PETRA IJBS VOL. 7, NO. 2, DECEMBER 2024: 201-210 DOI: https://doi.org/10.9744/petraijbs.7.2.201-210
E-ISSN 2621-6426

The Influence of Idealized Influence, Inspirational Motivation, Intellectual Stimulation and Individualized Consideration on Teaching Behavior Mediated by Entrepreneurial Behavior

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Abstract

The COVID-19 pandemic has highlighted numerous inequities within the education system, underscoring school leaders' need for strategic adjustments to enhance teacher competence for adaptive and effective teaching. This study investigates how transformational leadership influences teachers' instructional and entrepreneurial behaviors in the context of pandemic-era education. A quantitative research approach was employed, utilizing a 44-item questionnaire distributed to teachers to assess principal leadership, entrepreneurial behavior, and instructional practices. Findings indicate that principal leadership does not directly impact teachers' instructional behavior; instead, it influences their entrepreneurial behavior, which mediates the relationship between transformational leadership and instructional behavior. This research provides insights into the role of transformational leadership among school principals at the preschool and elementary levels within the framework of online education during the COVID-19 pandemic. Future studies are encouraged to incorporate a broader range of literature, as transformational leadership holds relevance across various institutional, organizational, and business contexts.

Keywords: Transformational Leadership; Teaching Behavior; Entrepreneurial Behavior; Education.

1. Introduction

The COVID-19 pandemic has introduced unprecedented educational challenges, necessitating rapid adoption of emergency remote teaching (Lily et al., 2020; Hodges, 2020; Salama & Crosbie, 2020). This shift has fundamentally altered traditional education methods (Basak et al., 2016; Hadullo et al., 2017), raising concerns about teachers' preparedness and pedagogical capabilities (Pitroda, 2020; Gopinathan & Ramachandran, 2020).

The rapid transition to distance learning has highlighted the need to assess teachers' competencies in online environments, as few educators were previously trained in remote instructional methods. Teachers are now compelled to adapt quickly, challenging their capacity to maintain effective classroom management and instructional clarity in a virtual format. These competencies are linked to established indicators of effective teaching, including positive impacts on student learning and achievement (Creemers, 1994; Sammons, Hillman, & Mortimore, 1995), critical determinants of student success in educational settings.

Given these demands, school leaders must formulate strategic approaches to enhance teachers' competencies, enabling them to teach adaptively and effectively in the current educational landscape (Rieley, 2020). As Paletta et al. (2017) noted, teachers are central to the flow of information within schools, providing essential input for the learning process. Teachers' responsiveness to these changes and the trust vested in them by school principals require accountability and active engagement in adapting to new challenges.

In Entrepreneurial Competency Education, teachers are vital to sustaining the learning process. The unique challenges of distance learning demand that educators "rebalance" pedagogy to incorporate performance and innovation (Burnard & Putih, 2008). Willingness to take risks is a crucial component of teacher behavior, impacting both pedagogical effectiveness and adaptability (Burnard & White, 2008; Hargreaves, 2003). Entrepreneurial competence, encompassing traits like proactivity and risk-taking, aligns with professional competence, which includes the knowledge, skills, and ability to address student needs, foster collaboration, and build a supportive school environment (Niemi et al., 2016). Franke and Lüthje (2004) emphasize the role of Entrepreneurial Behaviour in enhancing initiative and efficacy in education, underscoring the importance of leadership in fostering these qualities in teachers.

This study seeks to assess the impact of transformational leadership, focusing on its four core dimensions, on teacher behavior within a distance learning framework adapted to pandemic conditions. The research examines how transformational leadership can influence teaching quality and consistency, even under challenging conditions, focusing on entrepreneurial

competencies in educational settings. This research's findings offer academic and practical insights, especially for school leadership, by contributing to developing transformational leadership models in education. Hopefully, this study will further the advancement of education in Indonesia, providing a foundation for evaluating and addressing emerging educational challenges. By enabling schools to continue the teaching and learning process effectively in a remote setting, even amidst a pandemic, progress in the education system can be sustained and adapted to meet evolving needs.

2. Literature Review

2.1. Transformational Leadership

Leadership influences followers to align with and commit to shared objectives, facilitating their understanding of what must be achieved and guiding individual and collective efforts toward organizational goals (Yukl, 2013). This definition aligns with research by Hutahayan and Yufra (2019) and Fernandes and Solimun (2017), which describes leadership as a leader's ability to direct followers' behaviors to accomplish tasks effectively. Both perspectives emphasize the role of a leader in inspiring and guiding followers toward achieving organizational objectives. Paletta et al. (2017) further support this view, stating that leadership can instill confidence in followers, enabling them to contribute meaningfully to the organizational environment and its goals.

Transformational leadership is a style that seeks to inspire and elevate followers by focusing on visionary, long-term objectives and encouraging followers to exceed expectations through motivation and ethical guidance (Northouse, 2019). According to Burns, as cited in Jovanovic and Ciric (2016), ethical and moral components are integral to transformational leadership, underpinning leaders' influence on followers. Bass and Avolio (1994), Bednall et al. (2018), and Stefan et al. (2018) further describe transformational leadership as a process where leaders stimulate innovative work behaviors, inspire followers, and provide direction in the pursuit of the organization's vision. Zuraik and Kelly (2019) elaborate that transformational leaders move employees beyond individual interests, fostering alignment with organizational goals. Morales et al. (2008) add that transformational leaders are expected to coach followers, listen attentively, communicate transparently, and recognize contributions, thus strengthening follower commitment.

Bass and Avolio (1990) identified four primary dimensions of transformational leadership: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. According to Bass and Avolio in Northouse, 2019, idealized influence involves leaders serving as role models, inspiring followers to emulate their values and actions, while inspirational motivation is characterized by leaders communicating a compelling vision that motivates and engages followers. Additionally, the two transformational leadership scholars explain that intellectual stimulation refers to leaders encouraging innovative thinking and creative problem-solving, and individualized consideration emphasizes the importance of leaders providing personalized attention and mentorship, dedicating time to support the development of each follower.

2.2. Transformational Leadership in Education

In educational settings, transformational leadership among school principals is instrumental in articulating the school's mission, providing professional development, and managing community relations to foster a culture of professional learning and innovation (Moolenaar et al., 2010). By building organizational capacity, transformational leaders in school principals, teachers, and stakeholders are better positioned to impact students positively learning outcomes.

Transformational leadership characteristics in school principals focus on school growth and improvement (Hallinger, 2003; Leithwood & Sun, 2012). This leadership style is ideal for fostering a dynamic and progressive educational environment. Kouzes (2009) notes that transformational leadership in education involves the capacity to elevate school quality through continuous improvement initiatives. While educational innovation can be complex—sometimes leading to setbacks or stagnation—transformational school principals are expected to create an inspiring environment that motivates all organization members. Through this approach, schools can improve accreditation, overcome challenges, and advance positively, making transformational leadership a key indicator of effective school principalship.

In this study, transformational leadership at school is being researched regarding the headmistress's four dimensions: idealized influence, individualized consideration, inspirational motivation, and intellectual stimulation. A conceptual breakdown is necessary to understand better the aspects of transformational leadership of the head of school and its influence on teaching behavior.

2.3. Teaching Behaviour

Maulana et al. (2017) define teaching behavior as a foundational concept in the learning process whereby teachers actively motivate students within the learning environment to achieve academic success. Key

indicators of effective teaching behavior include a teacher's ability to adapt within the instructional setting, provide additional time outside standard teaching hours, and apply effective learning methodologies.

As proposed by Deci (2009), self-determination theory identifies three essential psychological needs—competence, relatedness, and autonomy—that contribute to effective teaching and learning experiences. Further research by van Dam et al. (2010) suggests that teaching behavior is demonstrated through specific classroom practices, including effective classroom management, establishing a safe learning climate, and providing clear instructional guidance (Harmsen et al., 2018). Expanding on these concepts, Stronge (2007) outlines four domains that characterize high-quality teaching behavior: 1) classroom Management – This involves setting and maintaining standards for student behavior, organizing the classroom environment, fostering a positive classroom climate, and keeping students actively engaged in the learning process, 2) instructional Organization – Effective teachers organize the teaching and learning process by maximizing instructional time, planning and preparing instruction efficiently, and ensuring that new knowledge is clearly conveyed and accessible to students, 3) instructional Implementation – High-quality teaching includes employing diverse instructional strategies, clearly communicating subject knowledge, using effective questioning techniques, and promoting active student engagement and 4) monitoring Student Progress and Potential – This includes tracking students' progress, collecting evidence of student learning, designing assessments that align with instructional objectives, and continually assessing individual student understanding and growth.

Drawing from the theoretical perspectives of these scholars, it can be concluded that teaching behavior encompasses a teacher's ability to effectively explain and organize instructional content, manage the classroom environment, and demonstrate professional behaviors that support learning outcomes both in the classroom and within the broader educational setting. In this study, teaching behavior is hypothesized to be predicted by the four dimensions of transformational leadership. In detail, the hypotheses are as follows: Idealized influence significantly influences teaching behavior, individualized consideration significantly influences teaching behavior, inspirational motivation influences teaching behavior, and intellectual stimulation influences teaching behavior.

2.4. Entrepreneurial Behaviour

According to Gibb (2011), an entrepreneurial teacher is an educator who demonstrates entrepreneurial behaviors in their professional and instructional practices to foster an entrepreneurial learning environment (as cited in Peltonen, 2015). Leffler (2002) expands on this concept, emphasizing that an entrepreneurial teacher seeks to develop an entrepreneurial spirit in their students. Peltonen (2015) further suggests that becoming an entrepreneurial teacher requires competencies across cognitive (thinking), conative (acting), and affective (feeling) domains.

Van Dam (2010) identifies six core entrepreneurial competencies: knowledge, adaptability, confidence, creative thinking, networking, and collaboration. Within educational contexts, teacher entrepreneurial behavior is characterized by innovation (Borasi & Finnigan, 2010; Rherrad, 2008; Eyal & Inbar, 2003; Eyal & Yosef-Hassidim, 2012), risk-taking (Hayat & Amer, 2015; Martin et al., 2018; Neto et al., 2017), autonomy with a positive attitude (Eyal & Inbar, 2003; Oplatka, 2014), and managerial skills (Borasi & Finnigan, 2010; Weber et al., 2013). Regarding innovation and risk-taking, Chand (2014) and Oplatka (2014) elaborate on the significance of entrepreneurial behavior in teaching, especially as it pertains to managerial skills such as managing resources, scheduling lessons, and guiding colleagues (Borasi & Finnigan, 2010; Van Dam et al., 2010; Weber et al., 2013).

Entrepreneurial behavior in teachers is evident in their creativity in delivering instructional content (Martin et al., 2018), utilizing innovative ideas, and enhancing classroom engagement (Hayat & Riaz, 2011). This entrepreneurial approach increases teacher job satisfaction and self-confidence (Pearce et al., 1997; Kuratko et al., 2005; Rae, 2013; Jain & Ali, 2013). Additionally, research indicates that teachers' entrepreneurial behavior can encourage their colleagues to explore new knowledge, promote innovative ideas, and improve overall performance by helping peers identify developmental needs aligned with innovative strategies (Alipour et al., 2011; Howell & Boies, 2004).

In this study, entrepreneurial behavior is hypothesized to mediate between each transformational dimension and the teaching behavior. In other words, the influence of four transformational leadership dimensions toward teaching behavior is mediated by entrepreneurial behavior. The research's theoretical framework can be seen in the following graph.

The theoretical framework outlines four main hypotheses as follows:

H_1a: Idealized influence affects entrepreneurial behavior.

H_1b: Individualized consideration influences entrepreneurial behavior.

H_1c: Inspirational motivation affects entrepreneurial behavior.

H_1d: Intelectual stimulation influences entrepreneurial behavior.
H_2a: Idealized influence affects teaching behavior.
H_2b: Individualized consideration influences teaching behavior.
H_2c: Inspirational motivation affects teaching behavior.
H_2d: Intellectual stimulation influences teaching behavior.
H_3: Entrepreneurial behavior affects teaching behavior.
H_4a: Idealized influence affects teaching behavior through entrepreneurial behavior.
H_4b: Inspirational motivations influence teaching behavior through entrepreneurial behavior.

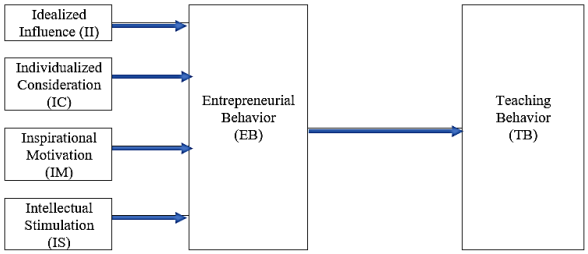

Figure 1. Theoretical framework

3. Methods

This study employs a quantitative approach, systematically collecting and analyzing numerical data (Sekaran & Bougie, 2016). Specifically, this research utilizes a causal research design, aiming to test the influence of one variable on another (Bougie & Sekaran, 2016). Consistent with quantitative methodology, this study draws on a positive (empirical) philosophy and focuses on defined populations or samples, generally selected through random sampling (Sugiyono, 2018).

The population for this study comprises 209 teachers from early childhood education (KB), kindergarten, and primary school (SD) institutions in the Surabaya and Sidoarjo regions, all under the supervision of a single educational foundation. The sample consists of individuals with specific characteristics selected to address the research objectives, enabling the drawing of generalizable conclusions (Sugiyono, 2018).

This study examines three variables: a dependent variable, aimed at understanding and describing the outcomes being measured (Saunders et al., 2016); an independent variable, which potentially affects the dependent variable either positively or negatively; and a moderating variable, which influences the strength or direction of the relationship between the dependent and independent variables. Each variable is further operationalized through specific dimensions.

Data were collected via a questionnaire that asked respondents to rate statements on a Likert scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree), mainly focusing on transformational leadership. The response options on the scale are defined as follows:

1 = StronglyDisagree
2 = Disagree
3 = Neutral
4 = Agree
5 = Strongly Agree

After collection, the data were analyzed descriptively and statistically (Sekaran & Bougie, 2016), considering respondent demographics, including teaching location, length of service, teaching level, and subject specialization. Statistical analysis was conducted using Partial Least Squares (PLS) software, including the Outer and Inner Model. The Outer Model, evaluated with reflective indicators, assesses convergent validity, discriminant validity, composite reliability, and Cronbach's alpha (Ghozali & Latan, 2015). The Inner Model is examined using the R-square and Q-square tests to evaluate model fit and predictive relevance.

Validity testing was conducted on the 209 respondents and consisted of convergent and discriminant validity. Convergent validity is measured at the item level, with items considered valid if their loadings are equal to or greater than 0.5. Convergent validity at the construct level is assessed using the Average Variance Extracted (AVE), with an acceptable AVE threshold of 0.5 or above. Reliability testing, used to measure consistency across questionnaire items, indicates the model's robustness (Ghozali, 2009).

4. Result

4.1. Transformational Leadership Variable Descriptions

The overall mean value for the Transformational Leadership variable is 3.786. Within this variable, the Idealized Influence dimension has a mean of 3.751. Among its four indicators, the highest mean (3.852) is found in indicator II4, which reflects principals' ability to instill pride by inspiring the school's vision. The lowest mean within this dimension (3.645) is found in indicator II1, which represents principals serving as ethical role models.

The Inspirational Motivation dimension has an average mean of 3.836, with the highest mean (4.087) in indicator IM2, indicating that principals consistently remind teachers to maintain high teaching standards. The lowest mean (3.697) in this dimension is in indicator IM1, which measures principals' ability to motivate teachers to achieve the school's vision. For Intellectual Stimulation, the mean is 3.934. The highest mean within this dimension (4.111) appears in indicator IS2, which reflects principals' encouragement for teachers to continue learning. The lowest mean (3.779) is found

in IS1, which represents principals' openness to creative ideas from teachers.

In the Individualized Consideration dimension, the mean is 3.626. The highest mean within this dimension (3.692) is in indicator IC1, which reflects principals' efforts to address teachers' challenges. The lowest mean (3.500) is in IC3, indicating principals' consideration of teachers' aspirations. Among the four dimensions, Intellectual Stimulation has the highest mean (3.934), followed by Inspirational Motivation (3.836), Idealized Influence (3.751), and finally, Individualized Consideration (3.626). These results suggest that principals encourage teachers to engage in innovative thinking and problem-solving.

4.2. Teacher Teaching Behavior Variables

The Classroom Management dimension has an average mean of 3.955. The highest score (3.990) is in indicator MK1, which reflects teachers' ability to create a conducive learning environment. The lowest mean (3.889) is in MK3, which assesses teachers' ability to maintain consistent learning standards. The Organizing the Learning Process dimension is 3.967, with the highest mean (4.043) in indicator MPP4, reflecting teachers' preparation for each lesson. The lowest mean (3.928) is in MPP3, which indicates teachers' ability to design learning activities effectively.

For the Implementing Instruction dimension, the mean is 3.983. The highest mean (4.043) is in MI3, showing teachers' efforts to stimulate student thinking through questioning. The lowest mean (3.880) is in MI1, reflecting teachers' diverse teaching methods.

In the Monitoring Student Progress and Potential dimension, the mean is 3.906. The highest mean (3.986) is found in MKPS3, indicating teachers' ability to assess student progress relative to their abilities. The lowest mean (3.817) is in MKPS1, representing teachers' ability to develop effective assessment systems.

4.3. Entrepreneurial Behavior Mediation Variables

Within the Innovation dimension, the highest mean (4.000) is in indicator INV2, reflecting teachers' proficiency in using digital media for instruction. The average mean for innovation is 3.960, while the lowest mean (3.918) is in INV3, which assesses teachers' capacity to design collaborative, meaningful learning experiences.

The Self-Confidence dimension has a mean of 3.872, with the highest score (3.986) in indicator KD3, representing teachers' ability to evaluate completed lessons. The lowest mean (3.731) is in KD1, indicating teachers' decision-making skills in various situations.

For the Continuing Learning dimension, the mean is 3.944. The highest mean (4.019) is in BB2, representing teachers' motivation to pursue ongoing learning. The lowest mean (3.827) is in BB3, which measures teachers' prioritization of learning.

In the Collaboration dimension, the mean is 4.094. The highest mean (4.202) is in KJS4, indicating respondents' ability to collaborate effectively with students. The lowest mean (3.981) is in KJS1, which reflects respondents' coordination with colleagues to improve teaching methods.

4.4. Outer Model Evaluation

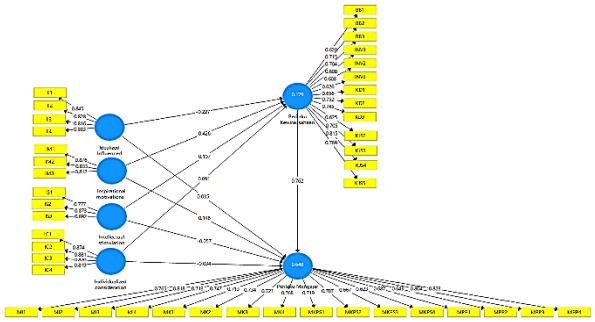

Figure 2. Outer model SmartPLS algorithm results

The Outer Model analysis using the SmartPLS algorithm reveals the loading scores for all indicators based on responses from the study's participants. In Figure 1, indicators with loading scores below the acceptable threshold have been excluded. Expressly, within the entrepreneurial behavior dimension, the KJS1 indicator—which assesses teachers' coordination with colleagues to establish learning methods—was excluded due to its low loading score.

4.5. Convergent Validity – Item Level

Transformational Leadership Variables – Idealized Influence Dimension. The convergent validity test indicates that effective transformational leadership in school principals requires them to exhibit ethical behavior that consistently influences teachers. This ethical behavior should be evident in the principal's professional conduct, daily interactions, and consistent decision-making.

Transformational Leadership Variables – Inspirational Motivation Dimension. According to the convergent validity test, transformational leadership in school principals must include motivational elements that drive teachers toward institutional goals. Principals should also remind teachers to align their teaching practices with students' needs. Effective communication is essential to meeting transformational leadership standards, whereby principals can discuss learning process challenges with teachers and offer guidance.

Transformational Leadership Variables – Intellectual Stimulation Dimension. In the Intellectual Stimulation dimension, the highest loading score is observed in indicator IS3 (0.778), followed by IS2 (0.740), and the lowest in IS1 (0.735). These results suggest that transformational school principals effectively encourage teachers to address challenges proactively, raise questions, and maintain a continuous learning mindset.

Transformational Leadership Variables – Individualized Consideration Dimension. Within the Individualized Consideration dimension, the highest loading score is observed in IC3 (0.847), followed by IC2 (0.840), IC3 (0.694), and the lowest in IC4 (0.693). The high loading scores in IC1 and IC2 indicate that these elements are particularly influential, reflecting principals' attention to individual teacher needs and their ability to support personal development effectively.

4.6. Convergent Validity – Construct Level

Table 1. Average Variance Extracted (AVE) Value

Variable	*Average Variance Extracted* (AVE)
Idealized Influenced	0.711
Individualized consideration	0.721
Inspirational motivations	0.706
Intellectual stimulation	0.720
Entrepreneurial Behaviour	0.540
Teaching Behaviour	0.541

Table 1, with the validity test value with the square Average Variance Extracted (AVE) value, is said to pass the test because each value is above 0.5, so it passes the test.

4.7. Reliability Test

Table 2. Cronbach's Alpha Value, Rho_A, Composite Reliability

Constructs	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Idealized Influenced	0.870	0.908	0.711
Individualized consideration	0.871	0.912	0.721
Inspirational motivations	0.796	0.878	0.706
Intellectual stimulation	0.807	0.885	0.720
Entrepreneurial Behaviour	0.909	0.923	0.540
Teaching Behaviour	0.943	0.949	0.541

The Composite Reliability value of all constructs has passed the test because the value shown exceeds 0.70, which means the research construct is reliable.

4.8. Inner Model Evaluation

4.8.1. R-Square

The R-squared values in Table 5 indicate the extent to which the model explains the variables. For the Entrepreneurial Behavior variable, the R-Square value is 0.179, meaning that 17.9% of the variance in Entrepreneurial Behavior is explained by Transformational Leadership and Teaching Behavior variables, with the remaining 82.1% attributed to factors outside of this study's variables. The R-Square value of the Teaching Behavior variable is 0.648, indicating that Transformational Leadership explains 64.8% of the variance in Teaching Behavior. In comparison, the remaining 35.2% is influenced by external variables not included in this model.

4.8.2. Q-Square

The Q-Square (Q^2) results for the Entrepreneurial Behavior and Teaching Behavior variables are 0.077 and 0.339, respectively. Both values are above 0, indicating that the model has predictive relevance. The overall Q-Square value for the model is 0.46, or 46%, which explains 46% of the information in this study, further supporting its predictive relevance.

5. Discussion

5.1. Hypothesis Testing

5.1.1. Effect of TL (II, IC, IM, IS) on Entrepreneurial Behaviour

The value of the research hypothesis is acceptable if the t-statistic value is > 1.65. The following is the result of testing the hypothesis of this study.

The findings of this study indicate that Transformational Leadership (TL), specifically within the Idealized Influence dimension, has a significant but negative effect on Entrepreneurial Behavior. These results suggest that while principals may lead by example, their approach—especially when emphasizing "safe" policies and strict rules during the pandemic—can inadvertently discourage teachers from adopting entrepreneurial approaches in their teaching practices. Teachers with high respect for their principals may become less inclined to take risks in planning and executing the learning process.

Table 3. Hypotheses testing result

H_1a, H_1b, H_1c, H_1d	Coefficient	P Values	T Statistics	Information
Idealized influence → Entrepreneurial Behaviour (H1a)	-0.227	0.029	2.186	Accepted
Individualized consideration → Entrepreneurial Behaviour (H1b)	0.091	0.449	0.757	Rejected
Inspirational motivations → Entrepreneurial Behaviour (H1c)	0.426	0.000	3.684	Accepted
Intellectual stimulation → Entrepreneurial Behaviour (H1d)	0.107	0.349	0.938	Rejected

This effect can be seen across various aspects of teacher behavior, such as planning and integrating digital media, designing collaborative learning activities, making autonomous decisions, creating and implementing effective lesson plans, evaluating learning outcomes, cultivating curiosity, prioritizing continuous learning, coordinating with colleagues on instructional methods, and fostering collaboration with students, parents, and other educational stakeholders (e.g., the education department, school staff, and the local community). Conversely, the Individualized Consideration dimension of TL did not significantly impact these aspects of Entrepreneurial Behavior among teachers.

The Inspirational Motivation dimension, however, showed a direct and significant positive effect on Entrepreneurial Behavior. Principals who can inspire teachers to work toward the school's vision, remind them of the importance of quality teaching, and guide them in achieving challenging objectives positively influence teachers' ability to plan and utilize digital tools, create collaborative learning experiences, make sound decisions, and execute lesson plans. This inspiration also extends to teachers' continuous professional growth, curiosity, prioritization of learning, teamwork with colleagues, relationships with parents and students, and engagement with external partners supporting the learning environment.

Detailed results from the outer model reveal that the most influential indicators are II4, IM1, IC1, and IC2, highlighting that instilling pride in the school's vision, motivating achievement of this vision, problem-solving, and effective communication are critical components of transformational leadership as perceived by principals.

These results align with prior research. Van Dam et al. (2010) identified core components of entrepreneurial behavior in teachers, including knowledge, adaptability, confidence, creativity, networking, and cooperation. This study supports these findings, showing that principal Transformational Leadership—particularly in the Idealized Influence and Inspirational Motivation dimensions—positively influences entrepreneurial behaviors in innovation, continuous learning, confidence, and collaboration.

Data from Table 7 indicate that the Inspirational Motivation (IM) dimension strongly influences entrepreneurial behavior. This suggests that while Entrepreneurial Behavior may not inherently drive teacher performance, principals who inspire teachers to pursue the school's vision and communicate effectively when challenges arise encourage teachers to innovate, engage in lifelong learning, make confident decisions, and collaborate effectively to support online learning processes.

5.1.2. The Effect of TL (II, IC, IM, IS) on Teaching Behaviour

The results of this study indicate that Idealized Influence does not have a direct, significant effect on Teaching Behavior. Although principals may display ethical behavior, engender trust and respect among teachers, and inspire pride by promoting the school's vision, these elements alone do not appear sufficient to directly impact teachers' instructional practices. Similarly, Individualized Consideration does not significantly affect Teaching Behavior. Efforts by principals to address teachers' challenges, provide a supportive environment for discussing difficulties, value teachers' aspirations, and publicly acknowledge their contributions are also insufficient to influence teaching behavior directly.

Table 4. Analysis of H2a, H2b, H2c, H2d

H_2a, H_2b, H_2c, H_2d	Coefficient	P Values	T Statistics	Information
Idealized influence → Teaching Behaviour (H_2a)	0.035	0.632	0.479	Rejected
Individualized consideration → Teaching Behaviour (H_2b)	-0.034	0.681	0.411	Rejected
Inspirational motivations → Teaching Behaviour (H_2c)	0.146	0.096	1.665	Rejected
Intellectual stimulation → Teaching Behaviour (H_2d)	-0.057	0.533	0.624	Rejected

Likewise, Inspirational Motivation does not demonstrate a significant direct impact on Teaching Behavior. Although principals may inspire teachers to pursue the school's vision, remind them of the importance of quality teaching, and communicate strategies for overcoming challenging goals, these actions alone do not directly alter teacher behavior in the classroom. Intellectual stimulation similarly lacks a significant direct effect on teaching behavior. These results indicated that

the influence toward the dependent variable is potentially mediated by another variable in this research: entrepreneurial behavior. Zhao et al. (2010) argue that the absence of directly significant relationships strongly indicates that the predictor influences the predicted variable through another variable or a mediator.

For a research hypothesis to be accepted, the t-statistic value must be >1.65. Testing of this study's hypotheses revealed that Transformational Leadership (TL), across its four dimensions (Idealized Influence, Individualized Consideration, Inspirational Motivation, and Intellectual Stimulation), does not significantly impact Teaching Behavior. This finding aligns with prior research, such as Manoppo (2020), in the study "Transformational Leadership as a Factor that Reduces Turnover Intention: A Mediation of Work Stress and Organizational Citizenship Behavior." Manoppo's findings support those of Baah and Ampofo (2015), which indicate that transformational leadership may reduce work stress but does not directly influence operational behaviors.

Similarly, the present study suggests that while transformational leadership from principals does not directly impact teachers' instructional behavior, it can do so indirectly by fostering Entrepreneurial Behavior. Entrepreneurial Behavior, in turn, positively affects Teaching Behavior, indicating that principals can support teachers' instructional practices more effectively by encouraging entrepreneurial qualities.

Table 5. Hypotheses testing result

Hypothesis	Connection	*Coefficient*	*T-Statistic*	*P Values*	Information
H_3	Entrepreneurial Behaviour Teaching Behavior	0.762	0.000	15.842	Accepted

The findings of this study indicate that Entrepreneurial Behavior has a direct, positive, and significant effect on Teaching Behavior. This suggests that innovation, self-confidence, continuous learning, and collaboration positively influence teachers' instructional practices. Analysis of the outer model identified the four highest-loading indicators: KJS4, KJS5, KD2, and KD3. These results imply that key influences on Teaching Behavior include teachers' ability to establish strong cooperative relationships with students and other stakeholders in the teaching and learning process and their capacity to develop and evaluate effective lesson plans.

These findings align with prior research, which suggests that organizations must adopt entrepreneurial orientation behaviors, such as innovation, proactivity, and risk-taking, to adapt to dynamic environmental conditions (Kraus, 2013). However, this study's focus on the educational context is further supported by Alipour et al. (2011) and Howell and Boies (2004), who assert that entrepreneurial behavior among teachers encourages peers to explore new knowledge, foster innovative ideas, and enhance overall performance. Entrepreneurial teachers also support colleagues in identifying developmental needs essential for implementing innovation strategies effectively.

Table 6. Mediation effect test result

	Original Sample (O)	T Statistics (|O/STDEV|)	P Values	Information
Idealized influence → Entrepreneurial Behaviour → Teaching Behaviour	-0.173	2.112	0.035	Accepted
Inspirational motivations → Entrepreneurial Behaviour → Teaching Behaviour	0.324	3.784	0.000	Accepted Perfect Mediation

This study demonstrates that Entrepreneurial Behavior significantly mediates between Transformational Leadership—specifically within the Idealized Influence (II) and Inspirational Motivation (IM) dimensions—and Teaching Behavior. Given that the direct influence of Transformational Leadership across all four dimensions of Teaching Behavior is insignificant, Entrepreneurial Behavior enables a more effective pathway for influencing teaching practices.

Idealized Influence in school principals, mediated negatively, suggests that increased respect from teachers for their principals is associated with lower levels of entrepreneurial behavior. This may be due to principals emphasizing adherence to rules and restrictions imposed during the pandemic by governmental and institutional bodies, which limits teachers' risk-taking and entrepreneurial activities. Conversely, principals' Inspirational Motivation has a positive mediating effect, as principals in the pandemic context are expected to motivate teachers to remain adaptive, creative, and resilient despite regulatory constraints.

6. Conclusion

The study's findings reveal that the first and third hypotheses are supported, while the second and fourth are not. Specifically, idealized influence negatively influences teaching behavior by mediating entrepreneurial behavior. This suggests that the idealized influence of school leaders (e.g., principals) has been less

effective during the pandemic. Many decisions and instructions have been top-down, with principals merely passing along directives from higher authorities without personal adaptation or consideration for their teams. This approach limits the ability of teachers to exhibit entrepreneurial behaviors, such as innovating or taking proactive steps in their teaching practices, ultimately hampers their teaching effectiveness.

In contrast, inspirational motivation influences teaching behavior significantly through the mediation of entrepreneurial behavior. During challenging times like the pandemic, school leaders who can articulate a compelling vision and motivate their teachers to align with it foster a stronger sense of purpose and adaptability. This encouragement empowers teachers to engage in entrepreneurial behaviors, such as creatively solving problems or seeking innovative teaching methods, positively impacting their teaching effectiveness. Inspirational motivation thus serves as a critical driver in maintaining teacher morale and fostering resilience during periods of uncertainty.

The rejection of the second and fourth hypotheses indicates that individualized consideration and intellectual stimulation may not effectively promote entrepreneurial behavior or teaching behavior in the pandemic context, possibly due to the unique constraints and challenges schools face during this period. These findings highlight the importance of leadership styles emphasizing motivation and adaptability in navigating crises.

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