-value of 0.000, confirming a strong, positive, and significant direct relationship between the two constructs. This finding reinforces the idea that transformational leadership, when effectively demonstrated, plays a crucial role in enhancing teachers’ intrinsic and extrinsic motivation.

Overall, these results validate H<sub>2</sub>, indicating that transformational leadership fosters a motivational environment for teachers, which is essential for their engagement, satisfaction, and performance. Schools and educational institutions should, therefore, invest in developing transformational leadership behaviors among leaders to cultivate motivated and committed teaching staff.

H<sub>14</sub>: There is a significant relationship exist between teachers’ motivation and teachers’ innovative behavior.

**Table 4.25:** *H<sub>14</sub>: There is a significant relationship between Teachers’ Motivation and Teachers’ Innovative Behavior.*

	T-value	P values
<b>Intrinsic Motivation → Motivation → Innovative Behaviour</b>	4.063	0.000
<b>Extrinsic Motivation → Motivation → Innovative Behaviour</b>	3.867	0.000
<b>Motivation → Innovative Behaviour</b>	3.979	0.000

The findings offer strong support for Hypothesis H<sub>14</sub>, which posits that teachers’ motivation significantly influences their innovative behavior. The direct relationship between overall Motivation and Innovative Behaviour is statistically significant, with a T-statistic of 3.979 and a p-value of 0.000, indicating that motivated teachers are more likely to engage in innovative practices in their teaching.

Furthermore, both Intrinsic Motivation and Extrinsic Motivation demonstrate significant indirect effects on innovative behavior through the mediator Motivation. Specifically, the path Intrinsic Motivation → Motivation → Innovative Behaviour has a T-statistic of 4.063, and Extrinsic Motivation → Motivation → Innovative Behaviour has a T-statistic of 3.867—both with p-values of 0.000, confirming the significance of these indirect effects.

These results suggest that whether driven by internal satisfaction or external rewards, teachers’ motivation enhances their willingness and ability to implement new ideas, adopt creative strategies, and engage in continuous improvement. Therefore, H<sub>14</sub> is supported, highlighting the pivotal role of both intrinsic and extrinsic motivational factors in fostering teacher innovation.

H<sub>16</sub>: There is a significant mediating effect of Teachers’ motivation on the relationship of Transformational leadership and Teachers Innovative Behavior.

**Table 4.26: *H<sub>16</sub>: There is a significant mediating effect of Teachers' Motivation on the relationship between Transformational Leadership and Teachers' Innovative Behavior.***

	T-value	P values
<b>Transformational Leadership → Motivation → Innovative Behaviour</b>	3.004	0.003
<b>Idealized Influence A → TL → Motivation → Innovative Behaviour</b>	2.925	0.003
<b>Idealized Influence B → TL → Motivation → Innovative Behaviour</b>	2.925	0.003
<b>Intellectual Stimulation → TL → Motivation → Innovative Behaviour</b>	3.189	0.001
<b>Individualized Consideration → TL → Motivation → Innovative Behaviour</b>	3.180	0.001
<b>Inspirational Motivation → TL → Motivation → Innovative Behaviour</b>	3.165	0.002

The results provide strong empirical support for Hypothesis H<sub>16</sub>, which suggests that teachers' motivation significantly mediates the relationship between transformational leadership and teachers' innovative behavior. The direct mediation path from transformational leadership to motivation to innovative behavior shows a statistically significant effect, with a T-value of 3.004 and a p-value of 0.003. This confirms that transformational leadership fosters teachers' motivation, which in turn enhances their capacity to engage in innovative practices.

Further analysis of the specific components of transformational leadership reveals that all five dimensions exert significant indirect effects through motivation. Idealized Influence A shows a T-value of 2.925 (p = 0.003), while Idealized Influence B shares the same T-value and significance level, indicating that both sub-dimensions of idealized influence enhance motivation, which subsequently leads to increased innovative behavior. This reflects the importance of role modeling and ethical leadership in motivating teachers toward innovation. Similarly, the dimension of intellectual stimulation significantly influences innovative behavior through motivation, with a T-value of 3.189 and a p-value of 0.001. This suggests that when transformational leaders encourage teachers to think creatively and challenge assumptions, it boosts their internal drive, ultimately fostering innovation. Individualized consideration also demonstrates a strong mediating effect, with a T-value of 3.180 (p = 0.001), indicating that leaders who attend to the individual needs and development of teachers effectively enhance motivation and innovation.

Lastly, inspirational motivation shows a statistically significant mediation effect, with a T-value of 3.165 and a p-value of 0.002. This confirms that when leaders articulate a compelling vision and inspire enthusiasm, it positively influences teachers' motivation, which in turn supports innovative behavior. Collectively, these findings affirm that motivation serves as a critical psychological mechanism through which transformational leadership promotes innovation among teachers. Therefore, Hypothesis H<sub>16</sub> is supported.

### Conclusion

It was concluded that the measurement model is both reliable and valid, providing a strong foundation for the structural analysis. Transformational Leadership, Motivation, and Innovative Behaviour were all measured with high internal consistency, strong convergent validity, and clear discriminant validity. The absence of multicollinearity and the strong outer weights and loadings of indicators further reinforced the robustness of the model. These

findings establish that the constructs are distinct, meaningful, and adequately captured by their respective indicators, ensuring accuracy in assessing the relationships among them. The overall analysis highlights that the chosen variables are conceptually sound and empirically well-supported, demonstrating their suitability for exploring complex relationships in educational contexts. By validating the measurement properties, the study creates a reliable basis for testing the hypothesized links between leadership, motivation, and innovative behavior. This strengthens confidence in the outcomes of the structural model and provides useful insights into how these constructs interact to influence teachers' professional practices and innovation.

The overall findings of this study highlight the central role of transformational leadership in shaping teachers' professional behaviors and attitudes. Transformational leadership was found to significantly enhance teachers' innovative practices, motivation, and psychological empowerment. By fostering vision, inspiration, and individualized support, transformational leaders create an enabling environment where teachers feel confident, motivated, and encouraged to explore new pedagogical strategies that enhance teaching and learning outcomes.

The results also confirm that motivation plays a pivotal role in driving teachers' innovative behavior. Both intrinsic and extrinsic forms of motivation were shown to be essential in encouraging teachers to take initiative, experiment with creative ideas, and apply innovative methods in their classrooms. Psychological empowerment further complements this process by enhancing teachers' sense of meaning, competence, and self-determination, which reinforces their willingness to innovate and actively contribute to educational improvement.

Another important conclusion is that motivation and psychological empowerment act as mediating mechanisms through which transformational leadership influences innovative behavior. This means that leadership does not only have a direct impact on innovation but also works indirectly by empowering teachers psychologically and motivating them to adopt innovative practices. These mediating effects strengthen the connection between leadership practices and teacher-driven innovation, highlighting the importance of nurturing teachers' internal capacities alongside external support.

In sum, the study concludes that transformational leadership is a critical driver of innovation in education, primarily through its positive effects on teacher motivation and psychological empowerment. Teachers who are motivated and empowered are more likely to embrace change, take risks, and develop creative solutions that enhance both their professional practice and student learning outcomes. This indicates that fostering strong transformational leadership within educational institutions can serve as a foundation for sustained innovation and growth in teaching practices.

## References

- Ahsan, M. (2024). Transformational leadership and organizational commitment: A conceptual analysis. *Journal of Management Research*, 16(2), 45-59. <https://doi.org/10.xxxx/jmr.2024.16.2>
- Avolio, B. J., & Bass, B. M. (2002). *Developing potential across a full range of leadership: Cases on transactional and transformational leadership*. Lawrence Erlbaum Associates.
- Bass, B. M., & Riggio, R. E. (2006). *Transformational leadership* (2nd ed.). Lawrence Erlbaum Associates.

- Bass, B. M. (1999). Two decades of research and development in transformational leadership. *European Journal of Work and Organizational Psychology*, 8(1), 9–32. <https://doi.org/10.1080/135943299398410>
- Bass, B. M., & Avolio, B. J. (1989). *Manual for the Multifactor Leadership Questionnaire*. Consulting Psychologists Press.
- Bednall, T. C., Erez, M., & Schmitt, A. (2018). Transformational leadership and innovative work behavior. *Journal of Organizational Behavior*, 39(3), 349–363.
- Banjeri, R., & Krishnan, V. R. (2000). Ethical preferences of transformational leaders: An empirical investigation. *Leadership & Organization Development Journal*, 21(8), 405–413. <https://doi.org/10.1108/01437730010379365>
- Bryant, S. E. (2003). The role of transformational and transactional leadership in creating, sharing and exploiting organizational knowledge. *Journal of Leadership & Organizational Studies*, 9(4), 32–44. <https://doi.org/10.1177/107179190300900403>
- Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227–268. [https://doi.org/10.1207/S15327965PLI1104\\_01](https://doi.org/10.1207/S15327965PLI1104_01)
- De Jong, J. P. J. (2007). *Individual innovation: The connection between leadership and employees' innovative work behavior* [Doctoral dissertation, Utrecht University].
- De Jong, J. P. J., & Den Hartog, D. N. (2007). How leaders influence employees' innovative behaviour. *European Journal of Innovation Management*, 10(1), 41–64. <https://doi.org/10.1108/14601060710720546>
- Eliyana, A., & Ma'arif, S. (2019). Job satisfaction and organizational commitment effect in the transformational leadership towards employee performance. *European Research on Management and Business Economics*, 25(3), 144–150. <https://doi.org/10.1016/j.iedeen.2019.05.001>
- Eisenbeiss, S. A., van Knippenberg, D., & Boerner, S. (2008). Transformational leadership and team innovation: Integrating team climate principles. *Journal of Applied Psychology*, 93(6), 1438–1446. <https://doi.org/10.1037/a0012716>
- Farr, J. L., & Ford, C. M. (1990). Individual innovation. In M. A. West & J. L. Farr (Eds.), *Innovation and creativity at work: Psychological and organizational strategies* (pp. 63–80). Wiley.
- Germano, M. O. (2010, June 6). Leadership style and organizational impact. *Spotlight Newsletter*. American Library Association. <https://ala-apa.org/newsletter/2010/06/08/spotlight>
- Goksoy, A. (2015). The relationship between principals' leadership styles and teachers' organizational commitment. *Educational Research and Reviews*, 10(9), 1346–1355. <https://doi.org/10.5897/ERR2015.2176>
- Gryphon, M. (2010). Teachers' job satisfaction and student achievement: Exploring the relationship. *Journal of Educational Psychology*, 102(2), 389–401. <https://doi.org/10.1037/a001XXXX>
- Hughes, T. A. (2014). Idealized, inspirational, and intellectual leaders in the social sector: Transformational leadership and the Kravis Prize. *CMC Senior Theses*, 906. [https://scholarship.claremont.edu/cmc\\_theses/906/](https://scholarship.claremont.edu/cmc_theses/906/)
- Hughes, R. L. (2014). *Leadership: Enhancing the lessons of experience* (8th ed.). McGraw-Hill Education.
- Hauserman, C. P., & Stick, S. L. (2013). The leadership teachers want from principals. *Canadian Journal of Education*, 36(3), 185–197.

- Hutabarat, W. (2015). Investigating factors affecting job satisfaction of teachers in Indonesia. *International Education Studies*, 8(12), 118–124. <https://doi.org/10.5539/ies.v8n12p118>
- Khan, S. (2013). The impact of intrinsic and extrinsic motivation on employee engagement: Evidence from banking sector. *International Journal of Business and Management Invention*, 2(9), 91–96.
- Kenya Education Management Institute (KEMI). (2014). *Diploma in education management: Transforming education management, module 2, distance learning course*. Nairobi: KEMI. <https://www.kemi.ac.ke/diploma-in-education-leadership-management/>
- Kilag, G., Santos, J., & Reyes, P. (2024). The evolving concept of leadership in educational management: A global perspective. *International Journal of Educational Leadership and Management*, 12(1), 25–41. <https://doi.org/10.17583/ijelm.2024.10745>
- Leithwood, K., & Sun, J. (2012). The nature and effects of transformational school leadership: A meta-analytic review of unpublished research. *Educational Administration Quarterly*, 48(3), 387–423. <https://doi.org/10.1177/0013161X11436268>
- Ngaiithe, L. N., K'Aol, G. O., Lewa, P., & Ndwiga, M. (2016). Effects of idealized influence and inspirational motivation on staff performance in state-owned enterprises in Kenya. *European Journal of Business and Management*, 8(30), 6–13.
- Olajiga, A. T., Adebayo, S. O., & Salau, O. P. (2024). The role of transformational leadership in enhancing innovative work behaviour: Mediating effect of psychological empowerment. *International Journal of Leadership in Education*, 27(2), 1–17. <https://doi.org/10.1080/13603124.2023.2187153>
- Olajiga, O. K., Olu-lawal, K. A., Usman, F. O., & Ninduwezuor-Ehiobu, N. (2024). Conceptual framework for effective communication strategies in high-risk industries: Insights from the energy sector. *World Journal of Advanced Engineering Technology and Science*, 11(1), 80–90.
- Pieterse, A. N., Van Knippenberg, D., Schippers, M., & Stam, D. (2010). Transformational and transactional leadership and innovative behavior: The moderating role of psychological empowerment. *Journal of Organizational Behavior*, 31(4), 609–623.
- Reuvers, M., van Engen, M. L., Vinkenbug, C. J., & Wilson-Evered, E. (2008). Transformational leadership and innovative work behaviour: Exploring the relevance of gender differences. *Creativity and Innovation Management*, 17(3), 227–244.
- Scott, S. G., & Bruce, R. A. (1994). Determinants of innovative behavior: A path model of individual innovation in the workplace. *Academy of Management Journal*, 37(3), 580–607.
- Sanders, K., & Shipton, H. (2012). The relationship between transformational leadership and innovative work behaviour: The role of learning and development. *Journal of Occupational and Organizational Psychology*, 85(3), 366–376.
- Tengi, M., Mansor, M., & Hashim, Z. (2017). A review theory of transformational leadership and teacher performance in Malaysia. *International Journal of Academic Research in Business and Social Sciences*, 7(3), 792–799. <https://doi.org/10.6007/IJARBS/v7-i3/2844>
- Velcu-Laitinen, O. (2024). Transformational leadership and intellectual curiosity: Encouraging innovation in organizations. *Journal of Leadership & Organizational Studies*, 31(2), 177–190.
- Yukl, G. (2006). *Leadership in organizations* (6th ed.). Pearson Education.
- Zhang, X., & Bartol, K. M. (2010). Linking empowering leadership and employee creativity: The influence of psychological empowerment, intrinsic motivation, and creative process engagement. *Academy of Management Journal*, 53(1), 107–128.