



THE EFFECT OF TRANSFORMATIONAL LEADERSHIP ON FACULTY PERFORMANCE THROUGH SELF-EFFICACY AND SELF-DIRECTED LEARNING IN THE ERA OF DIGITAL TRANSFORMATION AT RELIGIOUS HIGHER EDUCATION INSTITUTIONS

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Abstract:

Faculty performance is a strategic indicator of higher education quality, particularly at religious universities that face structural, cultural, and academic challenges, as well as the demands of digital transformation in the delivery of higher education. This study aims to analyze the influence of transformational leadership on faculty performance by examining the mediating roles of self-efficacy and self-directed learning. This study employs an exploratory quantitative approach involving 116 faculty members at public religious universities in Indonesia. Data were collected via a structured questionnaire and analyzed using Structural Equation Modeling (SEM). The results indicate that transformational leadership has a positive and significant influence on faculty performance, both directly and indirectly through self-efficacy and self-directed learning. Self-efficacy was found to act as a psychological mediator that strengthens lecturers' engagement in self-directed learning, thereby supporting their ability to adapt to the demands of technology-based teaching, research, and community service—which, in turn, leads to improved lecturer performance in fulfilling the Tri Dharma of Higher Education. These findings underscore the importance of transformational leadership focused on psychological empowerment and strengthening faculty members' learning capacity in navigating the dynamics of digital transformation. This study provides an empirical contribution to the development of higher education management, particularly in formulating sustainable leadership strategies capable of strengthening the readiness of institutions and faculty members to navigate the digital era at religious universities.

Keywords: *Transformational Leadership; Self-Efficacy; Self-Directed Learning; Lecturer Performance; Digital Transformation*

INTRODUCTION

Faculty performance is a key determinant of the quality of higher education, particularly in an era marked by rapid globalization, digital transformation, technological disruption, and increasing competition among institutions. The digitization of higher education has transformed the way faculty members conduct teaching, research, and community service through the use of Learning Management Systems (LMS), online and hybrid learning, artificial intelligence (AI), and various digital platforms that support academic activities.

Universities are expected not only to provide high-quality instruction but also to produce impactful research and engage in meaningful community involvement (Khairiniza & Rizki, 2025). Universities are expected not only to provide high-quality instruction but also to produce impactful research and engage in meaningful community outreach. In this context, faculty performance serves as a strategic indicator of an institution's effectiveness in fulfilling the three pillars of higher education. Globally, the expansion of higher education systems has increased pressure regarding quality assurance, accountability, and academic productivity (Marginson & Marginson, 2022). This phenomenon is particularly evident in developing countries, where institutions must simultaneously address issues of access, equity, and quality.

In the context of Islamic higher education institutions, these challenges become more complex due to the dual mandate to integrate academic excellence with religious and moral values. The transformation of Islamic higher education in Indonesia reflects a significant shift from traditional religious institutions toward a modern academic system that integrates scientific and theological knowledge (Azra, 2015). However, this transformation has also created new demands for improving faculty performance within an institutional environment often characterized by limited resources, bureaucratic constraints, cultural expectations, and the accelerating digitization of governance and learning. Faculty members at religious universities are not only expected to possess academic and religious competencies but also the ability to adapt to developments in digital technology, which are increasingly influencing the implementation of the Tri Dharma of Higher Education (Meang, 2024).

Leadership has been widely recognized as a key factor influencing performance in educational organizations. In particular, transformational leadership has received significant attention due to its ability to inspire, motivate, and intellectually stimulate members of the organization. Transformational leaders foster a shared vision, encourage innovation, and provide individual support, all of which are crucial for improving performance outcomes. Empirical studies show that transformational leadership has a strong positive influence on organizational effectiveness and employee performance (Leithwood & Harris, 2020); (Hallinger & Heck, 2010). Furthermore, the systematic review highlights that transformational leadership remains one of the most dominant paradigms in educational leadership research (Gumus et al., 2018). In the context of digital transformation, transformational leadership also plays a role in fostering a culture of innovation, encouraging the adoption of digital technology, and facilitating the development of faculty members' digital competencies so they can adaptively respond to changes in the higher education environment (Antonopoulou et al., 2021).

However, the relationship between leadership and performance is rarely direct. Contemporary research emphasizes the importance of examining the mediating mechanisms that explain how leadership influences individual outcomes. One of the most important psychological factors in this regard is self-efficacy, which is defined as an individual's belief in their ability to successfully perform specific tasks (Bandura, 1997). In the context of education, faculty members with high self-efficacy are more likely to demonstrate perseverance, adaptability, and effectiveness in their teaching and research activities. Meta-analytic evidence confirms that self-efficacy is a strong predictor of teaching effectiveness and professional performance (Yokoyama, 2019)(Skaalvik & Skaalvik, 2010). In the digital age, self-efficacy is also reflected in lecturers' confidence in their ability to utilize digital technology in teaching and community service, thereby enabling them to adapt to significant changes.

In addition to psychological factors, behavioral dimensions such as self-directed learning play a crucial role in improving faculty performance. Self-directed learning refers to an individual's ability to take the initiative in identifying their learning needs, setting goals, and evaluating outcomes. This ability is particularly important in higher education settings, where continuous learning and adaptation are essential. Conceptual and empirical studies show that self-directed learning significantly contributes to professional competence and lifelong learning (Song & Hill, 2007). In a rapidly evolving academic context driven by digital transformation, faculty members are expected to independently update their knowledge, digital skills, and ability to utilize various technology-based learning resources in order to remain relevant to advancements in science and the learning needs of the 21st century.

The increasing integration of digital technology in higher education further underscores the importance of self-directed learning. The shift toward online and hybrid learning environments has transformed traditional teaching practices and requires faculty to adopt more flexible and innovative approaches. Studies on emergency distance learning and digital transformation highlight the need for adaptive learning behaviors and continuous professional development (Bond & Bedenlier, 2021); (OECD, 2021). This development underscores the interrelated roles of leadership, psychological empowerment, and learning behaviors in shaping faculty performance.

Although there has been extensive research on leadership, self-efficacy, and learning, there remains a significant gap in understanding how these variables interact within an integrated framework, particularly in the context of religious higher education institutions. Previous studies have often examined these constructs separately or focused on direct relationships, thereby overlooking the potential sequential processes linking leadership to performance. Furthermore, research exploring these relationships within Islamic higher education settings remains limited, even though institutional values and cultural contexts can influence leadership practices and individual behavior. On the other hand, there is still limited research explaining how transformational leadership can improve faculty performance through psychological mechanisms and learning behaviors in the face of the demands of digital transformation at religious higher education institutions.

Therefore, this study aims to analyze the effect of transformational leadership on faculty performance by examining the mediating roles of self-efficacy and self-directed learning. Specifically, this study proposes a sequential mediation model in which transformational leadership enhances self-efficacy, which in turn promotes self-directed learning and ultimately improves faculty performance. By integrating transformational leadership theory, social cognitive theory, and the perspective of self-directed learning, this study seeks to provide a comprehensive understanding of the determinants of performance in higher education.

The findings of this study are expected to contribute both theoretically and practically. Theoretically, this study expands the literature by offering an integrated model that explains the mechanisms through which leadership influences performance. Practically, this study provides insights for higher education leaders in designing effective leadership strategies that emphasize psychological empowerment and continuous learning. In the context of Islamic higher education, these findings are crucial for developing a leadership approach that is not only performance-oriented but also aligned with institutional values and long-term sustainability. Furthermore, the results of this study are expected to serve as a foundation for the development of leadership policies capable of

strengthening faculty members' readiness to face digital transformation through enhanced self-efficacy and continuous self-directed learning.

Literature Review and Hypothesis Development

Transformational leadership has been widely recognized as one of the most influential leadership paradigms in educational management. This paradigm emphasizes a leader's ability to inspire, intellectually stimulate, and provide individual attention to followers, thereby fostering higher levels of motivation and performance. In the context of higher education, transformational leadership plays a crucial role in shaping an academic environment that fosters innovation, collaboration, and professional growth. In the era of digital transformation, transformational leadership has become increasingly relevant because leaders are not only expected to inspire and motivate faculty members but also to drive the adoption of digital technologies, foster a culture of innovation, and facilitate the development of digital competencies that support the implementation of the Tri Dharma of Higher Education. Empirical evidence consistently shows that transformational leadership positively influences organizational outcomes, including job performance, commitment, and satisfaction (Leithwood & Harris, 2020); (Hallinger, 2020). Furthermore, meta-analytic findings indicate that transformational leadership remains the dominant predictor of performance compared to other leadership styles (Xue et al., 2019). From this perspective, transformational leadership is expected to directly improve faculty performance.

In addition to its direct effects, transformational leadership also exerts influence through psychological mechanisms, particularly self-efficacy. Rooted in social cognitive theory, self-efficacy refers to an individual's belief in their ability to successfully perform a task (Bandura, 1997). Leaders who demonstrate transformational behavior can boost their followers' self-confidence by providing support, encouragement, and opportunities for mastery experiences. In educational settings, self-efficacy has been identified as a key determinant of teaching effectiveness and professional performance. Meta-analytic studies confirm that individuals with higher self-efficacy tend to demonstrate greater perseverance, adaptability, and effectiveness in their roles (Skaalvik & Skaalvik, 2010). A recent study in higher education also shows that leadership practices significantly influence the development of academic self-efficacy among faculty members (Fackler & Malmberg, 2016). Therefore, transformational leadership is expected to have a positive impact on self-efficacy.

In addition to psychological empowerment, transformational leadership is also associated with the development of proactive learning behaviors, particularly self-directed learning. Self-directed learning refers to an individual's ability to take the initiative in identifying learning needs, setting goals, and evaluating outcomes (Song & Hill, 2007). In a higher education environment characterized by rapid advances in knowledge and technological change, self-directed learning is essential for maintaining professional competence. In the context of digital transformation, self-efficacy also reflects faculty members' confidence in their ability to utilize digital technology to support learning, research, and community service. A systematic review indicates that self-directed learning makes a significant contribution to lifelong learning and professional development. Furthermore, recent studies highlight that leadership practices emphasizing autonomy and empowerment are more likely to foster self-directed learning behaviors among educators (Karatas & Arpacı, 2021); (T.H, 2019). Thus, transformational leadership is expected to have a positive impact on self-directed learning.

Self-efficacy also plays an important role in shaping independent learning behavior. Individuals with high self-efficacy are more confident in their ability to manage the learning process, set challenging goals, and persevere in the face of difficulties. This relationship is supported by self-directed learning theory, which emphasizes the role of personal beliefs in guiding learning behavior (Zimmerman, 2016)(Panadero, 2017). Further empirical studies confirm that self-efficacy significantly predicts engagement in self-directed learning activities, particularly in the context of an increasingly digitized higher education system, including online learning, hybrid learning, and the use of various digital learning platforms (Murniati et al., 2022); (Broadbent & Poon, 2021). Therefore, self-efficacy is expected to have a positive impact on independent learning.

In addition, self-directed learning has been shown to have a significant impact on individual performance. In an academic context, faculty members who are actively engaged in self-directed learning are more likely to update their knowledge, adopt innovative teaching methods, and increase their research productivity. This ultimately leads to improved performance outcomes. Empirical evidence shows that self-directed learning is positively associated with professional competence, teaching effectiveness, and academic productivity (T.H, 2019). In the context of digital transformation, the importance of self-directed learning has become increasingly prominent, as instructors are required to continually adapt to new technologies and pedagogical approaches (Bond et al., 2021). Thus, self-directed learning is expected to have a positive impact on faculty performance.

Based on the theoretical and empirical arguments above, it is also important to consider the mediating roles of self-efficacy and self-directed learning in the relationship between transformational leadership and faculty performance. Transformational leadership enhances self-efficacy by fostering self-confidence and motivation, which in turn encourages individuals to engage in self-directed learning behaviors. These behaviors ultimately lead to improved performance. This sequential mechanism is consistent with social cognitive theory, which states that environmental factors (e.g., leadership), personal factors (e.g., self-efficacy), and behavioral factors (e.g., learning) interact to influence outcomes (Bandura, 1997). Recent studies in the fields of education and organizational behavior support this mediation model, highlighting the importance of integrating psychological and behavioral mechanisms in explaining performance.

Based on the discussion above, the following hypotheses are proposed:

- H1. Transformational leadership has a positive effect on faculty performance.
- H2. Transformational leadership has a positive effect on self-efficacy.
- H3. Transformational leadership has a positive effect on self-directed learning.
- H4. Self-efficacy has a positive effect on faculty performance.
- H5. Self-efficacy has a positive effect on self-directed learning.
- H6. Self-directed learning has a positive effect on faculty performance.
- H7. Self-efficacy mediates the relationship between transformational leadership and faculty performance.
- H8. Self-directed learning mediates the relationship between transformational leadership and faculty performance.
- H9. Self-efficacy and self-directed learning sequentially mediate the relationship between transformational leadership and faculty performance.

RESEARCH METHODS

This study employs an exploratory quantitative research design to examine the relationship between transformational leadership, self-efficacy, self-directed learning, and faculty performance. The exploratory approach is appropriate because it aims to examine causal relationships among variables within a theory-based framework. This study adopts a cross-sectional survey design, which is widely used in leadership and educational management research to analyze latent constructs and their interrelationships (Hair et al., 2022; Sarstedt et al., 2020).

This study was conducted at Islamic higher education institutions in Indonesia. These institutions provide a unique context characterized by the integration of academic and religious values, making them relevant for researching leadership dynamics and performance. The sample consisted of 116 faculty members, selected using proportional random sampling to ensure representation across all faculties and disciplines. The sample size met the minimum requirements for structural equation modeling using Partial Least Squares (PLS-SEM), which is suitable for small to medium sample sizes and complex models (J. Hair & Alamer, 2022); (J. F. Hair & Hult, 2013). Data were collected using a structured questionnaire consisting of four main constructs: transformational leadership, self-efficacy, self-directed learning, and faculty performance. All constructs were measured using previously validated scales that had been adapted for the higher education context.

Transformational leadership is measured using indicators derived from the Multifactor Leadership Questionnaire (MLQ), which includes dimensions such as idealized influence, inspirational motivation, intellectual stimulation, and individual consideration (Bass & Riggio, 2006); (Dunst & Hamby, 2018). Self-efficacy is assessed based on social cognitive theory, which reflects individuals' beliefs about their ability to perform academic tasks effectively (Bandura, 1997); (Skaalvik & Skaalvik, 2010). Self-directed learning is measured using indicators related to learning autonomy, goal setting, self-monitoring, and evaluation (Song & Hill, 2007)). Faculty performance is evaluated based on the three pillars of higher education, including teaching, research, and community service (Marginson & Marginson, 2022).

All items were measured using a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The questionnaire was reviewed by experts to ensure content validity and was pilot-tested prior to data collection to improve clarity and reliability. Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with the assistance of SmartPLS software. PLS-SEM was chosen because of its suitability for predictive research, complex models, and relatively small sample sizes (J. F. Hair et al., 2019). In addition, PLS-SEM does not require strict assumptions about a normal data distribution, making it suitable for social science research (J. F. Hair et al., 2017).

This analysis follows a two-step approach: evaluation of the measurement model and the structural model. The measurement model was assessed in terms of reliability and validity, including indicator reliability (outer loadings), internal consistency reliability (Cronbach's alpha and composite reliability), convergent validity (average variance extracted/AVE), and discriminant validity using the Fornell-Larcker criterion and the HTMT ratio (Henseler et al., 2015).

The evaluation of the structural model includes an assessment of path coefficients, the coefficient of determination (R^2), effect size (f^2), and predictive relevance (Q^2). Hypotheses were tested using the bootstrapping technique with 5,000 resamples to determine the significance of the path coefficients (J. Hair & Alamer, 2022). The mediating effect was analyzed using the procedure for testing

indirect effects recommended in the PLS-SEM literature (Henseler et al., 2015). Participation in this study was voluntary, and respondents were informed of the study's objectives. Confidentiality and anonymity were ensured throughout the data collection and analysis process. These ethical considerations are crucial in educational research to protect participants and ensure data integrity (Jhon W. Creswell, 2009)

RESULTS AND DISCUSSION

The data were analyzed using the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach to evaluate the measurement model and the structural model. The results showed that all constructs met the necessary criteria for validity and reliability, as reflected by factor loadings exceeding 0.70, Average Variance Extracted (AVE) values above 0.50, and composite reliability values greater than 0.70. These findings confirm that the measurement model is robust and suitable for further structural analysis.

The structural model demonstrated adequate explanatory power. The coefficient of determination (R^2) for faculty performance (LP) was 0.672, indicating that transformational leadership (TL), self-efficacy (SE), and self-directed learning (SDL) collectively explained 67.2% of the variance in faculty performance. The R^2 values for self-efficacy (0.541) and self-directed learning (0.598) indicate a moderate level of explanatory power. Furthermore, the predictive relevance (Q^2) values for all endogenous constructs are greater than zero, confirming the model's predictive ability.

Table 1. Summary of Structural Model Results

Relationship	β	t-value	p-value
TL $\rightarrow$ LP	0.268	3.412	0.001
TL $\rightarrow$ SE	0.736	12.105	0.000
SE $\rightarrow$ LP	0.214	2.987	0.003
TL $\rightarrow$ SDL	0.421	5.876	0.000
SE $\rightarrow$ SDL	0.392	4.965	0.000
SDL $\rightarrow$ LP	0.401	5.214	0.000

The results of the study show that all hypothesized direct relationships are positive and statistically significant. Transformational leadership has a strong influence on self-efficacy, indicating that leadership practices play a crucial role in shaping lecturers' confidence in their professional abilities. Furthermore, self-directed learning showed the strongest direct influence on faculty performance, indicating that faculty members' ability to continue learning independently is a key factor in maintaining professional competence, including in the face of technological advancements and innovations in digital learning. These findings suggest that transformational leadership has the potential to strengthen faculty readiness to navigate changes in the academic environment, including the demands of adapting to digital transformation in higher education.

Table 2. Mediation Effects

Indirect Relationship	β	t-value	p-value
TL $\rightarrow$ SE $\rightarrow$ LP	0.157	2.876	0.004
TL $\rightarrow$ SDL $\rightarrow$ LP	0.169	3.021	0.003
TL $\rightarrow$ SE $\rightarrow$ SDL $\rightarrow$ LP	0.116	3.102	0.002

Mediation analysis revealed that both self-efficacy and self-directed learning act as significant mediators in the relationship between transformational leadership and faculty performance. The indirect effects via self-efficacy and self-directed learning were statistically significant, indicating partial mediation. Furthermore, the sequential mediation path was also significant, indicating that transformational leadership enhances faculty performance through a structured process in which psychological factors (self-efficacy) influence behavioral outcomes (self-directed learning), which ultimately leads to improved performance.

Table 3. Model Explanatory Power

Variable	R ²	Q ²
Self-Efficacy	0.541	0.421
Self-Directed Learning	0.598	0.398
Lecturer Performance	0.672	0.455

The R² and Q² values indicate that the model has moderate to substantial explanatory and predictive power. Specifically, the high R² value for faculty performance indicates that the proposed model effectively captures the key determinants of performance in the context of higher education.

Scientific Interpretation of the Findings

Overall, the research findings provide strong empirical support for the proposed model. The findings indicate that transformational leadership not only directly influences faculty performance but also exerts an indirect influence through psychological and behavioral mechanisms. The significant role of self-efficacy suggests that leadership effectiveness is closely linked to its ability to enhance individuals' self-confidence and motivation. At the same time, the strong influence of self-directed learning underscores the importance of continuous learning, adaptability, and readiness to face digital transformation in higher education.

The presence of significant sequential mediation further strengthens the explanatory power of the model, indicating that leadership influences performance through a multi-stage process involving internal cognition and external behavior. These findings highlight the importance of adopting an integrated perspective in understanding faculty performance, particularly in the context of digital transformation, which demands enhanced competencies, learning innovation, and lifelong learning capabilities.

DISCUSSION

The findings of this study provide a comprehensive empirical explanation of the relationship between transformational leadership, self-efficacy, self-directed learning, and faculty performance. All nine hypotheses proposed in this study were supported, confirming that the conceptual model is statistically robust and theoretically coherent. The discussion is organized around each hypothesized relationship to provide a clearer and more systematic interpretation of the findings.

Transformational Leadership and Faculty Performance

The first hypothesis asserts that transformational leadership has a significant positive influence on faculty performance in higher education institutions. These findings indicate that leadership serves as one of the most important organizational factors influencing the effectiveness and productivity of

academic staff. In the context of higher education, faculty members are expected to simultaneously fulfill the three core functions of a university: teaching, research, and community service. Successfully carrying out these responsibilities requires not only individual competence but also an organizational environment that supports professional growth, innovation, and commitment. Consequently, the significant relationship identified in this study indicates that faculty performance is strongly influenced by leadership practices that inspire, motivate, and empower academic personnel.

Transformational leadership contributes to faculty performance through several interrelated dimensions. First, the ideal influence dimension enables leaders to serve as role models who demonstrate integrity, professionalism, and commitment to institutional values. When leaders consistently demonstrate ethical behavior and dedication to academic excellence, faculty members are more likely to internalize these values and translate them into higher levels of responsibility and performance. This process strengthens organizational trust and encourages faculty members to align their personal goals with the institutional mission.

Second, inspirational motivation plays a crucial role in enhancing faculty performance. Leaders who communicate an engaging vision and provide clear academic direction help faculty members understand the broader significance of their work. Such leadership practices foster a sense of purpose and encourage faculty to actively contribute to achieving institutional goals. In higher education institutions, where academic work often requires long-term commitment and self-discipline, inspirational motivation strengthens faculty members' enthusiasm for improving the quality of teaching, increasing research productivity, and participating in community engagement activities. As a result, faculty members become more committed to achieving both individual and organizational goals.

Third, intellectual stimulation encourages faculty members to challenge conventional approaches and explore innovative solutions to academic problems. Higher education institutions operate in an increasingly dynamic environment characterized by technological advancements, the ever-evolving needs of students, and rising demands for research productivity. Transformational leaders stimulate creativity by encouraging critical thinking, experimentation, and continuous learning. Through this process, faculty members are motivated to adopt innovative pedagogical methods, integrate digital technology into teaching, develop interdisciplinary research projects, and pursue scientific publications. These activities ultimately contribute to improved academic performance and institutional competitiveness..

Another important mechanism is individualized consideration, which reflects leaders' attention to the unique needs, aspirations, and professional development of each faculty member. Academic staff differ in terms of experience, expertise, career stage, and research interests. Transformational leaders recognize these differences and provide personalized support through mentoring, training, professional development opportunities, and constructive feedback. This support enhances faculty members' self-confidence, job satisfaction, and professional engagement. When faculty members feel valued and supported by institutional leaders, they tend to demonstrate higher levels of commitment and exert greater effort in fulfilling their academic responsibilities.

In addition, transformational leadership creates an organizational climate that supports and encourages collaboration and knowledge sharing among academic staff. Universities are increasingly relying on teamwork, interdisciplinary research, and collective problem-solving to address complex

educational challenges. Transformational leaders encourage open communication, mutual respect, and collaborative learning, thereby facilitating the exchange of ideas and expertise among faculty members. Such a collaborative environment contributes to increased academic productivity and improves the overall quality of institutional outcomes.

These findings are consistent with previous research showing that transformational leadership positively influences the performance of employees and faculty by enhancing motivation, organizational commitment, job satisfaction, innovation, and productivity. In higher education institutions, where intellectual capital is the primary organizational asset, transformational leadership is highly effective because it fosters empowerment, innovation, and professional development while addressing the cognitive, emotional, and relational needs of academic staff. These results imply that universities should strengthen transformational leadership competencies among institutional leaders through initiatives that enhance their ability to communicate a vision, inspire faculty, foster innovation, and provide individualized support. Therefore, transformational leadership should not only be viewed as a managerial approach but also as a strategic organizational resource that contributes significantly to faculty performance, institutional effectiveness, and the long-term competitiveness of higher education institutions.

Transformational Leadership and Self-Efficacy

The second hypothesis asserts that transformational leadership significantly influences faculty members' self-efficacy. This finding highlights that leadership plays not only a managerial role but also a psychological one in strengthening lecturers' self-confidence in their ability to carry out their academic responsibilities. In higher education, lecturers are expected to manage various tasks, including teaching, research, publishing, student mentoring, community service, and institutional development. These demands have become increasingly complex in the era of digital transformation, as faculty members are not only required to master their academic disciplines but also to adapt to advancements in learning technologies, academic information systems, and various digital platforms that support teaching, research, and community service activities. According to Bandura's social cognitive theory, self-efficacy refers to an individual's belief in their ability to successfully perform specific tasks. Faculty members with high self-efficacy are more likely to view challenges as opportunities, persevere in the face of difficulties, and maintain strong motivation, making self-efficacy a vital resource for achieving professional success in an increasingly demanding academic environment.

Transformational leadership enhances self-efficacy through its four key dimensions: inspirational motivation, idealized influence, intellectual stimulation, and individual consideration. Inspirational motivation strengthens faculty members' self-confidence by providing a meaningful vision and linking individual contributions to institutional goals. Idealized influence enables leaders to serve as role models, offering vicarious experiences that reinforce belief in personal abilities. Intellectual stimulation encourages faculty members to engage in innovation, problem-solving, and continuous learning, thereby creating a sense of mastery that strengthens self-efficacy. Meanwhile, individual consideration provides guidance, training, emotional support, and constructive feedback that help faculty members recognize their strengths and overcome professional challenges with greater self-confidence.

These findings can also be explained through Bandura's four sources of self-efficacy: mastery experiences, vicarious experiences, social persuasion, and

positive emotional states. Transformational leaders facilitate opportunities for professional development, provide successful role models, offer encouragement and recognition, and create a supportive work environment that reduces stress and uncertainty. As a result, faculty members develop stronger confidence in their ability to adapt to technological changes, research demands, publication requirements, and evolving educational expectations. Higher self-efficacy is further associated with greater work engagement, intrinsic motivation, organizational commitment, creativity, resilience, and job satisfaction. Therefore, transformational leadership not only contributes to strengthening faculty members' self-efficacy but also to improved psychological outcomes and broader performance that support institutional effectiveness.

These findings are consistent with previous research conducted in educational settings, which shows that leadership behavior significantly influences teachers' and professors' self-efficacy beliefs. The study (Ng, 2015); (Kunter et al., 2013) indicate that a supportive and empowering leadership environment contributes positively to educators' self-confidence and professional effectiveness. These studies highlight that self-efficacy is not only determined by personal characteristics but is also shaped by social interactions and organizational conditions. Current findings reinforce this perspective by showing that leadership practices in higher education institutions can serve as an important environmental factor influencing the psychological development of faculty members.

Transformational Leadership and Self-Directed Learning

The third hypothesis asserts that transformational leadership significantly influences self-directed learning among faculty members. These findings suggest that leadership is not merely an organizational mechanism for directing and coordinating academic activities, but also a crucial factor in fostering a culture of continuous learning and professional growth in higher education institutions. In contemporary universities, faculty members are expected to operate in an increasingly complex and dynamic environment characterized by rapid technological advancements, shifts in pedagogical paradigms, the internationalization of higher education, evolving accreditation standards, and rising expectations for research productivity. Under these conditions, the ability to engage in self-directed learning becomes essential for maintaining professional competence, adapting to change, and sustaining academic excellence. Therefore, the significant effects identified in this study indicate that transformational leadership serves as a crucial catalyst in developing faculty members' capacity and willingness to engage in self-directed learning throughout their professional careers.

Self-directed learning refers to a process in which individuals bear primary responsibility for identifying their learning needs, setting learning goals, finding appropriate resources, selecting learning strategies, carrying out learning activities, and evaluating learning outcomes. This concept emphasizes learner autonomy, personal initiative, self-regulation, and continuous professional development. In the context of higher education, self-directed learning is particularly important because faculty members operate in a knowledge-intensive environment where information, theories, technology, and professional standards are constantly evolving. Unlike professions characterized by stable and predictable routines, academic work requires continuous learning and adaptation. Consequently, faculty members with strong self-directed learning skills are better prepared to update their knowledge, improve their teaching practices, develop innovative research agendas, and effectively respond to

emerging academic challenges.

The significant influence of transformational leadership on self-directed learning can be understood through several interrelated theoretical and practical mechanisms. One of the most important mechanisms is the creation of a learning-oriented organizational culture. Transformational leaders consistently communicate the importance of innovation, intellectual growth, and continuous improvement. By articulating a compelling vision of institutional excellence and academic progress, leaders encourage faculty to view learning not merely as an obligation but as an integral part of their professional identity. This vision-driven approach fosters a shared commitment to lifelong learning and motivates faculty to actively seek opportunities to acquire knowledge and develop skills.

The dimension of inspirational motivation plays a very significant role in fostering self-directed learning. Transformational leaders inspire faculty members to pursue higher standards of achievement and professional excellence. Through effective communication and encouragement, these leaders help faculty members recognize the importance of continuously improving their competencies to meet the expectations of the institution and society. When faculty members view their professional development as meaningful and aligned with the institution's broader mission, they become more motivated to voluntarily engage in learning activities such as attending workshops, participating in academic conferences, pursuing advanced certifications, conducting independent research, and exploring new teaching methodologies. As a result, learning is driven from within, rather than imposed from the outside..

Another important dimension is intellectual stimulation. Transformational leaders encourage faculty members to question conventional assumptions, explore alternative perspectives, and seek innovative solutions to academic problems. Rather than promoting rigid adherence to established practices, these leaders foster a climate of inquiry, experimentation, and creativity. Such an environment naturally stimulates self-directed learning because faculty members are encouraged to identify gaps in their knowledge and actively seek out information that can enhance their effectiveness. Intellectual stimulation fosters curiosity, critical thinking, and reflective practice—all of which are fundamental characteristics of self-directed learners. As a result, faculty members become more proactive in exploring new ideas, adopting innovative technologies, and integrating emerging knowledge into their teaching and research activities.

The findings of this study can also be explained through the lens of self-determination theory, which emphasizes the importance of autonomy, competence, and relatedness in fostering intrinsic motivation. Transformational leadership enhances these three psychological needs. First, by empowering faculty members and encouraging independent decision-making, transformational leaders strengthen their sense of autonomy. Second, through guidance, support, and constructive feedback, leaders enhance faculty members' sense of competence. Third, by fostering trust, collaboration, and supportive relationships, leaders meet the need for relatedness. When these psychological needs are met, faculty members are more likely to voluntarily engage in self-directed learning and sustain their learning efforts over time. Thus, transformational leadership creates motivational conditions that are highly conducive to autonomous and sustained learning.

These findings are consistent with previous empirical studies conducted in the contexts of organizations and education. Geng & Law (Geng & Law, 2019) found that transformational leadership promotes learning-oriented behavior by enhancing motivation, autonomy, and psychological empowerment. These

studies show that leadership practices characterized by trust, encouragement, and support create conditions that facilitate continuous learning and professional growth. The current findings reinforce this literature by demonstrating that similar mechanisms operate effectively within higher education institutions.

Another important implication of these findings relates to changes in the nature of academic careers. Contemporary faculty members are increasingly expected to function as lifelong learners capable of adapting to rapidly changing professional demands. Traditional professional development models, which rely primarily on formal training programs, are often insufficient to support the ongoing development of competencies. Instead, a successful academic career increasingly depends on faculty members' ability to direct and manage their own learning processes. The significant influence of transformational leadership identified in this study suggests that leadership can play a crucial role in fostering these abilities and ensuring that faculty members remain adaptable, innovative, and professionally relevant throughout their careers.

From a practical perspective, the findings suggest that universities should foster a learning-oriented environment that promotes autonomy, continuous professional development, knowledge sharing, and access to learning resources. Transformational leaders play a crucial role in this process by reducing organizational barriers such as excessive bureaucracy, rigid structures, and limited opportunities for professional growth, while fostering a culture of trust, flexibility, innovation, and empowerment. Through inspirational motivation, intellectual stimulation, individual consideration, and idealistic influence, transformational leadership encourages faculty to engage in self-directed learning, strengthen their professional competencies, and adapt to evolving academic demands. Therefore, transformational leadership should be viewed not only as a means to improve organizational performance but also as a strategic mechanism for developing self-directed learning capabilities that support long-term academic excellence, institutional competitiveness, and the sustainable development of higher education.

Self-Efficacy and Self-Directed Learning

The fourth hypothesis asserts that self-efficacy significantly influences self-directed learning among faculty members. These findings indicate that psychological beliefs about one's personal abilities serve as a fundamental determinant of faculty members' learning behaviors and professional development. In the context of higher education, where knowledge is constantly evolving and academic responsibilities are becoming increasingly complex, faculty members must engage in continuous learning to maintain their professional relevance and effectiveness. Consequently, self-efficacy serves as a crucial internal resource that influences whether faculty members actively seek out learning opportunities, persist in overcoming learning challenges, and successfully manage their own professional growth. The significant relationship identified in this study indicates that faculty members' confidence in their abilities substantially determines their readiness and willingness to engage in self-directed learning activities.

The significant influence of self-efficacy on self-directed learning can be explained through the Social Cognitive Theory framework proposed by Albert Bandura. According to this theory, self-efficacy refers to an individual's belief in their ability to manage and carry out the actions necessary to achieve desired outcomes. This belief influences cognitive processes, emotional responses, motivational patterns, and behavioral choices. Individuals with a strong sense of self-efficacy are more likely to view challenging situations as opportunities for

growth rather than threats to be avoided. As a result, they are more willing to engage in demanding learning activities, invest effort in acquiring new competencies, and persevere despite difficulties. Therefore, self-efficacy serves as a primary motivational mechanism that drives individuals to actively engage in self-directed learning.

One of the main reasons why self-efficacy influences self-directed learning is that confidence in one's abilities affects learning initiative. Self-directed learning begins with the recognition of learning needs and the willingness to take responsibility for meeting those needs. Instructors with high self-efficacy believe they are capable of acquiring new knowledge and mastering unfamiliar skills. As a result, they are more proactive in identifying gaps in their competencies and seeking opportunities for improvement. Rather than waiting for formal instructions or institutional mandates, they independently explore new information, participate in professional development activities, and pursue learning opportunities that support their academic growth. This proactive orientation is one of the key characteristics of independent learners.

Self-efficacy also influences the goal-setting process, which is at the core of self-directed learning. Individuals with a strong sense of self-efficacy tend to set challenging yet achievable goals because they are confident in their ability to achieve them. In an academic setting, faculty members with high self-efficacy are more likely to set ambitious goals related to teaching innovation, research productivity, publication achievements, curriculum development, and professional certification. These goals provide direction and motivation for learning activities. Furthermore, confident faculty members are more likely to develop strategic plans to achieve their goals and systematically monitor their progress. Thus, self-efficacy not only encourages participation in learning but also enhances the quality and effectiveness of the self-directed learning process..

Another important mechanism through which self-efficacy influences self-directed learning is perseverance. Learning, particularly in academic and professional contexts, often involves challenges, setbacks, and uncertainty. Faculty members may face difficulties when adopting new technologies, conducting complex research, publishing in high-impact journals, or implementing innovative teaching strategies. Individuals with high self-efficacy are more likely to interpret these obstacles as temporary and surmountable. They demonstrate greater perseverance, exert additional effort when facing difficulties, and continue learning despite experiencing failure or frustration. In contrast, faculty members with low self-efficacy are more likely to view challenges as evidence of personal incompetence, leading to avoidance behaviors and reduced engagement in learning activities. Therefore, self-efficacy plays a crucial role in sustaining long-term learning efforts.

The relationships identified in this study can also be explained through the concept of self-regulation. Self-directed learning requires individuals to plan, monitor, and evaluate their own learning activities. Effective self-regulation involves setting learning goals, selecting appropriate learning strategies, managing time effectively, monitoring progress, and making necessary adjustments to improve outcomes. Self-efficacy significantly influences each of these processes. Faculty members who believe in their abilities are more likely to be actively involved in planning and monitoring their learning activities because they expect their efforts to yield positive results. Conversely, faculty members with low self-efficacy may be less motivated to invest in self-regulation because they doubt their ability to succeed. Consequently, self-efficacy serves as a foundational element that supports effective self-directed learning behavior.

These findings are also consistent with Self-Determination Theory, which

emphasizes the importance of autonomy, competence, and intrinsic motivation in driving learning behavior. Self-efficacy contributes directly to the perception of competence, one of the key psychological needs identified in that theory. When faculty members view themselves as capable and effective, they experience greater intrinsic motivation to engage in learning activities. They pursue knowledge not only to meet external requirements but because they value personal growth, professional mastery, and intellectual development. This intrinsic motivation strengthens their commitment to self-directed learning and increases the likelihood of sustained engagement over time.

In higher education, self-efficacy influences self-directed learning across various professional fields. In teaching, faculty members with high self-efficacy are more likely to explore innovative pedagogical approaches, integrate educational technology, redesign learning activities, and experiment with student-centered teaching methods. They actively seek out new knowledge that can enhance the effectiveness of their teaching and improve student learning outcomes. In research, confident faculty members are more willing to pursue complex research projects, develop advanced methodological skills, seek out opportunities for collaboration, and submit manuscripts to prestigious journals. Similarly, in community service activities, faculty members with strong self-efficacy are more likely to engage in interdisciplinary initiatives, develop innovative solutions to social problems, and pursue professional development opportunities that enhance their impact. Thus, self-efficacy fosters self-directed learning across all dimensions of academic responsibility.

The findings of this study are consistent with the broader literature on self-directed learning and professional development. Previous studies have consistently shown that self-efficacy is one of the strongest predictors of autonomous learning behavior. Research indicates that individuals with high self-efficacy beliefs demonstrate greater learning initiative, stronger commitment to learning goals, more effective learning strategies, and higher levels of perseverance when faced with difficulties. Studies conducted in educational contexts also indicate that educators' self-efficacy beliefs significantly influence their willingness to engage in professional learning and continuous improvement activities. The findings of this study reinforce these conclusions by confirming the important role of self-efficacy in promoting self-directed learning among faculty members at institutions of higher education.

These findings suggest that higher education institutions should strengthen faculty members' self-efficacy through professional development programs that provide mastery experiences, constructive feedback, mentoring, opportunities for collaborative learning, and recognition of achievements. Such initiatives can boost faculty members' self-confidence, encourage greater engagement in self-directed learning, and reduce barriers to professional growth. Furthermore, investing in the development of self-efficacy can yield long-term organizational benefits, as faculty members with strong self-efficacy beliefs are more likely to engage in lifelong learning, adapt to changing academic demands, pursue innovation, and contribute to institutional excellence. Therefore, self-efficacy should be viewed as a strategic resource that supports not only individual learning and development but also broader outcomes such as teaching quality, research productivity, academic innovation, and institutional competitiveness.

From a theoretical perspective, these findings provide further support for social-cognitive explanations of learning behavior. The significant influence of self-efficacy on self-directed learning confirms that cognitive beliefs serve as strong determinants of behavioral outcomes. Learning is not only determined by external opportunities or organizational support but is also strongly influenced

by individuals' perceptions of their own abilities. These findings highlight the importance of integrating psychological factors into models of professional development and lifelong learning in higher education (Liu et al., 2026)(Jr, 2012).

Overall, the research findings confirm that self-efficacy serves as a fundamental psychological mechanism that influences self-directed learning among faculty members. Through its influence on motivation, goal-setting, perseverance, self-regulation, resilience, emotional well-being, and engagement in learning, self-efficacy shapes how faculty members initiate, manage, and sustain their professional learning activities. As higher education institutions continue to face increasingly complex and dynamic challenges, strengthening faculty members' self-efficacy will become increasingly important for fostering continuous learning, professional growth, and long-term academic excellence.

Self-Efficacy and Faculty Performance

The fifth hypothesis asserts that self-efficacy has a significant positive influence on faculty performance. This finding provides strong empirical evidence that lecturers' beliefs about their abilities are a fundamental psychological determinant of academic effectiveness. Although professional competence, academic qualifications, and institutional resources are undoubtedly important factors influencing lecturer performance, current findings suggest that these factors alone are not sufficient to ensure high levels of performance. Rather, the extent to which faculty members believe in their ability to successfully carry out academic tasks significantly determines how effectively their knowledge, skills, and experience are translated into tangible performance outcomes. Consequently, self-efficacy emerges as a critical psychological mechanism that bridges the gap between potential ability and actual performance in higher education institutions..

These findings are highly relevant in the contemporary higher education environment, where faculty members face increasingly complex professional demands. Beyond traditional teaching responsibilities, faculty members are expected to conduct high-quality research, publish in reputable academic journals, secure research grants, mentor undergraduate and graduate students, participate in community engagement programs, contribute to institutional governance, and continually adapt to technological and pedagogical innovations. These diverse responsibilities require not only technical competence but also strong psychological self-confidence. In such a context, self-efficacy serves as a vital internal resource that enables faculty members to manage multiple responsibilities simultaneously while maintaining high standards of academic performance.

The significant relationships identified in this study can be explained by Social Cognitive Theory, developed by Albert Bandura. According to this theory, self-efficacy influences human functioning through cognitive, motivational, affective, and behavioral processes. Individuals with high self-efficacy tend to set challenging goals, exert greater effort in completing tasks, persevere when facing obstacles, and recover more quickly from setbacks. These characteristics are highly relevant to academic work, where success often requires sustained effort, intellectual perseverance, and resilience in the face of recurring challenges. Therefore, faculty members with a strong sense of self-efficacy are more likely to be actively engaged in teaching, research, and professional development, ultimately achieving higher levels of performance.

The relationship between self-efficacy and performance can also be understood through the concept of self-regulation. Effective performance

requires individuals to monitor their progress, evaluate outcomes, and adjust strategies as needed. Self-efficacy strengthens the self-regulation process because individuals who believe in their abilities are more likely to be actively involved in planning, monitoring, and evaluating their work. Faculty members with high self-efficacy tend to set clear performance goals, manage their time effectively, monitor the outcomes of their teaching and research, and make necessary adjustments when challenges arise. These self-regulatory behaviors contribute significantly to sustained performance excellence.

In addition, self-efficacy influences performance through its impact on resilience and adaptability. The contemporary academic environment is characterized by rapid changes in technology, educational policies, research expectations, and institutional accountability. These changes often create uncertainty and stress among academic staff. Faculty members with strong self-efficacy generally demonstrate greater resilience because they believe in their ability to successfully adapt to changing circumstances. Rather than resisting change, they actively seek opportunities to learn new skills and acquire new knowledge. This adaptability allows them to maintain a high level of performance even in dynamic and demanding environments.

Another important explanation for these findings relates to emotional regulation. Academic work often involves significant psychological pressure, including publication requirements, accreditation demands, administrative responsibilities, student expectations, and competition for limited resources. High levels of stress and emotional exhaustion can impair performance if not managed effectively. Self-efficacy contributes to emotional stability by reducing anxiety and increasing confidence in one's ability to overcome challenges. Faculty members with strong self-efficacy beliefs are less likely to experience debilitating stress when facing professional difficulties and are more likely to maintain productive behavior under pressure. Consequently, self-efficacy supports performance not only through cognitive and motivational mechanisms but also through emotional resilience.

These findings are consistent with expectancy theory, which suggests that individuals are more motivated to exert effort when they believe their actions will lead to successful outcomes. In this context, self-efficacy reinforces lecturers' belief that their efforts in teaching, research, and community service will yield meaningful results, thereby enhancing their motivation and performance. The research findings also highlight the importance of psychological capital in higher education, indicating that academic success depends not only on qualifications, expertise, and technical competencies, but also on psychological resources. As a core component of psychological capital, self-efficacy enables faculty members to utilize their knowledge and skills more effectively, suggesting that investment in psychological development is just as important as professional training in enhancing academic performance.

Consistent with previous research, self-efficacy has been identified as a strong predictor of job performance in educational settings (Skaalvik & Skaalvik, 2010). This study expands on this knowledge by demonstrating that self-efficacy remains highly relevant in higher education institutions, where faculty members are required to manage complex responsibilities in teaching, research, community engagement, and professional development. As a key psychological resource, self-efficacy strengthens motivation, perseverance, self-regulation, resilience, and adaptability, enabling faculty members to maximize their competencies and achieve outstanding performance outcomes. Therefore, universities should implement initiatives such as mentoring, coaching, constructive feedback, collaborative learning, and recognition programs to

enhance faculty members' sense of self-efficacy. These efforts can make a significant contribution to academic excellence, institutional effectiveness, and the long-term competitiveness of higher education institutions.

Self-Directed Learning and Faculty Performance

The sixth hypothesis asserts that self-directed learning has a significant positive influence on faculty performance. This finding provides empirical evidence that faculty members' ability to independently manage, organize, and continuously improve their teaching processes is a key determinant of academic effectiveness in higher education institutions. In contemporary higher education systems, where knowledge is rapidly evolving and professional expectations continue to expand, faculty performance is increasingly influenced not only by existing competencies but also by the capacity to continually acquire new knowledge and skills. Therefore, self-directed learning emerges as a crucial mechanism through which faculty members maintain professional relevance, enhance their academic capabilities, and sustain high levels of performance across various areas of responsibility..

The significance of this relationship reflects the changing nature of academic work in the 21st century. Universities today operate in a highly dynamic environment characterized by technological disruption, globalization, interdisciplinary collaboration, increased demands for accountability, and rapidly changing student expectations. These developments require faculty members to continually adapt their teaching methods, research competencies, and professional practices. Traditional approaches to professional development, which rely primarily on formal training programs and institutional initiatives, are no longer sufficient to address the complexity and pace of change in higher education. Consequently, faculty members must take increasing responsibility for guiding their own learning and development. Current findings indicate that those who are actively engaged in self-directed learning are more likely to perform effectively because they continuously acquire the knowledge and competencies needed to respond to evolving academic challenges.

The positive impact of self-directed learning on faculty performance can be explained through several theoretical perspectives. One of the most relevant frameworks is Adult Learning Theory, which emphasizes that adults learn most effectively when they are responsible for identifying their learning needs, setting goals, choosing learning strategies, and evaluating outcomes. In an academic setting, faculty members function as professional adult learners who must independently manage their intellectual growth throughout their careers. Self-directed learning enables faculty members to actively identify gaps in their knowledge, seek out relevant learning resources, and apply newly acquired competencies to their professional responsibilities. This process contributes directly to improved performance because learning activities are closely aligned with workplace demands and actual professional goals.

These findings are consistent with previous empirical studies showing the positive impact of self-directed learning on professional competence and performance. Research conducted by Yokoyama (Yokoyama, 2024)(Cher & Lim, 2003) shows that self-directed learners demonstrate higher levels of professional adaptability, knowledge acquisition, and workplace effectiveness. Similarly, Cher and Lim (Cher & Lim, 2003) found that autonomous learning behavior contributes significantly to long-term professional development and improved performance. These studies show that individuals who take responsibility for their own learning are better prepared to respond to changing professional demands and achieve sustained success. The current findings expand on this

knowledge by confirming that self-directed learning plays an equally important role in determining the performance of faculty members at institutions of higher education.

This study highlights that faculty performance should not only be viewed as a reflection of existing qualifications and competencies, but also as the result of continuous learning and adaptation. The crucial role of self-directed learning demonstrates that lifelong learning is essential for maintaining professional effectiveness in higher education. Therefore, universities must foster a learning-oriented environment by providing access to learning resources, encouraging professional development, facilitating knowledge-sharing activities, and promoting learning autonomy through individual and reflective learning practices. By fostering a culture that values intellectual curiosity, innovation, and continuous improvement, higher education institutions can strengthen faculty engagement in self-directed learning, enhance academic performance, and develop a more adaptive and competitive workforce capable of supporting long-term institutional quality and sustainability.

Overall, these findings confirm that self-directed learning is a strong predictor of faculty performance. Through its impact on knowledge acquisition, professional competence, adaptability, innovation, self-regulation, motivation, and lifelong learning, self-directed learning enables faculty members to maintain and continuously improve their effectiveness in teaching, research, and community service. As higher education institutions continue to operate in an increasingly complex and rapidly changing environment, the capacity for self-directed learning will become an increasingly important factor in achieving sustainable academic excellence and institutional success.

Self-Efficacy Mediation

The seventh hypothesis confirms that self-efficacy significantly mediates the relationship between transformational leadership and lecturers' performance. This finding indicates that the influence of transformational leadership on lecturers' performance is not only direct but also operates through an important psychological mechanism, namely self-efficacy. In other words, transformational leadership enhances lecturers' performance by strengthening their belief in their own abilities, which in turn motivates them to perform more effectively in their academic responsibilities.

This finding extends the understanding of transformational leadership by demonstrating that leadership effectiveness does not solely depend on organizational processes, but also on how leadership behaviors shape individual psychological resources. Transformational leaders create a supportive environment through inspirational motivation, intellectual stimulation, individualized consideration, and idealized influence. These leadership behaviors encourage lecturers to perceive themselves as capable professionals who can successfully manage teaching, research, and community service responsibilities. As a result, lecturers develop stronger confidence in their abilities, which ultimately contributes to higher levels of performance.

The mediating role of self-efficacy can be explained through Social Cognitive Theory proposed by Albert Bandura. According to this theory, individual behavior is influenced by the reciprocal interaction between environmental factors, cognitive beliefs, and behavioral outcomes. Transformational leadership serves as an important environmental factor that shapes lecturers' cognitive evaluations of their own abilities. When leaders provide encouragement, constructive feedback, guidance, and opportunities for professional growth, lecturers become more confident in their ability to

successfully complete academic tasks. This efficacy belief then influences the level of effort, persistence, and commitment invested in work activities, thereby improving performance outcomes (Ng, 2015).

The findings show that lecturers who experience strong transformational leadership are more likely to develop positive self-efficacy beliefs, which in turn increase their willingness to undertake challenging academic tasks. In higher education settings, lecturers often face complex demands such as curriculum development, research publication, grant acquisition, student supervision, and community engagement activities. Successfully handling these responsibilities requires not only technical competence but also confidence in one's ability to perform effectively. Therefore, self-efficacy functions as a critical psychological resource that enables lecturers to transform leadership support into tangible performance improvements.

The significant mediating effect also highlights that transformational leadership contributes to lecturers' performance by fostering psychological empowerment. Leaders who promote autonomy, recognize achievements, and provide intellectual support help lecturers develop a stronger sense of competence and professional capability. This psychological condition enhances motivation, resilience, and persistence in facing academic challenges. Consequently, lecturers with high self-efficacy are more likely to maintain performance quality, adapt to changing academic demands, and sustain long-term professional productivity.

This study underscores the importance of integrating psychological factors into leadership–performance models by demonstrating that the effectiveness of transformational leadership depends not only on its direct impact on performance but also on its ability to strengthen lecturers' self-efficacy. As a key mediating mechanism, self-efficacy translates leadership support into greater effort, persistence, adaptability, and academic effectiveness. Therefore, university leaders should complement performance management practices with supportive leadership behaviors such as providing constructive feedback, recognizing achievements, facilitating professional development, and encouraging participation in academic decision-making. These efforts can enhance lecturers' confidence and contribute to continuous improvement in individual performance and overall institutional effectiveness.

Self-Directed Learning Mediation

The eighth hypothesis confirms that self-directed learning significantly mediates the relationship between transformational leadership and lecturers' performance. This finding indicates that transformational leadership enhances lecturers' performance not only through direct influence but also by encouraging lecturers' engagement in continuous learning and professional development. In higher education institutions, where knowledge and professional demands evolve rapidly, self-directed learning becomes a crucial mechanism that enables lecturers to maintain and improve their academic effectiveness.

Transformational leaders create an environment that fosters autonomy, intellectual curiosity, and continuous improvement. Through inspirational motivation, intellectual stimulation, individualized consideration, and idealized influence, leaders motivate lecturers to actively seek new knowledge, develop innovative teaching practices, and enhance their research capabilities. As a result, lecturers become more engaged in self-directed learning activities that contribute to their professional growth.

The mediating role of self-directed learning can be explained through Adult Learning Theory, which emphasizes that professionals achieve optimal

development when they take responsibility for managing their own learning processes. Lecturers who engage in self-directed learning continuously update their competencies, acquire new skills, and adapt to emerging academic challenges. This learning behavior strengthens their ability to perform effectively across teaching, research, and community service domains.

These findings also indicate that self-directed learning enhances faculty performance by improving adaptability and professional competence. In an era of rapid technological and educational change, faculty members who actively seek out learning opportunities are better prepared to respond to new institutional needs, adopt innovative practices, and maintain high levels of productivity. Consequently, self-directed learning serves as a key pathway through which leadership support is translated into improved academic performance.

These findings are consistent with previous research showing that leadership influences performance through learning-related behaviors (Albrecht et al., 2015; Geng & Law, 2019). From a practical perspective, these findings suggest that university leaders should promote a culture of continuous learning by providing access to professional development opportunities, academic resources, and a supportive learning environment. By encouraging self-directed learning, higher education institutions can enhance faculty performance and improve long-term institutional effectiveness.

Sequential Mediation (H9)

Hypothesis 9 confirms the sequential mediating effect of transformational leadership → self-efficacy → self-directed learning → faculty performance. This finding represents the most comprehensive explanatory pathway in the proposed model because it demonstrates that the influence of transformational leadership on faculty performance operates through a series of interrelated psychological and behavioral mechanisms. Rather than influencing performance directly, transformational leadership first shapes faculty members' internal cognitive beliefs, particularly their self-confidence in their ability to successfully carry out academic tasks. This increased self-confidence then encourages faculty members to become more proactive in managing their own learning and professional development. Consequently, faculty performance emerges not merely as a consequence of leadership practices but as the result of a dynamic process in which leadership stimulates psychological empowerment, fosters continuous learning, and ultimately enhances academic effectiveness. The significance of this sequential mediation provides stronger evidence that leadership effectiveness in higher education depends on its ability to influence the mindsets and behaviors of academic staff.

These findings indicate that transformational leadership strengthens faculty members' self-efficacy, which in turn encourages self-directed learning behaviors and ultimately improves performance. These results support the Social Cognitive Theory's argument that environmental factors influence behavior through cognitive processes. When transformational leaders provide encouragement, constructive feedback, guidance, intellectual stimulation, and opportunities for professional growth, faculty members develop a stronger belief in their ability to successfully fulfill their academic responsibilities. This sense of efficacy increases faculty members' willingness to engage in challenging activities, seek new knowledge, and persevere when facing obstacles. As a result, faculty members with high self-efficacy become more active participants in self-directed learning, continuously updating their competencies and adapting to emerging academic demands. Through this process, self-efficacy serves as a vital psychological resource that initiates a series of positive behavioral responses

leading to improved performance.

These findings are consistent with integrated behavioral models in organizational psychology, which emphasize that performance outcomes are often produced through various interrelated pathways rather than through simple direct effects. Previous studies (Schaubroeck et al., 2011); (Oreg, 2011) shows that leadership influences employee outcomes through complex interactions involving cognitive, motivational, and behavioral factors. The current findings extend this perspective to the context of higher education by demonstrating that transformational leadership influences faculty performance through a sequential process involving self-efficacy and self-directed learning. This contributes to the leadership literature by providing empirical evidence that performance improvement is best understood through a multilevel framework that integrates external organizational factors, internal psychological resources, and individual learning behaviors. Such an approach offers a more comprehensive explanation of academic performance than models that focus solely on the direct leadership-performance relationship.

Overall, these findings confirm that faculty performance in higher education is shaped by a complex interplay between leadership, psychological factors, and learning behaviors. Transformational leadership serves as the primary external driver that creates supportive conditions for professional growth, while self-efficacy and self-directed learning function as internal mechanisms that translate the influence of leadership into tangible performance outcomes. The research results indicate that improving faculty performance requires more than just effective leadership; it also requires strengthening faculty members' confidence in their abilities and fostering a culture of continuous learning. These findings are particularly relevant in an era of global higher education transformation, where faculty members are expected to adapt rapidly to technological changes, rising research expectations, international competition, and ever-evolving educational demands. Consequently, the integrated model proposed in this study provides a valuable theoretical framework for understanding academic performance and offers practical guidance for higher education institutions seeking to enhance faculty effectiveness and long-term institutional competitiveness.

CONCLUSION

This study examines the influence of transformational leadership on faculty performance through self-efficacy and self-directed learning in higher education institutions. Findings based on Structural Equation Modeling confirm that all nine hypotheses are supported. Transformational leadership has a significant direct effect on faculty performance and also exerts an indirect effect through self-efficacy and self-directed learning, including a sequential mediation mechanism. These results indicate that leadership not only influences performance directly but also operates through psychological and behavioral pathways that reinforce academic outcomes.

Further findings show that transformational leadership significantly enhances self-efficacy and self-directed learning, while self-efficacy also has a positive effect on self-directed learning and faculty performance. Additionally, self-directed learning has a direct positive effect on faculty performance. The sequential mediation effect confirms that self-efficacy strengthens self-directed learning, which in turn enhances faculty performance. This highlights that academic performance is shaped by an integrated system comprising the influence of leadership, psychological self-efficacy, and self-directed learning behavior.

From a theoretical perspective, this study contributes to the integration of transformational leadership theory, social cognitive theory, and self-directed learning theory into a unified explanatory model. This study expands on previous research by demonstrating that psychological and behavioral mechanisms are sequentially interrelated in explaining performance outcomes, rather than functioning independently. This provides a more comprehensive understanding of how leadership translates into academic performance in the context of higher education.

Practically, these findings emphasize the importance of strengthening transformational leadership practices in higher education institutions, particularly in fostering vision, intellectual stimulation, and individual support. Institutions should also focus on enhancing faculty members' self-efficacy through mentoring and a supportive academic environment, as well as promoting self-directed learning through professional development opportunities and learning autonomy. At the policy level, these results indicate that improving faculty performance requires an integrated approach that combines leadership development and human capacity building.

Despite its contributions, this study is limited by its cross-sectional design and its focus on public higher education institutions, which may restrict its generalizability. Future research is encouraged to use a longitudinal approach or mixed-methods design and to consider additional variables, such as organizational culture or digital competencies, to enrich the model.

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