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Empowering Saudi Academia: Exploring the Role of Entrepreneurial Leadership in Enhancing Faculty Performance through Psychological Empowerment and Team Creativity.

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Abstract. The research aims to explore the role of entrepreneurial leadership in influencing the performance of faculty members in universities of Saudi Arabia, emphasizing the mediating roles of psychological empowerment and team creativity. Based on social exchange theory, the study provides a theoretical framework to comprehend how entrepreneurial leadership creates reciprocal interactions that raise faculty member's individual and group performance. The research study aligns with the strategic goals of Vision 2030, which underline the importance of education sector reforms, the promotion of creative and innovative practices, and enhancing human capital. The study supports national efforts to build a competitive knowledge-based economy while positioning Saudi universities as centers of academic excellence and innovation. The study utilized a cross-sectional quantitative research design and conducted an online survey of faculty members from the universities of Saudi Arabia. Three hundred twenty-two responses were collected using Google Forms and the snowball sampling technique. SPSS-28 and SmartPLS4 analyzed the data to test hypotheses. Reliability was measured using Cronbach Alpha, and validity was assessed through AVE. Descriptive statistics, Pearson correlation analysis, and structural equation modeling were utilized to test hypotheses. The results of the structural equation model revealed that entrepreneurial leadership significantly influences faculty performance both directly and indirectly through psychological empowerment and team creativity. The study extends social exchange theory by demonstrating how entrepreneurial leadership facilitates beneficial exchanges that enhance psychological empowerment and team creativity, both of which are facilitators of faculty performance. Study stated that psychological empowerment increase motivation, and creative teams can drive academic excellence.
Keywords: Entrepreneurial Leadership; Faculty Performance; Psychological Empowerment; Team Creativity; Higher Education Institutions.

1. Introduction

In the era of rapid development, digitalization, and globalization, the higher education sector has become a cornerstone of national development. In Saudi Arabia, the strategic vision outlined in Vision 2030 requires a shift from a resource-based to a knowledge-based economy, thereby placing universities under unprecedented pressure to drive academic excellence, innovation, and human capital development (Amirat & Zaidi, 2020; Ben Hassen, 2022). With the Kingdom undertaking ambitious reforms to elevate its global academic reputation, the role of faculty members as the driving forces of institutional success becomes increasingly essential (Alanazi, 2024). Their productivity, innovation, and commitment are crucial in fostering an innovative culture in learning institutions (Alanazi, 2024; Montash et al., 2025). This can only be achieved by adopting a leadership style that fosters autonomy, creativity, and collective productivity, rather than the traditional approach.

The Saudi higher education system is undergoing an unprecedented transformation under Vision 2030. This strategic planning review categorically restructures universities as world-class, globally

competitive universities that excel in innovation, entrepreneurship, and world-class research (Al Shamlan, 2023; Brahimi et al., 2024). Changes such as increased research funding, international collaborations, and curriculum overhauls reflect a focus on enhancing academic quality and effectiveness (Wang et al., 2024). Simultaneously, a paradigm shift at the global level emphasizes the concept of the "entrepreneurial university," where higher education institutions take an active role in knowledge transfer, spin-off creation, and direct contributions to economic and social advancement (Pacheco & Franco, 2024). Faculty members are at the fulcrum of this transformation; their performance, in terms of research productivity, teaching innovation, community building, and administrative effectiveness, has direct ramifications for institutional success and national development (Bhatti et al., 2022; Pham, 2021). In this context, Vision 2030 is heavily focused on developing human capital and encouraging creative and innovative thinking in the education sector (Abubakar et al., 2024).

Despite huge financial investments and reform efforts, Saudi universities continue to struggle in optimizing faculty effectiveness and establishing an inclusive corporate culture of innovation (Alowayyid & Nasser, 2024). Empirical evidence suggests challenges to research productivity, including investment levels, hesitation towards pedagogical innovation, and varying levels of engagement in applied research and entrepreneurial pursuits (Chen et al., 2025; Neupane et al., 2025). There is a need to identify and cultivate leadership styles that can optimize faculty potential, drive creativity, and enhance performance in alignment with national strategic goals (Subrahmanyam, 2024). Specially the concern is that the specific mechanisms through which such leadership, particularly entrepreneurial leadership (EL), optimizes individual and collective faculty performance in the Saudi academic context are under-researched.

The entrepreneurial leadership (EL) philosophy has gained greater interest in both organizational and academic communities. It has emphasis on opportunity discovery, innovation stimulation, and calculated risk-taking (Ataei et al., 2024; Mehmood et al., 2021). In universities, where traditional hierarchies are most prevalent, EL can act as a change agent by disrupting the status quo and facilitating more faculty involvement in valuable academic endeavors (Estrada et al., 2024). However, the channels through which EL influences enhanced faculty performance remain under-researched, particularly in emerging economies like Saudi Arabia. Despite significant investments in higher education reform, the majority of Saudi universities continue to struggle with issues related to faculty motivation, innovation, and long-term performance (Alanazi, 2024). In this study, EL is suggested as a determinant of faculty performance, due to its emphasis on visionary thinking and the development of new ideas. The connection is not direct; it is possible that it is facilitated by faculty members' psychological empowerment (PE) in collaborative creativity efforts.

Psychological empowerment (PE) refers to a person's sense of importance, competence, self-determination, and influence within a work environment (Oliveira et al., 2023). PE is a psychological state that enhances intrinsic motivation and performance levels. Empowered faculty in academic settings are more likely to take the initiative, innovate in teaching methodology, and engage in collaborative research across departments (Siyal et al., 2023). EL who foster autonomy, recognize achievements, and facilitate participative decision-making can go a long way in fostering PE among faculty members (Bilal et al., 2021). For faculty members, this implies a sense of importance in their work, an assurance of their ability and autonomy to perform their tasks competently, and a feeling that their efforts have a positive impact within their department, institution, and the academy (Fan et al., 2024; Meung, 2024).

Team creativity (TC) refers to a team's ability to generate new and useful ideas through collaboration and information exchange (Liu et al., 2022). In research cultures like universities, where interdependence is crucial in generating innovation and solving complex problems, TC is a key driver of organizational performance (Paredes-Saavedra et al., 2024). EL can foster TC through an open culture,

effective communication between departments, and recognition of innovative work, ultimately leading to improved academic performance (Ibrahim et al., 2024). In the academy, this encompasses breakthroughs in collaborative research, innovative teaching methods created by faculty teams, and innovative solutions to departmental or institutional problems (Meung, 2024).

The faculty performance (FP) is often considered to encompass teaching effectiveness, research productivity, and service involvement, is a multifaceted construct that shapes institutional reputations, student satisfaction, and outcomes for the greater good of society (Vallon, 2024). While previous research has investigated individual and organizational determinants of FP, the EL dimension that drives performance through psychological and innovative means has not been closely examined enough, especially in Saudi Arabia (Al-Dhdan, 2020; Alghamdi, 2024).

1.1. Research Gap

Although the effect of leadership on performance is well-documented, existing gaps in the Saudi higher education context are particularly pronounced regarding the specific variables involved. Firstly, particular studies on EL in Saudi universities are only beginning to emerge. Leadership studies primarily focus on either transformational or transactional leadership styles, without considering the specific factors of EL pertinent to innovation and proactivity (Mehmood et al., 2021; Mutabelezi & Sethibe, 2023). Secondly, the mediation processes between leadership and performance, between leadership and PE, and between leadership and TC are underdeveloped in this context. Although PE is known to be a mediator in other contexts (Meung, 2024; Stanescu et al., 2021), and TC plays a crucial role in innovation (Huang et al., 2022), the specific mediator roles of PE and TC in mediating between EL and academic performance in Saudi academia are not well documented. Thirdly, the theoretical formulation of SET in explaining how EL generates mutual exchanges (e.g., from leader support to empowerment, leading to strengthened performance reciprocation) in academic teams is novel in this institutional and cultural context. Lastly, there is a lack of comprehensive empirical research on this specific chain of influence (EL → PE/TC → FP) that is specific to the strategic priorities and unique context of Saudi higher education institutions within the context of the Vision 2030 reforms (Al Shamlan, 2023).

1.2. Research Objectives

The primary objective of this research is to empirically investigate the role of EL in enhancing FP in Saudi universities, with a specific focus on the mediating processes of PE and TC. Drawing on SET (Blau, 1964; Islam & Asad, 2024), which posits that relationships evolve through successive stages of reciprocal exchanges characterized by the building of trust and obligation over time, the current research aims to: (1) Test the direct impact of EL on FP; (2) Test the direct impact of EL on PE and TC; (3) Test the direct impacts of PE and TC on FP; (4) Test the mediating effects of PE and TC in the dynamic exchange between EL and FP; and (5) Provide a theoretically informed framework (drawing on SET) that explains how EL builds reciprocal, high-quality exchanges that build up individual (PE) and collective (TC) assets that yield enhanced FP. The current research is particularly interested in contributing to the attainment of the education and human capital development objectives set out in Saudi Vision 2030.

This study primarily focuses on the teaching staff in the public and well-known private universities of the Kingdom of Saudi Arabia. It analyzes the relationship between four basic variables: EL (subjectively assessed by academic staff members), PE, TC (within team and departmental contexts), and FP (self-assessed, subject to supplementation by objective ratings if feasible). The theoretical framework used is SET. While the study acknowledges the presence of alternative leadership styles, individual demographic variables as potential moderators (even though they are potentially

controlled), and more general organizational culture factors outside the immediate department or team environment, it does not focus on these aspects in its main analysis.

1.3. Theoretical Framework and Hypothesis Development

Based on Social Exchange Theory (SET) (Blau, 1964), the study examines the impact of EL on the performance of the faculty of the universities of Saudi Arabia. SET postulates that social interactions have their basis in reciprocal exchange, where individuals respond positively to facilitative behaviors by expressing commitment and greater contribution (Ahmad et al., 2023; Kumar & Shailaja, 2024). In this framework, EL is defined as a leadership style that invests in faculty by empowering them, recognizing their contributions, and providing creativity-based opportunities, which the faculty members respond to by increasing their quality of performance and creativity (Nawaz et al., 2025). This provides a robust theoretical foundation for understanding how EL supports both individual and group-based driving forces of academic excellence within the transformative Saudi Arabia's Vision 2030 (Nawaz et al., 2025; Obuobisa-Darko, 2024).

EL is widely recognized as a pivotal factor impacting performance in academic institutions, as it stimulates risk-taking, creativity, and proactive engagement (Ataei et al., 2024). In universities, the FP extends beyond teaching to include research productivity, service, and the ability to innovate (Ibrahim et al., 2024). EL increases these outcomes by developing a culture that identifies opportunity and facilitates empowerment (Wahab & Tyasari, 2020). Moreover, EL inspires the faculty to excel beyond their traditional duties and engage in value-creating scholarly and academic activities (Renko et al., 2015; Wahab & Tyasari, 2020). Mehmood et al. (2021) and Ibrahim et al. (2024) confirm that EL creates a significant influence on organizational performance by stimulating creativity and novelty. Therefore, the study hypothesizes that:

H1: Entrepreneurial leadership has a significant influence on faculty performance.

Psychological empowerment comprises employees' views of the importance, ability, autonomy, and influence of their workplaces (Spreitzer, 1995). Faculty members who feel empowered depict greater creativity, motivation, and commitment to the activities of teaching and research (Oliveira et al., 2023; Siyal et al., 2023). EL initiates PE by delegating significant responsibility and authority, acknowledging achievements, and engaging the faculty members in decision-making processes (Bilal et al., 2021). By fostering confidence and a sense of importance among faculty members, EL promotes ownership and intrinsic motivation for academic tasks (Joel & Oguanobi, 2024). According to the studies conducted by Nguyen et al. (2021) and Klein and Zwilling (2022), EL and empowerment outcomes have a positive association in various settings. Therefore, it is hypothesized that:

H2: Entrepreneurial leadership has a significant influence on faculty's psychological empowerment.

Team creativity reflects the ability of a group to develop novel and utilitarian solutions by cooperation and collaboration, information/ knowledge exchange, and overcoming barriers (Liu et al., 2022). In universities, TC forms the backbone of interdisciplinary research, creative teaching, and institutional problem resolution (Torrents et al., 2021). EL facilitates TC by allowing a psychologically safe climate, cross-departmental interactions, and valuing creative team initiatives (Ibrahim et al., 2024; Meung, 2024). Empirical research suggests that a leadership style that values autonomy and creativity can foster collective creativity and organizational development (Ibrahim et al., 2024; Royston & Reiter-Palmon, 2022; Torrents et al., 2021). Therefore, it is hypothesized that:

H3: Entrepreneurial leadership has a significant influence on the faculty team's creativity.

Employees who demonstrate high levels of PE exhibit greater initiative, creativity, and resilience in their teaching and research activities (Torrents et al., 2021). Psychological empowerment facilitates

self-determination and develops confidence, allowing the faculty members to attempt novel pedagogical practices and undertake high-impact research practices (Nguyen et al., 2021; Siyal et al., 2023). Empirical research verifies that empowered individuals provide more meaningful contributions to organizational performance and creativity (Fan et al., 2024; Oliveira et al., 2023). In the case of higher education settings (i.e., colleges and universities), empowerment supports superior FP that aligns with faculty members' individual aspirations and the institutional objectives (Nawaz et al., 2025). Therefore, it is hypothesized that:

H4: Psychological empowerment has a significant influence on faculty performance.

Team creativity improves FP by utilizing collective intelligence, teamwork (i.e., cooperation and collaborations), and cross-functional problem-solving (Paredes-Saavedra et al., 2024; Torrents et al., 2021). In academia, creative teams enhance research outcomes (via initiatives and breakthroughs), creative course design, and creative solutions to institutional problems (Obuobisa-Darko, 2024). Induced TC by EL enhances the faculty's ability to co-construct and practice innovative practices to improve the quality of instruction, research, and service (Ibrahim et al., 2024). Mehmood et al. (2021) have shown that collective/team creativity enhances overall institutional performance and reputation. Therefore, it is hypothesized that:

H5: Team creativity has a significant influence on faculty performance.

SET suggests that individuals respond to support from leaders by demonstrating improved performance outcomes (i.e., quantity and quality) (Ahmad et al., 2023). EL offers resources and recognition that promote empowerment, which faculty members reciprocate by enhancing their discretionary efforts in the areas of research, teaching, and service (Kasim, 2021). Stanescu et al. (2021) and Klein and Zwilling (2022) suggest that empowerment serves as a mediator between leadership and employee performance and creativity. In the academic environment, this indicates that the impact of EL on faculty performance is predominantly transferred through increased psychological empowerment (Yamao, 2024). Therefore, it is hypothesized that:

H6: Psychological empowerment significantly mediates the relationship between entrepreneurial leadership and faculty performance.

Besides supporting employee's PE, EL facilitates group innovation by improving team functioning (Meung, 2024; Rababah, 2023). Faculty teams that engage in collaborative/team creative work have a greater ability to produce creative solutions, interdisciplinary research/academic outputs, and innovation in teaching (Huang et al., 2022; Ibrahim et al., 2024). Through the development of an atmosphere of trust and collaboration, EL has an indirect positive impact on faculty performance through team creativity (Alalfy et al., 2024; Mehmood et al., 2021). Thus, according to the SET assumption, reciprocal exchanges on the group level, it is hypothesized that:

H_7: Team creativity significantly mediates between the relationship of entrepreneurial leadership and faculty performance.

Based on the hypotheses following theoretical framework was designed (Figure 1).

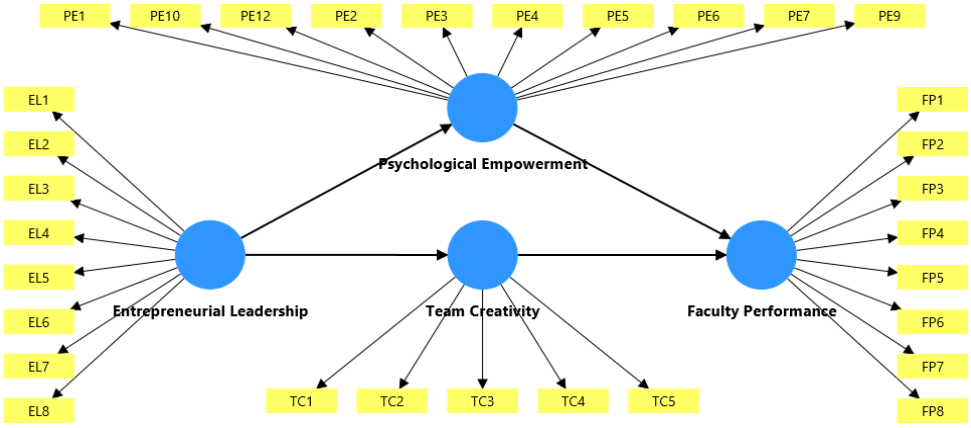

Figure 1. Theoretical Framework

2. Materials and Methods

2.1. Measurement

To empirically examine the postulated relationships between EL, PE, TC, and FP, the study employed highly validated and standardized measures. All constructs were measured on a five-point Likert scale ranging from 1 ("strongly disagree") to 5 ("strongly agree") to facilitate comparability and consistency in the collected data. Due to Saudi Arabian HEIs' linguistic diversity, the survey was administered in both English and Arabic. The translation process utilized the rigorous back-translation method to ensure semantic equivalence and cultural acceptability of the survey items.

The EL scale employed an 8-item measure by Renko et al. (2015) designed to assess leaders' capacity to spur initiative and innovation in their subordinates. One of the interesting items of this scale is, "My department head challenges and pushes me to act more innovatively." Confirmatory factor analysis (CFA) provided acceptable factor loadings, thus ensuring the preservation of its unidimensional construct. The 12-item scale developed by Spreitzer (1995) was employed to assess PE, which encompasses four aspects: meaning, competence, self-determination, and impact. In the CFA, two items had poor factor loadings and were dropped, resulting in a strong 10-item scale for subsequent analysis. TC was assessed using a 5-item measure developed by Tierney et al. (1991) to evaluate team-level problem-solving and performance innovation. Example items were "Our team is commended as an excellent role model for our creativity." CFA estimates indicated an excellent model fit. Lastly, FP was assessed using an 8-item measure adapted from Wahab and Tyasari (2020) to evaluate academic engagement, communication, decision-making, and research productivity. The scale exhibited excellent psychometric features and a unidimensional factor structure.

2.2. Sampling and Procedure

To reveal the impact of EL on FP through PE and TC, a triadic data collection strategy (i.e., three waves) was employed. A longitudinal design was employed (i.e., between waves, an approximately four-week intervals were inserted) to reduce common method bias by providing a temporal distinction between variables, as proposed by Podsakoff et al. (2012). The participants were selected from the academic faculty of the overall 20 top-ranked HEIs in Saudi Arabia, as outlined in the Times

Higher Education World University Rankings 2025. Purposive sampling was used to select participants who had been known for their relevant domain knowledge in academic and leadership practices prevalent in HEIs. Academic staff of different ranks, ranging from lecturers to full professors, were included to gather a representative sample with varied opinions and experiences. The survey form was distributed using Google Forms, and the links were shared through institutional email lists and professional WhatsApp groups to ensure optimal access and response rates. The research aims were described to the participants beforehand, and assurances regarding confidentiality and anonymity were provided. No personal data were collected, and the responses were used only for academic purposes. These procedures were followed in accordance with ethical standards to ensure research integrity and foster respondent trust.

2.3. Data Collection

Data were collected in three waves over four months (January 2025 – March 2025), with each wave focusing on different variables. In the first wave, data were collected on demographics (e.g., age, gender, education, experience, academic position, and marital status) and entrepreneurial leadership, yielding 500 responses. Data regarding psychological empowerment and team creativity were collected during the second phase, resulting in 422 responses. In the third phase, data were collected regarding faculty performance, yielding 334 responses. After removing 24 outliers, the sample size was 310. The sample consists of 56.8% males and 43.2% females, indicating a moderate gender balance.

Table 1 shows that the majority are between 25 and 35 years old (45.8%), followed by those between 36 and 45 years old (30%). The majority of participants held a Ph.D. (64.2%), indicating a highly educated academic group. For professional experience, 30% indicated 1–5 years, and 23.9% indicated 6–10 years. Academic ranks are assistant professors (34.5%), lecturers (30%), associate professors (22.6%), and professors (12.9%). The majority of the respondents (58.7%) indicated that they were married. The demographic characteristics of the study participants indicate that the sample population from Saudi Arabia's higher education sector aligns with strategic objectives, such as Saudi Vision 2030. These findings highlight the crucial role of higher education in promoting a sustainable, inclusive, and research-driven system that aligns with national innovation and development objectives.

Table 1. Demographic Characteristics

Demographic Characteristics		**Frequency**	**Percentage**
Gender	Male	176	56.8
	Female	134	43.2
Age	Less than 25 years	19	6.1
	25-35 years	142	45.8
	36-45 years	93	30
	46-55 years	43	13.9
	Above 55 years	13	4.2
Education	Master	111	35.8
	Ph.D.	199	64.2
Experience	Less than 1 year	34	11.0

	1-5 years	93	30.0
	6-10 years	74	23.9
	11-15 years	54	17.4
	16-20 years	27	8.7
	Above 20 years	28	9.0
Position	Lecturer	93	30.0
	Assistant Professor	107	34.5
	Associate Professor	70	22.6
	Professor	40	12.9
Marital Status	Single	95	30.6
	Married	182	58.7
	Separated	33	10.6
Note: N = 310			

2.4. Data Analysis

This study employed partial least squares structural equation modeling (PLS-SEM) to validate theoretical models. Since PLS-SEM summarizes several latent variables, it can address some measurement shortcomings prevalent in social sciences studies (Joseph Jr, 2021). Structural equation modeling estimates and calibrates observed variables to reduce ambiguities regarding latent constructs, while concurrently describing causal relationships between latent and observed variables (Hair et al., 2020).

3. Results

3.1. Assessment of Reflective Measurement

The reflective measurement model (Table 2) analyzes the psychometric properties of four major latent constructs (i.e., EL, PE, TC, and FP). Each of these constructs was tested against requirements in reflective measurement models, including indicator loadings, internal consistency reliability, convergent validity, and diagnostics for multicollinearity. All these analyses are important in determining the validity and reliability of constructs when using PLS-SEM.

Const-ructs	**Items**	**Loading**	**AVE**	**CR**	**rho-A**	**CA**	**VIF**
EL	EL 1-8	0.56-0.75	0.56	0.84	0.81	0.79	1.26-1.64
PE	PE1-7, 9,10, 12	0.56-0.79	0.57	0.89	0.86	0.85	1.45-2.16
TC	TC 1-5	0.66-0.78	0.51	0.79	0.77	0.76	1.37-1.71
FP	FP 1-8	0.54-0.83	0.51	0.89	0.88	0.86	1.27-2.36

Note: Cronbach alpha (CA); Composite reliability (CR); Average variance extracted (AVE); Variance inflation factor (VIF)

Table 2: Assessment of Reflective Measurement

The loadings of every construct range from 0.536 to 0.831, thus meeting the acceptable threshold of 0.50, which ensures strong indicator reliability (Joseph Jr, 2021). The average variance extracted (AVE) for all constructs meets the minimum of 0.50 (Fornell & Larcker, 1981), thus ensuring adequate convergent validity. In particular, AVE for EL is 0.558, PE is 0.566, TC is 0.511, and for FP, 0.510, which means each of the constructs explains more than half of the variance in its respective indicators.

Internal consistency reliability is reflected in CR scores ranging from 0.786 to 0.891, which is significantly higher than the required minimum of 0.70 (Joseph Jr, 2021), thereby establishing construct reliability. Additionally, Cronbach's Alpha scores range from 0.761 to 0.861, and rho-A scores range from 0.770 to 0.876; both of these are within acceptable limits, thereby establishing internal consistency across all constructs. Lastly, VIF values range from 1.261 to 2.363 and are far below the conservative threshold of 3.3 (Kock, 2017), indicating that multicollinearity is not a significant issue. The results demonstrated in Table 2 confirm that the reflective measurement model is statistically valid and provides a sufficient structural analysis.

3.2. Discriminant Validity

Table 3 presents the results of discriminant validity testing for four constructs (i.e., EL, PE, TC, and FP) based on both the Fornell–Larcker criterion and the HTMT ratio. The discriminant validity ensures that each construct is statistically unique and not too highly correlated with other constructs in the model. According to the Fornell–Larcker criterion, discriminant validity is confirmed if the square root of the AVE of every construct is higher than its correlations with any other construct (Fornell & Larcker, 1981). The table shown here indicates that the square roots of the AVEs of EL (0.638), PE (0.664), TC (0.715), and FP (0.714) are all higher than the correlations between constructs. The correlation achieved between PE and FP is 0.690, which is lower than both the square roots of the AVEs for these constructs and thus indicates their discriminant validity. These values show that every construct explains a higher percentage of variance with its respective indicators than with the other constructs.

Table 3: Discriminant Analysis

Constructs	**Fornell Larcker Criteria**				**HTMT Criteria**			
	EL	**PE**	**TC**	**FP**	**EL**	**PE**	**TC**	**FP**
EL	*0.64*							
PE	0.46	*0.66*			0.54			
TC	0.48	0.54	*0.72*		0.59	0.67		
FP	0.42	0.69	0.49	*0.71*	0.45	0.69	0.58	

Note: The diagonal italic numbers in Fornell- Larcker section are square root of AVE of each construct, and other numbers are correlation between constructs

The HTMT criterion offers a stricter test, indicating that HTMT values must be below 0.85 for conceptually different constructs (Henseler et al., 2015). For the current analysis, all the HTMT values are below the set value, with a maximum of 0.673 (for PE and FP), thus confirming discriminant validity. Together, the two criteria confirm the idea that EL, PE, TC, and FP are statistically and conceptually distinct constructs, thereby validating the measurement model for the subsequent structural equation modeling.

3.3. Descriptive Statistics and Correlation Analysis

The descriptive statistics (Table 4) reveal uniformly positive mean scores for all variables, indicating a generally positive attitude among the faculty members. EL had a mean of 3.992 (SD = 0.417), indicating favorable but relatively dissimilar views of leadership behavior. PE had a higher mean of 4.256 (SD = 0.403), indicating strong agreement and relatively consistent responses toward faculty empowerment. TC had a mean of 4.181 (SD = 0.445), indicating a positive opinion with moderate variability. FP had the highest mean of 4.337 (SD = 0.404), indicating strong and consistent agreement with faculty members' self-assessments of their effectiveness in performance.

Table 4: Descriptive and Correlation Analysis

Descriptive Statistics			**Pearson Correlation Analysis**					
	Mean	**S. D**	**Gen**	**Exp**	**EL**	**PE**	**TC**	**FP**
Gen	1.43	0.49	1.00					
Exp	3.10	1.44	0.00	1.00				
EL	3.99	0.42	0.08	-0.01	1.00			
PE	4.26	0.40	0.15*	0.18**	0.44**	1.00		
TC	4.18	0.45	0.20**	0.05	0.46**	0.54**	1.00	
FP	4.34	0.40	0.11	0.09	0.38**	0.68**	0.48**	1.00

Note: *. Correlation is significant at the 0.05 level (2-tailed);

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4 also presents the correlation analysis between the key constructs (i.e., EL, PE, TC, and FP) and demographic factors, including gender and experience. Interestingly, EL is positively correlated with PE ($r = 0.437$, $p < 0.01$), TC ($r = 0.463$, $p < 0.01$), and FP ($r = 0.375$, $p < 0.01$), indicating that EL enhances the development of empowerment, TC, and overall FP. Furthermore, PE is also highly correlated with TC ($r = 0.543$, $p < 0.01$) and FP ($r = 0.675$, $p < 0.01$), validating its mediator role in this context. Furthermore, TC is also highly correlated with FP ($r = 0.478$, $p < 0.01$), indicating that team-level innovation has a positive impact on FP. Furthermore, gender is weakly but statistically correlated with PE ($r = 0.145$, $p < 0.05$) and TC ($r = 0.202$, $p < 0.01$). In contrast, experience is positively correlated with PE ($r = 0.182$, $p < 0.01$), suggesting that demographic factors have a subtle impact on perceptions of empowerment and creativity among faculty members.

3.4. Structural Equation Modelling

The SEM findings, which were empirically validated using the SmartPLS 4 tool, described the complex interrelationships between EL, PE, TC, and FP in Saudi universities (Table 5). According to the normative SEM process, path coefficients (β) were tested for statistical significance using bootstrapping with 5,000 subsamples. Threshold criteria for significance testing were a t-value of more than 1.96 ($p < 0.05$) and bias-corrected confidence intervals (BCCI) that did not include zero (Joseph Jr, 2021). All the proposed relationships met these conditions, thus establishing the robustness of the model, which accounted for 49.7% of FP's variance, reflecting high predictive power in the context of behavioral studies.

Hypothesis 1 proposed that EL and FP would have a direct positive association. There is strong evidence for this ($\beta = 0.357$, $t = 9.751$, $p < 0.001$), indicating that entrepreneurial leadership, in itself, enhances faculty performance. Hypothesis 2 tested the influence of EL on PE and found a significant positive influence ($\beta = 0.459$, $t = 10.129$, $p < 0.001$), as predicted by SET, which posits that leaders' sponsorship of innovation encourages faculty members' sense of autonomy and meaning. Likewise, H_3 testing the influence of EL on TC was confirmed ($\beta = 0.479$, $t = 10.797$, $p < 0.001$), showing that entrepreneurial leaders successfully enable collaborative innovation. Hypothesis 4 proved PE's strong direct influence on FP ($\beta = 0.596$, $t = 12.714$, $p < 0.001$), emphasizing that empowered teachers perform better. Hypothesis 5, testing TC's influence on FP, was significant but small ($\beta = 0.173$, $t = 3.476$, $p < 0.001$), showing that creative collaboration makes incremental contributions to performance outcomes.

Table 5: Results (Structural Equation Modelling)

Hypothesis	Direct / Indirect Relationships	b value	T values	P values	BCCI	
					2.50%	97.50%
H_1	EL -> FP	0.36	9.75	0.00	0.27	0.42
H_2	EL -> PE	0.46	10.13	0.00	0.35	0.53
H_3	EL -> TC	0.48	10.79	0.00	0.36	0.56
H_4	PE -> FP	0.59	12.71	0.00	0.49	0.68
H_5	TC -> FP	0.17	3.48	0.00	0.08	0.27
H_6	EL -> PE -> FP	0.27	7.31	0.00	0.19	0.34
H_7	EL -> TC -> FP	0.08	3.11	0.00	0.03	0.14

Note: EL = Entrepreneurial Leadership; FP = Faculty Performance; PE = Psychological Empowerment: TC = Team Creativity.

Regarding mediation, Hypothesis 6 posited PE as a mediator between EL and FP. The large indirect effect ($\beta = 0.273$, $t = 7.308$, $p < 0.001$) confirms that 76.5% of the total effect of EL on FP is mediated through empowerment.

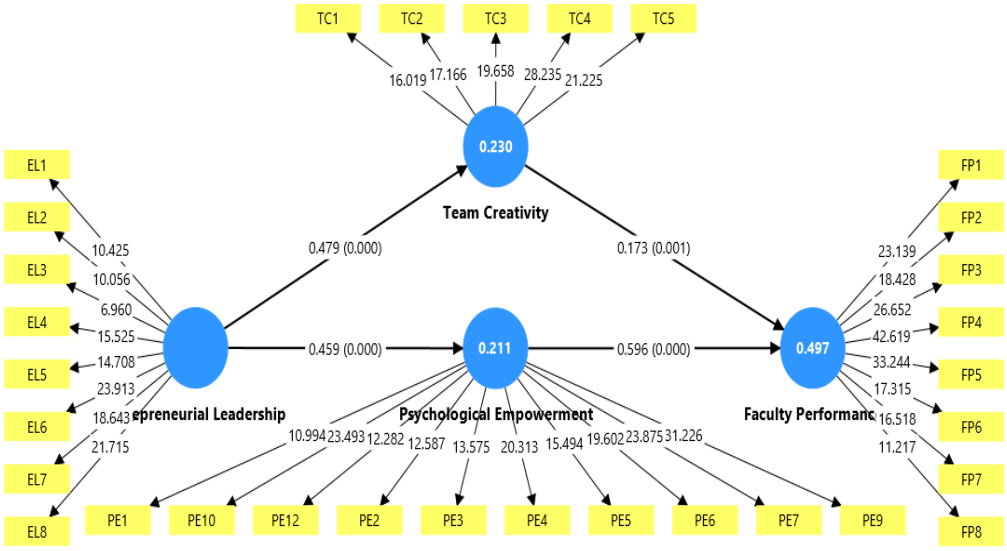

Figure 2. Results (Hypothesis Testing)

Hypothesis 7 examined TC's mediating effect and found a slightly lower but still significant indirect effect (β = 0.083, t = 3.111, p = 0.002). Although labeled as "partially supported" due to its comparatively limited contribution (23.2% of the total effect), this finding is still noteworthy (Table 5, Figure 2). This subtle finding suggests that both processes exist but that PE is the overarching conduit through which EL contributes positively to performance, with TC playing an additive role.

3.5. Model Evaluation

Table 6 provides critical measures of model fit, explanatory power, and predictive relevance for constructs (i.e., EL, PE, TC, and FP).

Table 6: Model Evaluation

Constructs	R^2_{adj}	SRMR	NFI	$Q^2_{Predict}$	Q^2 Effect
EL					
FP	0.497			0.266	Moderate
PE	0.211	0.072	0.933	0.358	Large
TC	0.230			0.379	Large

Note: SRMR (Standardized Root Mean Square Residual); NFI (Normed Fit Index); Q^2 for Predictive Relevance

The adjusted R^2 value for FP is 0.497, accounting for nearly 50% of the variance, which is a moderate to significant level of explanatory power (Cohen et al., 2013). The adjusted R^2 for PE and TC is 0.211 and 0.230, respectively, indicating moderate predictive accuracy for these measures. The SRMR is 0.072, which is below the recommended 0.08, indicating an acceptable model fit. Additionally, the NFI is 0.933, exceeding the minimum acceptable value of 0.90, indicating a good fit between the observed data and the hypothesized model (Joseph Jr, 2021). The Q^2 predictive relevance values, based on blindfolding procedures, are 0.266 for FP (moderate), 0.358 for PE (large), and 0.379 for TC (large), all of which exceed the 0.15 cutoff for significant predictive relevance (Hair et al., 2020).

Overall, the findings demonstrate the robustness of the model, both in terms of fit and predictive power (Table 6).

EL had a significant and direct impact on faculty performance FP. This finding suggests that if leaders practice stimulating creativity, taking calculated risks, and supporting novel solutions, the faculty will likely improve their performance on dimensions of teaching, research, and service. Moreover, the analysis revealed that EL has the indirect effect of augmenting the FP by stimulating PE and TC. Out of these two mediators, PE proved the greater pathway. Therefore, if faculty members feel confident, grateful, and empowered to influence decisions, they become more motivated and effective, which explains the greater portion of the positive influence of EL. Though TC also played a role, it tended to be relatively smaller, which reflects that TC adds value by providing novelty that comes by virtue of collaboration. Overall, the results (Tables 4, 5, and 6) suggest that both empowerment of individuals and team creativity play a significant role in the association of EL to enhance faculty outcomes.

4. Discussion

This empirical study validates a theoretically sound model that explores the role of EL in enhancing FP in Saudi Arabian universities through intervention variables of PE and TC. Aligning with the Saudi Vision 2030 transformative agenda for tertiary education (Amirat & Zaidi, 2020; Ben Hassen, 2022), the empirical results provide sophisticated explanations of the psychosocial processes through which leadership contributes to excellence in performance. The results strongly validate SET (Blau, 1964), where EL strengthens mutual social exchanges that maximize individual (PE) and collective (TC) capabilities, which in turn drive FP (Nawaz et al., 2025). In the following sections discuss these results, their theoretical and practical implications, contextual complexities, and possible directions for further studies.

4.1. Theoretical Contributions and Main Findings

The significant direct influence of EL on FP is a testament to its role as one of the major enablers in the academic environment. In contrast to traditional leadership models prevalent in Saudi institutions, EL (i.e., focusing on opportunity discovery, autonomy delegation, and calculated risk-taking) actively resists hierarchical stagnation (Ataei et al., 2024). This aligns with international calls for "entrepreneurial universities" (Pacheco & Franco, 2024) and addresses, in particular, deficiencies in Saudi Arabia surrounding faculty motivation and innovation (Alanazi, 2024). Leaders who encourage faculty to "act more innovatively" (Renko et al., 2015) establish environments where performance transcends routine expectations, thus encouraging active participation in research, teaching, and addressing institutional issues.

In addition, the powerful impact of EL on PE and TC also demonstrates its dual ability to empower individuals and teams. By providing meaningful autonomy, acknowledging achievements, and engaging faculty in decision-making (Klein & Zwilling, 2022), EL constructs the four pillars of PE: meaning (alignment of work values), competence (self-certainty of skill), self-determination (autonomy in task accomplishment), and impact (sense of influence). At the same time, EL fosters TC by promoting cross-departmental cooperation, open communication, and a culture of collective innovation (Ibrahim et al., 2024). This double attention is aligned with SET's key principle: leader investments (e.g., trust, resources) elicit reciprocal faculty behaviors beyond compliance to intrinsic motivation and cooperative synergy (Ahmad et al., 2023).

The strongest finding is that PE serves as a mediator, accounting for 76.5% of the overall influence of EL on FP. This underscores that faculty reciprocate EL's support mainly through individual psychological change. Empowered faculty, perceiving higher ownership and efficacy, promote pedagogical innovation (e.g., embracing technology-infused learning), participate in high-impact research, and participate in administrative service above the minimum requirement (Siyal et al., 2023). This coheres with SET's focus on individualized reciprocity: when leaders invest in faculty's psychological well-being, faculty reciprocate through discretionary effort that enhances performance (Nguyen et al., 2021).

Conversely, the mediating effect of TC, although significant, accounted for only 23.2% of the total effect of EL. This suggests that TC, though significant, is primarily a supplementary process. The deeply entrenched reliance on hierarchical frameworks in Saudi academia may still impede seamless team-based innovation (Chen et al., 2025). Although EL encourages collaboration, translating TC into quantifiable deliverables (i.e., such as patents and interdisciplinary publications) may necessitate more profound cultural transformations. The efficacy of PE highlights faculty members' emphasis on individual agency as a crucial precursor to effective performance. In a reform-minded setting, PE is a more proximal catalyst for change than team dynamics. TC was also assessed in the study through self-reported TC scales (Tierney et al., 1991). Utilizing objective assessments, such as interdisciplinary grants awarded, may uncover stronger associations between TC and FP.

4.2. Practical Implications

The primacy of PE, call for a visionary recasting of Saudi universities' leadership and organizational habits. To enable institutions to leverage EL as a force behind Vision 2030's human capital goals, institutions need to transition from theoretical support to implementing creativity and empowerment in the classroom. Systemic interventions are needed at the leadership, structural, and cultural levels.

Above all, EL development must be an institutional priority. Academic leaders (e.g., deans, department chairs) need specialized development opportunities beyond general management training. Programs should integrate Renko et al.'s (2015) EL measures opportunity recognition, innovation sponsorship, and autonomy delegation into practical models. Most critically, incentive systems must reward leaders who model empowerment behaviors; promotion criteria could include measures such as faculty participation in decision-making ratios or innovation grants won by their teams. This aligns leadership accountability from bureaucratic control to faculty enablement, directly capitalizing on EL's twin ability to enhance individual agency (PE) and collective synergy (TC).

Concurrently, institutions of higher learning must design systems that institutionalize PE. Our research indicates that PE accounts for 76.5% of the effect of EL on FP, making it a priority to maintain faculty members' sense of purpose, expertise, and influence through entrenched practices. HEIs must accept participatory models of governance, such as rotating senates collaborating to develop curriculum reform or research projects. This institutionalizes Spreitzer's (1995) "self-determination" dimension, converting input into effective influence. Additionally, recognition systems must evolve to reward unconventional contributions, such as digital badges for innovative pedagogical ideas, sabbaticals for community-based projects, or "impact narratives" that describe how research impacts local industries.

Third, the latent potential of TC must be intentionally developed and nurtured. Although TC's mediating role was secondary, its strong correlation with FP indicates it is an under-leveraged lever. Universities must establish innovation infrastructure: physical and virtual "collaborators" with seed

grants for cross-disciplinary teams on national priorities (e.g., renewable energy, water scarcity). Bureaucratic drag must be minimized—streamlining cross-department MoUs, merging joint appointments, and adopting workload models that reward collaborative time. To capitalize on the effect of TC, performance reviews must include team-based measures, such as co-authored patents, cross-college course designs, or community solutions co-designed with industry partners. This enacts Tierney et al.'s (1991) TC scale by recognizing real collective gains. Most importantly, such initiatives must be paired with EL training; leaders with training in creating psychological safety will more effectively empower teams to take creative risks without fear of punitive failure (Paredes-Saavedra et al., 2024).

Finally, these impacts lead to one mandate: the redefinition of universities as entrepreneurial ecosystems. That is, matching recruitment, promotion, and funding policies with EL values, PE, and TC. This includes hiring leaders with established empowerment practices, offering "innovation sabbaticals" to professors to develop ventures, and departmental budgeting based on outcome-driven team creativity. This integration yields sustainability that extends beyond individual leaders, embedding empowerment and creativity into the institution's fabric (i.e., a crucial first step toward Saudi Arabia's transformation into a knowledge-based economy).

4.3. Limitations and Future Directions

While this study is rich in insights, some limitations must be noted. First, reliance on self-reported measures of FP can create a potential for common method bias and social desirability effects, despite the mitigating factors offered by the longitudinal design. Future studies should incorporate findings based on objective indicators (e.g., publication counts, patent applications, and teaching ratings) to enhance validity. Second, a focus on Saudi Arabia, while contextually justified for Vision 2030, limits the generalizability of the findings. Cross-cultural comparative studies across GCC nations may enable inferences about cultural moderators (e.g., collectivism and power distance) affecting the efficacy of EL. While the cross-sectional mediation approach is robust, it precludes firm conclusions about causality; longitudinal or experimental designs that track leadership interventions over time would strengthen causal inferences.

More studies would investigate untested boundary conditions, such as disciplinary variation (STEM vs. humanities) or institutional levels (research-intensive vs. teaching-oriented universities), which can modulate the relationship between EL and FP. The limited mediating role of TC suggests that institutional enablers (e.g., funding systems, policy structures) play key amplifying role subsequent research should examine how university policies facilitate the conversion of TC into concrete outputs.

Another limitation is the use of self-reported faculty performance, which is susceptible to perceptual error. Future studies must combine objective indicators, such as the number of publications and citations, grants, teaching evaluations, and service accomplishments, with survey data to obtain a more inclusive and informative measure of work. Lastly, individual variables such as gender dynamics, emphasized in our correlation analysis, deserve further qualitative examination to inform inclusive empowerment strategies.

4.4. Conclusion

This research contributes a nuanced conceptualization of leadership-performance dynamics in reshaping higher education systems. It reinforces that entrepreneurial leadership is more than a strategic option but a relational power in motivating FP first through PE and second through TC. Placing SET in the context of Saudi Vision 2030, we expose how leader-faculty relationships based on trust, autonomy, and reciprocity become the pillars of institutional innovation. In Saudi universities, investing

in ELs who empower and foster TC is not only an operational necessity but also a strategic imperative to fulfill their role as drivers of a knowledge-based economy.

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References

Abubakar, A. A., Al-Mamary, Y. H., Singh, H. P., Singh, A., Alam, F., & Agrawal, V. (2024). Exploring factors influencing sustainable human capital development: Insights from Saudi Arabia. *Heliyon*, *10*(16).

Ahmad, R., Nawaz, M. R., Ishaq, M. I., Khan, M. M., & Ashraf, H. A. (2023). Social exchange theory: Systematic review and future directions. *Frontiers in Psychology*, *13*, Article 1015921.

Al-Dhdan, A. (2020). Psychological empowerment and its relationship to creative behavior among a sample of faculty members at Saudi universities. *Islamic University Journal for Educational and Social Sciences*, *4*(2), 415-500.

Al Shamlan, A. E. (2023). *Resilient leadership: A study connecting Saudi Vision 2030 and the higher education sector* Victoria University].

Alalfy, H. R., Alaraby, H. Y., Gaballa, A. S., Shalaby, S., & Alrefai, Z. A. (2024). Women academic leaders in Saudi universities: Educational and psychological vision. *International Journal of Advanced and Applied Sciences*, *11*(10), 76-82. https://doi.org/10.21833/ijaas.2024.10.008

Alanazi, A. H. (2024). *Achieving global recognition: Higher education rankings and the commitment to quality in Saudi Arabia's 2030 Strategic Vision* University of Glasgow]. https://theses.gla.ac.uk/84488/

Alghamdi, A. M. (2024). The impact of psychological empowerment on the possession of entrepreneurial characteristics among academic leaders at Princess Nourah Bint Abdulrahman university. *King Khalid University Journal of Educational Sciences*, *11*(1), 70-95.

Alowayyid, S., & Nasser, N. (2024). Activating pedagogical innovation requirements for vision Saudi Arabia 2030: A delphi study. *Eurasian Journal of Educational Research (EJER)*, *110*, 84-113. https://doi.org/10.14689/ejer.2024.110.06

Amirat, A., & Zaidi, M. (2020). Estimating GDP growth in Saudi Arabia under the government's vision 2030: A knowledge-based economy approach. *Journal of The Knowledge Economy*, *11*(3), 1145-1170. https://doi.org/10.1007/S13132-019-00596-2

Ataei, P., Karimi, H., & Zarei, R. (2024). The role of entrepreneurial leadership, intellectual capital, innovativeness culture, and entrepreneurial orientation in entrepreneurial opportunity recognition by students. *Journal of Open Innovation: Technology, Market, and Complexity*, *10*(2), Article 100265.

Ben Hassen, T. (2022). The GCC economies in the wake of COVID-19: Toward post-oil sustainable knowledge-based economies? *Sustainability*, *14*(18), Article 11251.

Bhatti, M. A., Alyahya, M., & Alshiha, A. A. (2022). Research culture among higher education institutions of Saudi Arabia and its impact on faculty performance: Assessing the role of instrumentality, research infrastructure, and knowledge production. *Educational Sciences: Theory & Practice*, *22*(2), 15-28.

Bilal, M., Chaudhry, S., Amber, H., Shahid, M., Aslam, S., & Shahzad, K. (2021). Entrepreneurial leadership and employees' proactive behaviour: Fortifying self-determination theory. *Journal of Open Innovation: Technology, Market, and Complexity*, *7*(3), Article 176.

Blau, P. M. (1964). *Exchange and Power in Social Life*. John Wiley.

Brahimi, T., Sarirete, A., & Al-Lail, H. J. (2024). Innovation, Leadership, and Education: How Effat University is Paving the Way for Vision 2030. In S. Baroudi & M. D. Lytras (Eds.), *Transformative Leadership and Sustainable Innovation in Education: Interdisciplinary Perspectives (Emerald Studies in Higher Education, Innovation and Technology)* (pp. 169-189). Emerald Publishing Limited. https://doi.org/10.1108/978-1-83753-536-120241011

Chen, Y. S., Liao, K. C., & Yau, S. Y. (2025). From hesitation to participation: A narrative review of facilitators and barriers for healthcare professionals' engagement in medical education research. *BMC Medical Education*, *25*(1), Article 302. https://doi.org/10.1186/s12909-025-06792-w

Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2013). *Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences*. Routledge.

Estrada, C., Felix, E. R., Vedar, E. N. R., & Perez, E. J. (2024). Latina community college presidents: Drawing from cultural intuition to disrupt leadership norms in higher education. *Education Sciences*, *15*(1), Article 35. https://doi.org/10.3390/educsci15010035

Fan, L. S., Kumar, S., Sunny, A. A., Joshi, R., Mohapatra, P., Joshi, A., & Marashdeh, Q. (2024). Multiphase entrepreneurship: An academic reflection. *Powder Technology*, *439*, Article 119654. https://doi.org/10.1016/j.powtec.2024.119654

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, *18*(1), 39-50. http://www.jstor.org/stable/3151312

Hair, J. F., Howard, M. C., & Nitzl, C. (2020). Assessing measurement model quality in PLS-SEM using confirmatory composite analysis. *Journal of Business Research, 109*(2), 101-110. https://doi.org/10.1016/j.jbusres.2019.11.069

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, *43*(1), 115-135. https://doi.org/10.1007/s11747-014-0403-8

Huang, Z., Sindakis, S., Aggarwal, S., & Thomas, L. (2022). The role of leadership in collective creativity and innovation: Examining academic research and development environments. *Frontiers in Psychology*, *13*, Article 1060412. https://doi.org/10.3389/fpsyg.2022.1060412

Ibrahim, A., Al-refaei, A. A., Alshuhumi, S., Al-Hidabi, D., & Ateeq, A. (2024). The effect of entrepreneurial leadership on employee's creativity and sustainable innovation performance in education sector: A literature review. In A. Hamdan & A. Harraf (Eds.), *Business Development via AI and Digitalization. Studies in Systems, Decision and Control* (Vol. 2, pp. 143–154). Springer. https://doi.org/10.1007/978-3-031-62106-2_12

Islam, T., & Asad, M. (2024). Enhancing employees' creativity through entrepreneurial leadership: can knowledge sharing and creative self-efficacy matter? *VINE Journal of Information and Knowledge Management Systems*, *54*(1), 59-73. https://doi.org/10.1108/VJIKMS-07-2021-0121

Joel, O. T., & Oguanobi, V. U. (2024). Entrepreneurial leadership in startups and SMEs: Critical lessons from building and sustaining growth. *International Journal of Management & Entrepreneurship Research*, *6*(5), 1441-1456. https://doi.org/10.51594/ijmer.v6i5.1093

Joseph Jr, F. (2021). *Partial least squares structural equation modeling (PLS-SEM) using R: A workbook*. Springer International Publishing.

Kasim, N. M. (2021). The influence of entrepreneurial leadership and sustainability leadership on high-performing school leaders: mediated by empowerment. *Leadership, Education, Personality: An Interdisciplinary Journal*, *3*(2), 101-115. https://doi.org/10.1365/s42681-022-00031-2

Klein, G., & Zwilling, M. (2022). Leader-member exchange theory and its relationship to teachers' intrapreneurial behaviour, teachers' work engagement and entrepreneurial orientation. *International Journal of Innovation and Learning*, *32*(2), 199-221. https://doi.org/10.1504/IJIL.2022.125031

Kock, N. (2017). Common Method Bias: A Full Collinearity Assessment Method for PLS-SEM. In H. Latan & R. Noonan (Eds.), *Partial Least Squares Path Modeling*. Springer. https://doi.org/10.1007/978-3-319-64069-3_11

Kumar, B. V., & Shailaja, N. (2024). Social exchange theory: Exploring reciprocity, equity, and relationship management in diverse contexts. *International Journal for Multidisciplinary Research*, *6*(6), 1-11. https://doi.org/10.36948/ijfmr.2024.v06i06.32850

Liu, H. Y., Sung, S. C., Chao, C. Y., Chen, N. H., Chen, H. F., & Wu, S. M. (2022). Development and psychometric testing of a Taiwanese team interactions and team creativity instrument (TITC-T) for nursing students. *International Journal of Environmental Research and Public Health*, *19*(13), Article 7958. https://doi.org/10.3390/ijerph19137958

Mehmood, M. S., Jian, Z., Akram, U., & Tariq, A. (2021). Entrepreneurial leadership: The key to develop creativity in organizations. *Leadership & Organization Development Journal*, *42*(3), 434-452. https://doi.org/10.1108/LODJ-01-2020-0008

Meung, H. (2024). Entrepreneurial leadership in education: Fostering innovation and creativity. *Journal of Asian Multicultural Research for Educational Study*, *4*(3), 23-30. https://doi.org/10.47616/jamres.v4i3.458

Montash, M. A. H., Alahmadi, G., & Alghamdi, H. (2025). Saudi universities as catalysts for sustainable innovation and entrepreneurship development. *Journal of Lifestyle and SDGs Review*, *5*(2), Article e04115. https://doi.org/10.47172/2965-730x.sdgsreview.v5.n02.pe04115

Mutabelezi, W. M., & Sethibe, T. (2023). A model on the relationship between transformational leadership, transactional leadership, entrepreneurial leadership, and the innovation process. *International Journal of Innovation Management* *27*(07n08), Article 2350043. https://doi.org/10.1142/S1363919623500433

Nawaz, A., Wenqi, J., & Akhtar, S. (2025). Entrepreneurial leadership and organizational performance: employee creativity and behavior. *Management Decision*, *63*(7), 2486-2510. https://doi.org/0.1108/MD-02-2024-0317

Neupane, S. M., Bhattarai, P. C., & Lowery, C. L. (2025). Personality traits in describing entrepreneurial intentions: A sequential mixed methods study. *Journal of Innovation and Entrepreneurship*, *14*(1), 1-35. https://doi.org/10.1186/s13731-024-00459-4

Nguyen, H. T. N., Nguyen, H. T. T., Truong, A. T. L., Nguyen, T. T. P., & Nguyen, A. T. V. (2021). Entrepreneurial culture and innovative work behaviour: The mediating effect of psychological empowerment. *Journal of Entrepreneurship in Emerging Economies*, *15*(2), 254-277. https://doi.org/10.1108/JEEE-04-2021-0132

Obuobisa-Darko, T. (2024). Entrepreneurial leadership: The best promoter of employee engagement and innovative behaviour for organisational success. In S. Siyal (Ed.), *Transformational Concepts and Tools for Entrepreneurial Leadership* (pp. 93–122). IGI Global Scientific Publishing. https://doi.org/10.4018/979-8-3693-0078-7.ch005

Oliveira, M., Andrade, J. R., Ratten, V., & Santos, E. (2023). Psychological empowerment for the future of work: Evidence from Portugal. *Global Business and Organizational Excellence*, *42*(5), 65-78. https://doi.org/10.1002/joe.22194

Pacheco, A., & Franco, M. (2024). The role of higher education institutions (HEI) in academic spin-off creation: A cooperation perspective. *Journal of The Knowledge Economy*, *15*(2), 7523-7541. https://doi.org/10.1007/s13132-023-01390-x

Paredes-Saavedra, M., Vallejos, M., Huancahuire-Vega, S., Morales-García, W. C., & Geraldo-Campos, L. A. (2024). Work team effectiveness: Importance of organizational culture, work climate, leadership, creative synergy, and emotional intelligence in university employees. *Administrative Sciences*, *14*(11), Article 280. https://doi.org/10.3390/admsci14110280

Pham, D. H. (2021). The professional development of academic staff in higher education institution. *Journal of Teacher Education for Sustainability 23*(1), 115-131. https://doi.org/10.2478/jtes-2021-0009

Podsakoff, P. M., MacKenzie, S. B., & Podsakoff, N. P. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annual Review of Psychology*, *63*, 539-569. https://doi.org/10.1146/annurev-psych-120710-100452

Rababah, N. (2023). Empowerment and innovation types: Key advance performance of SMEs in Saudi Arabia. *Saudi Journal of Humanities and Social Sciences*, *8*(8), 1-13. https://doi.org/10.36348/sjhss.2023.v08i01.001

Renko, M., El Tarabishy, A., Carsrud, A. L., & Brannback, M. (2015). Understanding and measuring entrepreneurial leadership style. *Journal of Small Business Management*, *53*(1), 54-74. https://doi.org/10.1111/jsbm.12086

Royston, R., & Reiter-Palmon, R. (2022). Leadership and Creativity. In J. A. Pluker (Ed.), *Creativity and Innovation* (Second ed., pp. 305-326). Routledge Publications. https://doi.org/10.4324/9781003233923-26

Siyal, S., Liu, J., Ma, L., Kumari, K., Saeed, M., Xin, C., & Hussain, S. N. (2023). Does inclusive leadership influence task performance of hospitality industry employees? Role of psychological empowerment and trust in leader. *Heliyon*, *9*(5), Article e15507. https://doi.org/10.1016/j.heliyon.2023.e15507

Spreitzer, G. M. (1995). Psychological empowerment in the workplace: Dimensions, measurement, and validation. *Academy of Management Journal*, *38*(5), 1442-1465. https://doi.org/10.5465/256865

Stanescu, D. F., Zbuchea, A., & Pinzaru, F. (2021). Transformational leadership and innovative work behaviour: The mediating role of psychological empowerment. *Kybernetes*, *50*(5), 1041-1057. https://doi.org/10.1108/K-07-2019-0491

Subrahmanyam, S. (2024). The role of leadership in nurturing innovation and creativity among faculty and staff. In M. Kayyali (Ed.), *Cultivating Creativity and Navigating Talent Management in*

Academia (pp. 449–468). IGI Global Scientific Publishing. https://doi.org/10.4018/979-8-3693-6880-0.ch021

Tierney, P., Farmer, S. M., & Graen, G. B. (1991). An examination of leadership and employee creativity: The relevance of traits and relationships. *Personal Psychology*, *52*(3), 591-620. https://doi.org/10.1111/j.1744-6570.1999.tb00173.x

Torrents, C., Balagué, N., Hristovski, R., Almarcha, M., & Kelso, J. A. S. (2021). Metastable coordination dynamics of collaborative creativity in educational settings. *Sustainability*, *13*(5), Article 2696. https://doi.org/10.3390/SU13052696

Vallon, P. (2024). *Developing and Implementing Effective Faculty Review Processes for Enhanced Performance in Higher Education* Walden University]. https://www.proquest.com/dissertations-theses/developing-implementing-effective-faculty-review/docview/3108242721/se-2

Wahab, A., & Tyasari, I. (2020). Entrepreneurial leadership for university leaders: A futuristic approach for Pakistani HEIs. *Asia Pacific Management Review*, *25*(1), 54-63. https://doi.org/10.1016/j.apmrv.2019.09.002

Wang, C., Chen, X., Yu, T., Liu, Y., & Jing, Y. (2024). Education reform and change driven by digital technology: A bibliometric study from a global perspective. *Humanities and Social Sciences Communications*, *11*(1), 1-17. https://doi.org/10.1057/s41599-024-02717-y

Yamao, S. (2024). Social exchange theory. In K. Hutchings, S. Michailova, & A. Wilkinson (Eds.), *A Guide to Key Theories for Human Resource Management Research* (pp. 274-279). Edward Elgar Publishing. https://doi.org/10.4337/9781035308767.ch35