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FULL PAPER

The Role of Smart Leadership in Enhancing Institutional Performance: A Field Study of Private Technical Education and Vocational Training Colleges in the Capital Sana' and Amran Governorate

دور القيادة الذكية في تعزيز الأداء المؤسسي: دراسة ميدانية على كليات التعليم الفني والتدريب المهني الخاصة بأمانة العاصمة صنعاء ومحافظة عمران.

Abstract

The study aimed to investigate the role of smart leadership in promoting institutional performance among academic leaders, administrative staff, and faculty members in the private technical education and vocational training colleges in Sana'a Capital and Amran Governorate. **Methodology:** The descriptive-analytical method was used, and a questionnaire was administered to a sample of 400 participants. Data were processed and analyzed using SPSS-27 and AMOS-26. **Results:** The results of the data analysis revealed that there was a statistically significant positive relationship between smart leadership and institutional performance ($\beta = 0.888$, $T = 20.584$, $P < 0.001$), while the rational, spiritual, and emotional intelligence dimensions have contributed to the formation of smart leadership, which in turn affected the institutional performance dimensions, including efficiency, effectiveness, quality, and productivity. The results also showed there were no statistically significant differences in the mean scores of smart leadership and institutional performance due to gender at the $\alpha \leq 0.05$ level. However, significant differences were found at the $\alpha \leq 0.05$ level in the overall score of both smart leadership and institutional performance, specifically in the quality and productivity dimensions according to years of experience, favoring participants with greater experience (>10 years). In light of the results, the study recommended promoting smart leadership development programs, integrating them into administrative policies, and developing related evaluation systems to improve the efficiency and effectiveness of educational institutions and elevate the institutional performance of academic and administrative leaders.

Keywords: Smart Leadership, Institutional Performance, Private Technical Education and Vocational Training Colleges.

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المستخلص:

هدفت الدراسة إلى التحقق من دور القيادة الذكية في تعزيز الأداء المؤسسي لدى القادة الأكاديميين، والموظفين الإداريين، وأعضاء هيئة التدريس في كليات التعليم التقني والتدريب المهني الخاصة في العاصمة صنعاء ومحافظة عمران. **المنهجية:** تم استخدام المنهج الوصفي التحليلي، وتم تطبيق استبيان على عينة مكونة من 400 مشارك. تمت معالجة البيانات وتحليلها باستخدام برنامجي SPSS-27 و AMOS-26. **النتائج:** كشفت نتائج تحليل البيانات وجود علاقة إيجابية ذات دلالة إحصائية بين القيادة الذكية والأداء المؤسسي (β = 0.888, $T = 20.584$, $P < 0.001$)، حيث ساهمت أبعاد الذكاء العقلاني والروحي والعاطفي في تشكيل القيادة الذكية، مما أثر بدوره على أبعاد الأداء المؤسسي، والتي تشمل الكفاءة، والفعالية، والجودة، والإنتاجية. كما أظهرت النتائج عدم وجود فروق ذات دلالة إحصائية في المتوسطات الحسابية للقيادة الذكية والأداء المؤسسي تعزى إلى متغير الجنس عند مستوى الدلالة ($\alpha \leq 0.05$). بينما وجدت فروق ذات دلالة إحصائية عند مستوى ($\alpha \leq 0.05$) في الدرجة الكلية لكل من القيادة الذكية والأداء المؤسسي، وتحديداً في بُعدي الجودة والإنتاجية وفقاً لسنوات الخبرة، لصالح المشاركين ذوي الخبرة الأكبر (>10 سنوات). وفي ضوء النتائج، أوصت الدراسة بتعزيز برامج تنمية القيادة الذكية، وإدماجها في السياسات الإدارية، وتطوير نظم التقييم المرتبطة بها لتحسين كفاءة وفعالية المؤسسات التعليمية والارتقاء بالأداء المؤسسي للقيادة الأكاديميين والإداريين.

الكلمات المفتاحية: القيادة الذكية، الأداء المؤسسي، كليات التعليم التقني والتدريب المهني الخاصة.

Introduction

Institutional performance has become an essential component in the success of any organization, reflecting the organization's potential to achieve its goals efficiently and effectively by utilizing its available resources and ensuring the quality of outcomes in line with the requirements of beneficiaries and labor-market (Abdullah & Al-Matari, 2024; Maghawry, 2022). With rapid economic and technological developments, it has become essential to adopt up-to-date and effective leadership practices to ensure organizations' ability to adapt, innovate, and maintain sustainable institutional performance.

In today's dynamic business landscape, smart leadership emerges as a novel strategic approach to enhancing institutional performance. It counts on integrating strategic thinking, emotional intelligence, and the ability to adapt to change, empowering organizations to effectively manage human and material resources, stimulate innovation, and achieve organizational agility (Teece, 2023; World Bank et al., 2023). Smart leadership is deemed an essential tool for tackling both internal and external challenges, such as intense competition and a rapidly changing work environment.

Recent studies pointed out that improving institutional performance requires developing management capabilities and leadership strategies that enable organizations to continuously innovate and renew, and realize a sustainable competitive advantage. This situation emphasizes mounting challenges facing technical and vocational education and training institutions in developing countries, resulting in poor infrastructure, duplication of organizational structures, and insufficient funding and institutional support (Al-Mashraei, 2021; Burns & Hassard, 2021). Hence, investigating the role of smart leadership in institutional performance is of priority to examine how smart leadership practices can contribute to nurturing the effectiveness of institutional performance, fostering the potential of educational institutions to adapt to change, and achieving their strategic goals effectively and efficiently.

Problem Statement and Questions

In Yemen context, the technical and vocational education is mismatched with institutional performance and needs of the surrounding environment. This gap is a result of numerous structural and cognitive challenges, such as a fragile organizational structure, administrative dependency dispersion, reliance on traditional management forms, a lack of administrative innovation, weak digital and technical efficiency, and limited professional development and administrative qualification plans (Al-Shamsi, 2017; Al-Mashrei, 2021; Al-Hadhrami, 2022; OECD, 2023).

These challenges also result to a poor ability to adjust to a rapidly changing labor market needs, colleges' lack of effective digital transformation strategies, a scarcity of digital equipment, and a significant discrepancy between graduates' skills and labor market demands, which reduces the quality of outcomes and weakens the competitiveness of the organizations (Al-Alaya & Al-Ansi, 2023).

Notwithstanding the vital role of smart leadership in improving institutional performance, applied studies in the Yemeni context are scarce, and the potential for employing smart leadership as a

strategic approach to improving institutional performance and aligning outcomes with labor market requirements has not been investigated (UNESCO, 2022; Al-Amrani, 2023).

Accordingly, the problem of this study lies in the failure of applying smart leadership practices to enhance institutional performance in private technical education and vocational training colleges, which highlights the need for investigating the relationship between the variables of smart leadership (emotional, spiritual, and rational intelligence) and the variables of institutional performance (efficiency, effectiveness, quality, and productivity) within the Yemeni context.

The problem of this study is determined by answering the following main question: **What is the role of smart leadership in enhancing institutional performance in the private technical education and vocational training colleges in the capital, Sana'a, and Amran Governorate?** This question then branched out into the following sub-questions:

1. What is the relationship between smart leadership and institutional performance in the private technical education and vocational training colleges?
2. Are there any significant differences in the level of smart leadership practice in the private technical education and vocational training colleges due to variables (gender, years of experience)?
3. Are there any significant differences in the level of institutional performance in the private technical education and vocational training colleges due to variables (gender, years of experience)?

Objectives of the Study

1. To investigate the relationship between the dimensions of smart leadership (emotional, spiritual and rational intelligence) and dimensions of institutional performance (efficiency, effectiveness, quality, and productivity) in the private technical education and vocational training colleges.
2. To identify differences in the level of smart leadership practice in the private technical education and vocational training colleges according to variables (gender and years of experience).
3. To identify differences in the level of institutional performance in the private technical education and vocational training colleges according to variables (gender and years of experience).
4. To analyze the challenges and obstacles that hinder the use of smart leadership practices to enhance institutional performance in the private technical education and vocational training colleges.
5. To present a proposed vision for activating the role of smart leadership in enhancing institutional performance, taking into account the specificities and local environment of educational institutions.

Significance of the Study

The importance of this study merges from its focus on smart leadership as a strategic approach to improving institutional performance in the private technical education and vocational training colleges. This relevance can be evident both in theoretical and in practical perspectives:

First: Theoretical Significance

1. Nurturing educational and administrative literature by tackling the relationship between smart leadership and institutional performance in the private technical education and vocational training college setting, which has not given sufficient interest in the Arab context, and in Yemen in particular.

2. Bridging the research gap related to the scarcity of studies that integrate smart leadership concepts with institutional performance development in educational settings.
3. Propose a conceptual framework and theoretical model that can form the grounding for future studies in the field of smart leadership and institutional performance in the educational institutions.

Second: Practical Significance

1. Enabling administrative leaders in technical education and vocational training colleges to evaluate their level of practice of smart leadership skills and dimensions and understand their impact on institutional performance.
2. Providing professionals and decision-makers at the Ministry of Technical Education and relevant authorities with a clear vision of the reality of leadership and institutional performance, contributing to improving the quality of educational outcomes and aligning them with the needs of the Yemeni labor market.
3. Contributing to raising the efficiency of institutional performance and enhancing the competitiveness of technical education graduates by developing administrative systems and leadership methods.

Limitations of the Study

Scope: this study focuses on investigating the role of smart leadership in enhancing institutional performance, and was limited to the dimensions of smart leadership (emotional intelligence, spiritual intelligence, and rational intelligence) and dimensions of institutional performance (efficiency, effectiveness, quality, and productivity).

Spatial: this study was limited to private technical education and vocational training colleges in the Capital Sana'a and Amran Governorate.

Human: a sample of administrative leaders and faculty members in the private technical education and vocational training colleges.

Temporal: this study was conducted during the 2024/2025 academic year.

1. Theoretical Background:

Smart Leadership: is defined as “the collective understanding between the leader and subordinates that works to achieve the future vision of the organization and set goals”. “It also uncovers new strategies in a dynamic and resource-limited environment to address the challenges facing the organization and thus achieve goals efficiently and effectively” (Al-Attar et al., 2020, 139).

Operational definition: Smart Leadership is defined in this study as “A mutual agreement between a leader and their team members to work together towards a shared goal: realizing the future vision for private technical education and vocational training colleges and uncover new strategies in a changing and resource-limited environment to address the challenges facing these colleges, while achieving goals efficiently and effectively.

The importance of smart leadership is evident due to several interconnected factors that highlight its critical role in contemporary organizations. Smart leaders are distinguished as strategic thinkers capable of envisioning the big picture and anticipating future challenges and opportunities, which enables them to develop and implement effective strategies aligned with the organization's goals and

vision. Their innovative nature and openness to new ideas allow them to inspire teams to think creatively, discovering novel approaches to problem-solving and operational improvement. Furthermore, these leaders demonstrate remarkable adaptability, navigating change and uncertainty with ease by pivoting swiftly when necessary and implementing required adjustments to sustain organizational progress. A key aspect of their effectiveness lies in high emotional intelligence, enabling them to manage both their own emotions and those of their team members effectively, while fostering clear communication, building strong relationships, and resolving conflicts constructively. This comprehensive approach is complemented by their strong commitment to talent development, as they actively identify and nurture team members' potential, provide meaningful growth opportunities, and empower them to undertake new challenges and responsibilities (Teece, 2019; Quynh et al., 2022).

The multidimensional nature of smart leadership encompasses three distinct yet complementary intelligence domains. Rational intelligence represents "a quick and wise response to sudden, urgent situations" and includes "an individual's ability to adapt, be flexible, inductive, deductive, and perceive relationships," ultimately reflecting "their mental abilities and their willingness to learn quickly and make use of their experiences" (Hassan & Abdullah, 2023, 245). Emotional intelligence, characterized as "the art of managing emotions, motivations, and feelings, and the art of influencing others and getting their respect" (Afifa, 2019, as cited in Al-Sharjabi et al., 2024, 166), is also recognized by various terms including affectional intelligence, sentimental intelligence, and emotive intelligence. Completing this triad, spiritual intelligence embodies "the ability to address and solve problems of deeper meaning and the values of life and associate thoughts and feelings with moral and spiritual principles," thereby "empowering the individual to make balanced decisions and overcome challenges with a holistic vision" (Amram & Dryer, 2023; Nasrabadi et al., 2023).

Institutional Performance: is an integrated system that assesses business results in the context of the organization's environment, work processes, and service delivery to achieve desired outcomes (Tuama & Alghiw, 2014).

Operational definition: Institutional performance in technical education and vocational training colleges procedurally is an integrated system of planned and organized efforts and activities, through which colleges work to ensure efficient and effective use of their human and material resources. This achieves their educational, training, and developmental objectives, contributes to improving the quality of outcomes, and enhances their potential to adapt to changes in the internal and external environment, ensuring their continuity and competitiveness.

The importance of institutional performance lies in its fundamental role in ensuring organizational sustainability and success, as demonstrated through several critical aspects. According to Al-Adlouni (2002), the relevance of institutional performance manifests through the clarity of the organization's founding conception and purpose, along with its legal compliance through proper licensing that authorizes operations according to established terms. The presence of qualified, capable, enthusiastic, and dedicated leadership represents another crucial determinant of institutional effectiveness. Furthermore, sufficient capital from diverse and ongoing self-financing sources, while maintaining operational independence and ensuring accurate financial and computer systems, forms the financial backbone for sustainable performance.

The establishment of specific, clear, agreed-upon, documented, and publicly accessible work regulations and systems that align with organizational goals provides the necessary framework for consistent operations. This is complemented by well-defined written plans and programs that are accessible to all relevant stakeholders. Finally, a robust system for continuous oversight, follow-up, and evaluation ensures the integrity of both planning and implementation processes (Al-Ayubi & Salman, 2020, 71).

Regarding the dimensions of institutional performance, organizations employ a set of benchmarks for evaluation and review. As Majid (2011, 28) identifies, these benchmarks include effectiveness, which measures the extent to which overall organizational objectives or operational unit goals are achieved; efficiency, referring to the optimal utilization of available resources including funds, personnel, and time; productivity, which quantifies the relationship between input and output ratios; and quality, reflecting beneficiary expectations through factors such as speed, accuracy, responsiveness, and accountability. These interconnected dimensions provide a comprehensive framework for assessing and enhancing institutional performance across various organizational contexts.

Based on the content presented, it is evident that the two researchers emphasize the pivotal role of smart leadership and its multiple dimensions in enhancing the level of institutional performance in private technical education and vocational training colleges. This conclusion coherently integrates the two main themes addressed in the research: smart leadership with all its dimensions of rational, emotional, and spiritual intelligence, and institutional performance with its indicators of effectiveness, efficiency, productivity, and quality. The researchers affirm that adopting smart leadership principles effectively contributes to achieving tangible improvements in the performance of these specialized educational institutions.

2. Literature Review

Recent research has increasingly highlighted the growing significance of smart leadership in enhancing institutional performance and organizational effectiveness within educational environments. In this context, Al-Sharjabi et al. (2024) investigated the relationship between smart leadership and job performance among faculty members and administrators at the Faculty of Education, Sana'a University, revealing moderate levels of smart leadership practice, where rational intelligence ranked highest, followed by spiritual and emotional intelligence. Their findings confirmed a statistically significant positive correlation between smart leadership and job performance across demographic variables. These results align with the findings of Dooshima (2024) at the University of Ibadan, Nigeria, who demonstrated that emotional intelligence significantly contributes to leadership effectiveness, particularly through self-awareness and emotion regulation, recommending that emotional intelligence competencies be integrated into leadership training and selection frameworks.

Consistent with these perspectives, Malhawi and Hamdi (2024) found that modern leadership styles, especially participatory leadership, play a key role in improving institutional performance at Jazan University. Their results also indicated that age, rather than gender or professional experience, was a differentiating factor in leadership impact, reflecting how maturity and professional longevity enhance participatory approaches. Similarly, Thabit and Al-Sufyani (2024) confirmed at Al-Saeed University that strategic planning exerts a strong influence on institutional performance, as strategic

orientation, analysis, and alternatives together explained 64.8% of the variance in performance outcomes. This finding underscores the systemic and forward-looking nature of effective academic leadership.

Adding further evidence, Hassan and Abdullah (2023) demonstrated that smart leadership dimensions—rational, emotional, and spiritual intelligence—significantly correlate with mathematical thinking skills among university students, emphasizing that the impact of smart leadership extends beyond administrative efficiency toward cognitive and creative development. This argument is reinforced by Al-Masoud and Darwish (2023), whose study on the education administration in Al-Kharj Governorate revealed that practicing smart leadership fosters competitive advantage, suggesting that rational decision-making and emotional sensitivity can jointly enhance organizational sustainability. In contrast, Al-Attar et al. (2020) found limited support for smart leadership within the Wasit Health Department, where emotional intelligence did not significantly affect organizational prosperity, indicating that contextual and cultural factors may moderate the effectiveness of smart leadership practices.

Previous studies have predominantly investigated the impact of smart leadership on organizational outcomes within public higher education. Nevertheless, its role in private technical and vocational education and training remains underexplored, despite the critical contribution of these institutions to human capital development.

This study seeks to address this gap by examining how the rational, emotional, and spiritual dimensions of smart leadership affect institutional performance in private technical and vocational education and training colleges in Sana'a and Amran. The findings aim to advance the empirical literature and provide evidence-based guidance to enhance leadership effectiveness, optimize performance in terms of efficiency, quality, and effectiveness, and support sustainable development aligned with labor market demands.

Hypotheses of the Study

H1. There is no statistically significant relationship at the ($\alpha \leq 0.05$) level between smart leadership and institutional performance in the private technical education and vocational training colleges.

H2. There are no statistically significant differences at the ($\alpha \leq 0.05$) level in the overall scores of smart leadership due to (gender, years of experience).

H3. There are no statistically significant differences at the ($\alpha \leq 0.05$) level in the overall scores of institutional performance due to (gender, years of experience).

Method

Study Design: The descriptive analytical method was used because it is suitable to the nature of the study objectives and allows for the collection of detailed and comprehensive information about the phenomenon of the smart leadership practice and its dimensions, as well as institutional performance and its dimensions, and analyzing the relationships between them and providing a foundation for interpreting the results and conclusions.

Study population and Setting: The study population consisted of academic and administrative leaders from the private technical education and vocational training (25) colleges in both the capital, Sana'a, and Amran Governorate. The total population size was (2,987) participants (Executive Body

of the Supreme Council of Community Colleges, 2023), distributed among (1,882) participants of the academic employees, (63%), and (1,105) employees of the administrative employees, (37%).

Study Sample: The sample of the study from the academic and administrative employees in the Capital Sana'a and Amran Governorate was chosen using a simple random technique. The number of targeted private colleges was (18), (72%) of the total colleges. These included 13 colleges in the Capital Sana'a (52%) of the total colleges in the governorate, and 5 colleges from Amran Governorate, (100%). The initial sample size was (420) participants. After excluding questionnaires that were invalid for the analysis, the final sample became (400) participants, from the total employees of technical education and vocational training colleges in the two governorates.

Data Collection Tool:

The study designed a questionnaire for data collection to achieve its objectives. The questionnaire was developed based on previous literature and related studies. The final draft of the tool consisted of (43) items distributed across major two variables:

- **Smart Leadership (independent variable):** consists of (21) items distributed across three dimensions: emotional intelligence, spiritual intelligence, and rational intelligence.
- **Institutional Performance (dependent variable):** consists of (23) items distributed across four dimensions: efficiency, effectiveness, quality, and productivity.

Validity: the questionnaire was validated using the following methods:

1. **Face Validity:** the questionnaire was given to a group of validators specialized in the fields of business administration, educational administration, curricula, and teaching methods to validate the content and consistency of the items.
2. **Factorial Reliability:** the confirmatory factor analysis (CFA) was used to ensure the reliability of the questionnaire according to its items and dimensions, and the results are shown as it follows:

First Variable: Smart Leadership:

Table (1): Results of confirmatory factor analysis (CFA) related to the smart leadership variable

Variable	Indicator Code	Standard Reliability (SR)	composite reliability (CR)
Emotional intelligence	Q1	0.731	0.87
	Q2	0.778	
	Q3	0.736	
	Q4	0.622	
	Q5	0.819	
	Q6	0.709	
	Q7	0.730	
Spiritual intelligence	Q8	0.786	0.88
	Q9	0.804	
	Q10	0.745	
	Q11	0.663	
	Q12	0.763	
	Q13	0.660	
	Q14	0.670	
Rational intelligence	Q15	0.708	0.86
	Q16	0.788	
	Q17	0.666	
	Q18	0.735	
	Q19	0.710	
	Q20	0.744	
	Q21	0.733	

Based on the CFA analysis, the results showed that emotional intelligence had good standardized reliability values ranging from (0.622 to 0.819). This finding indicates a strong correlation between the indicators and the measured dimensions, with a high composite reliability (CR = 0.87), demonstrating high reliability for this dimension. Similarly, spiritual intelligence recorded standardized reliability values between (0.660 and 0.804), and a composite reliability of (CR=0.88,) reflecting a strong internal consistency among its components. Rational intelligence showed standardized reliability values ranging from 0.666 to 0.788, with a composite reliability of 0.86, demonstrating a good reliability for this dimension. These findings show that the dimensions of smart leadership were accurate and reliable, which is consistent with the validity and reliability criteria of CFA analysis (Byrne, 2016; Hair et al., 2019).

Second Variable: Institutional Performance:

Table (2): Results of confirmatory factor analysis (CFA) related to the Institutional Performance variable

Variable	Indicator Code	Standard Reliability (SR)	composite reliability (CR)
Efficiency	Q44	0.751	0.84
	Q45	0.748	
	Q46	0.587	
	Q47	0.647	
	Q48	0.630	
	Q49	0.730	
effectiveness	Q50	0.810	0.91
	Q51	0.748	
	Q52	0.810	
	Q53	0.835	
	Q54	0.774	
	Q55	0.776	
Quality	Q56	0.664	0.90
	Q57	0.799	
	Q58	0.806	
	Q59	0.763	
	Q60	0.776	
	Q61	0.803	
Productivity	Q62	0.776	0.88
	Q63	0.713	
	Q64	0.755	
	Q65	0.806	
	Q66	0.833	

From the results of CFA analysis, all four dimensions of the institutional performance (efficiency, effectiveness, quality, and productivity) recorded standardized reliability values ranging between (0.8870 and 0.835), which is above the minimum acceptable level of (0.50,) indicating good convergent reliability. Composite reliability (CR) values ranged between (0.84 and 0.91), exceeding the minimum standard value of (0.70), which demonstrate high reliability for the dimensions. These findings indicate that the variable accurately measures the target concept and has high internal consistency (Hair et al., 2019), which support that the study instrument is valid for measuring the variable of institutional performance accurately and reliably.

Reliability of the Study Instrument: The results of instrument's reliability indicate that all dimensions of smart leadership and institutional performance demonstrated a high level of reliability, with Cronbach's alpha coefficient values ranging between (0.882 and 0.949), which reflect a strong

internal consistency of the indicators of each dimension. The split-half results also showed high reliability, ranging between (0.810 and 0.916), demonstrating that the tool is able to consistently measure the same concept across different parts of the questionnaire. The total score for the smart leadership variable and the institutional performance variable demonstrated the highest reliability values, confirming the reliability of the measurement of the total scores for these variables. These findings show that the tool is valid for examining and analyzing the relationship between smart leadership and institutional performance in the private technical education and vocational training colleges. Accordingly, this tool can be relied upon to come up with accurate and reliable results regarding the dimensions of smart leadership and institutional performance.

Statistical Analysis: SPSS-27 and AMOS-26 were used to conduct a set of statistical analyses and processing for testing the relationship between the dimensions of smart leadership (emotional intelligence, spiritual intelligence, and rational intelligence) and the dimensions of institutional performance (efficiency, effectiveness, quality, and productivity) to a sample of employees in the private technical education and vocational training colleges.

Table (3): shows the characteristics of the study sample (n=400)

Socio-demographic characteristics		N	%
Gender	Male	263	66
	Female	137	34
	Total	400	100%
Designation	Dean/vice dean	28	7
	Administrator	22	5.5
	Manager	94	23.5
	Head of Department	91	22.7
	Lecturer	165	41.3
	Total	400	100%
Years of experience	Less than 5 years	126	31
	5-10 years	143	36
	More than 10 years	131	33
	Total	400	100%

*Source: Researchers referring to the descriptive analysis tables of the sample using (SPSS-27)

Results

Socio-demographic characteristics: Table (3): presents the demographic characteristics of the study sample consisting of (n = 400) participants. The results indicate that males constitute the majority (66%) compared to females (34%), reflecting the predominance of male representation in private technical and vocational education and training colleges.

Regarding job designation, faculty members represent the largest proportion (41.3%), followed by managers (23.5%) and heads of departments (22.7%), while deans and vice-deans (7%) and general secretaries (5.5%) form smaller proportions. This distribution demonstrates the diversity of administrative and academic levels among the participants.

In terms of years of experience, the most represented category comprises participants with 5–10 years of experience (36%), followed by those with more than 10 years (33%) and less than 5 years (31%). This indicates that the sample includes a balanced mix of participants with both recent and extensive experience, thereby enhancing the representativeness and reliability of the study's statistical analysis.

1. Representation and discussion of the results related to the first hypothesis:

To check the validity of the hypothesis, Path Coefficient Analysis was used to calculate the correlation between the study variables. The results are shown in **Table (4)**: below as it follows:

Table (4): Path Coefficients between of smart leadership dimensions and institutional performance dimensions.

Path Coefficient	Estimate (β)	S.E.	T	P	value
Smart Leadership ---> Institutional Performance	0.927	0.043	21.559	0.000	Sig
Smart Leadership ---> Emotional Intelligence	1.000	-	-	-	Sig
Smart Leadership ---> Spiritual Intelligence	0.466	0.046	10.159	0.000	Sig
Smart Leadership ---> Rational Intelligence	1.168	0.048	24.480	0.000	Sig
Institutional Performance ---> Efficiency	0.297	0.036	8.169	0.000	Sig
Institutional Performance ---> Effectiveness	0.164	0.029	5.605	0.000	Sig
Institutional Performance ---> Quality	1.177	0.047	25.286	0.000	Sig
Institutional Performance ---> Productivity	1.000	-	-	-	Sig

The results from **Table (4)**: show that the causal relationship model between smart leadership and institutional performance is statistically significant, as the path coefficients and associated tests reflect the strength and clarity of the relationships hypothesized in the model.

1. The Relationship Between Smart Leadership and Institutional Performance: The results of the analysis indicate that smart leadership has a positive and significant impact on institutional performance. The path coefficient is (Estimate $\beta = 0.927$), which indicates that a One-Estimate increase in smart leadership corresponds to a 0.927-Estimate increase in the institutional performance. This high coefficient reflects a relatively strong impact of smart leadership as an independent variable on the institutional performance as a dependent variable. Furthermore, the small standard error (S.E. = 0.043) shows the accuracy of the coefficient estimate, which increases the level of confidence in the result. The large critical value ($T = 21.559$) shows that this impact is not a statistical coincidence, but rather real and strong, especially with a high statistical significance ($P < 0.001$).

This finding reveals that smart leadership plays a pivotal role in improved institutional performance within the colleges of technical education and vocational training in the capital, Sana'a, and Amran Governorate, and that it is an essential element in upgrading the efficiency, effectiveness, quality, and productivity of the colleges.

2. Smart Leadership Dimensions and Their Relationship to the Latent Variable:

- **Emotional Intelligence** (Estimate = 1.000): This dimension was used as a benchmark for smart leadership, so it does not show estimation constraints or significance tests. This dimension demonstrates the importance of emotional abilities in understanding situations and making smart decisions within the technical education and vocational training colleges, and demonstrates a central role of emotions in steering leadership behavior.
- **Spiritual Intelligence** (Estimate = 0.466, S.E. = 0.046, $T = 10.159$, $P < 0.001$): This dimension demonstrates the spiritual, value-based, and ethical dimension of smart leadership, and the correlation coefficient indicates a moderate but significant effect. This points out that ethical values and spiritual principles contribute to enhancing leaders' ability to effectively direct colleges and achieve their educational and organizational goals.
- **Rational Intelligence** (Estimate = 1.168, S.E. = 0.048, $T = 24.480$, $P < 0.001$): This is the most influential dimension of smart leadership, demonstrating a very high correlation coefficient. This indicates analytical mental abilities, decision-making, and problem-solving play a central role in effective leadership practices within the technical education and vocational training colleges, and

are a key factor in promoting institutional performance and achieving education goals.

3. **Institutional Performance Dimensions and Their Relationship to the Latent Variable:**

- **Efficiency** (Estimate = 0.297, S.E. = 0.036, T = 8.169, P < 0.001): Refers to the institution's potential to make use of available resources effectively to achieve its goals. The positive correlation coefficient reflects the role smart leadership plays in raising institutional efficiency and improving resource utilization.
- **Effectiveness** (Estimate = 0.164, S.E. = 0.029, T = 5.605, P < 0.001): Reflects the institution's potential to achieve planned results and goals. The positive correlation coefficient indicates that smart leadership enhances the colleges' ability to achieve their goals efficiently and successfully and supports the effectiveness of administrative decisions.
- **Quality** (Estimate = 1.177, S.E. = 0.047, T = 25.286, P < 0.001): Represents compliance with the required standards and levels of institutional services and operations. The strong correlation reflects that smart leadership contributes to raising the quality of outcomes and improving the overall performance of colleges.
- **Productivity** (Estimate = 1.000): Refers to the potentials of colleges to accomplish work and achieve the highest level of outcomes using available resources. The correlation coefficient reflects the significant role of smart leadership in increasing productivity and stimulating institutional performance, emphasizing its importance as a key factor in improved institutional achievement.

4. **Statistical Significance and the General Model of Institutional Performance:** The study results show that smart leadership is a powerful and positively influential factor in improving the level of institutional performance within technical education and vocational training colleges. The path coefficients, critical values, and their statistical significance demonstrated that all dimensions of smart leadership contribute to a tangible and clear improvement in institutional performance.

The rational dimension stands out as the most dominant and influential factor of smart leadership on institutional performance, followed by emotional intelligence and spiritual intelligence. This finding reveals the importance of rational capabilities in supporting strategic decisions and achieving institutional goals, while also taking into account the emotional and spiritual dimensions that complement the role of effective leadership. The importance of sub-dimensions of institutional performance in expressing the impact of smart leadership is also evident. The productivity dimension has the highest impact, then effectiveness, quality and efficiency. This indicates that smart leadership helps to raise the level of institutional outcomes and achieve organizational goals with high efficiency, effectiveness, and quality, enhancing the potential of educational institutions to keep pace with the requirements of the modern work environment and achieve sustainable development. These findings support that the causal relationship model between smart leadership and dimensions of institutional performance is statistically strong and reflects the clarity and strength of the hypothesized relationships in the model, enhancing the credibility of the results and their practical relevance in the technical education and vocational training environment. The path coefficients between smart leadership and its sub-dimensions and institutional performance with its sub-dimensions in technical education and vocational training colleges can be envisaged in Figure (1) below:

Cmin=8.812
 DF=8
 P=.358
 Cmindf=1.102
 Cfi=.999
 Tli=.999
 Rmsea=.016

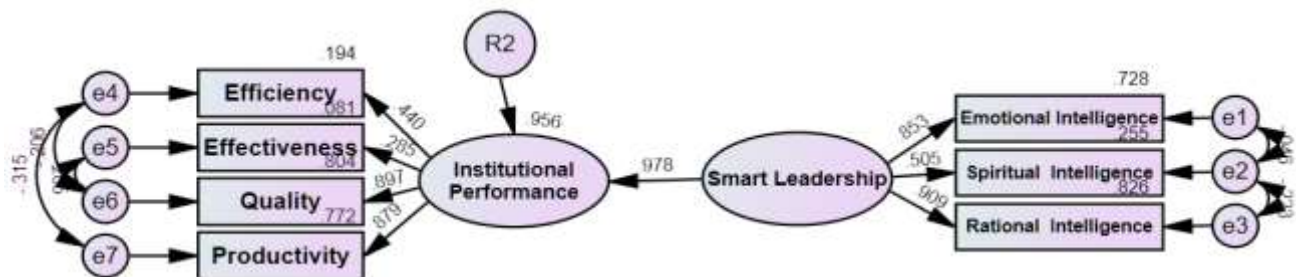


Figure (1): Path coefficients between smart leadership and institutional performance dimensions.

Based on the data analysis, the results of the present study show that smart leadership has a strong, positive impact on the institutional performance in the private technical education and vocational training colleges in the capital, Sana'a, and Amran Governorate. This finding is consistent with the findings of Al-Sharjabi, Al-Maqri, and Al-Hanani (2024), which demonstrated a strong, statistically significant positive relationship between smart leadership and improved job performance at the College of Education at Sana'a University. The findings of Dooshima (2024), Malhawi & Hamdi (2024), and Thabet & Al-Sufyani (2024) also support this trend by reporting a positive impact of smart leadership dimensions, or emotional, spiritual, and rational intelligence, on enhancing leadership effectiveness and improving institutional or job performance. The findings are also consistent with Al-Masoud & Darwish (2023), Al-Maqri et al. (2023), and Bani Yassin & Al-Maqdadi (2021), who concluded that the availability of smart leadership dimensions or rational capital is associated with improved institutional performance. The study by Malhawi & Hamdi (2024) demonstrated the impact of modern leadership styles on institutional performance in educational institutions.

2. Representation and Discussion of the Results Related to the Second Hypothesis:

The t-test was used to analyze the differences in the mean scores of smart leadership according to gender (male/female), in addition to a one-way analysis of variance (ANOVA) to compare the mean scores of smart leadership and institutional performance according to years of experience. The results are presented as follows:

1. Differences in smart leadership according to gender:

Table (5): shows the results of Sig. differences in the mean scores of smart leadership according to gender.

Dimensions	Gender	N	Mean	Std.de	Df	t	p	Sig
Emotional intelligence	Male	272	3.33	0.66	398	-0.782	0.434	No sig
	Female	128	3.39	0.65				
Spiritual intelligence	Male	272	3.23	0.48		-1.177	0.240	No sig
	Female	128	3.29	0.51				
Rational intelligence	Male	272	3.28	0.72		-0.676	0.499	No sig
	Female	128	3.33	0.71				
Overall Score of smart leadership	Male	272	3.28	0.53		-1.008	0.314	No sig
	Female	128	3.34	0.51				

The results of the above Table show no statistically significant differences between males and females in the mean scores for smart leadership and its dimensions. The t-test values and significance levels were as follows: emotional intelligence ($t = -0.782$, $p = 0.434$), spiritual intelligence ($t = -1.177$, $p = 0.240$), intellectual intelligence ($t = -0.676$, $p = 0.499$), and the overall score for smart leadership ($t = -1.008$, $p = 0.314$).

This finding reflects that gender does not significantly affect the levels of smart leadership practice among participants of technical education and vocational training colleges in the capital, Sana'a, and Amran Governorates. Males and females are equal in the emotional, spiritual, and rational capabilities required to practice smart leadership. These findings are consistent with the findings by Al-Sharjabi, Al-Maqri, and Al-Hanani (2024), who found no statistically significant differences between the gender in terms of the dimensions of smart leadership among faculty members and administrators.

2. Differences in smart leadership according to years of experience:

Table (6): shows the results of the analysis of variance (ANOVA) for smart leadership according to years of experience.

Variables		Total squares	df	Mean	F	p.v	Sig
Emotional intelligence	Among groups	125.62	2	62.812	2.982	0.052	No sig
	Within groups	8360.94	397	21.060			
	Total	8486.56	399				
Spiritual intelligence	Among groups	41.48	2	20.739	1.737	0.177	No sig
	Within groups	4739.52	397	11.938			
	Total	4781.00	399				
Rational intelligence	Among groups	117.52	2	58.762	2.363	0.095	No sig
	Within groups	9873.48	397	24.870			
	Total	9991.00	399				
Smart leadership	Among groups	800.84	2	400.419	3.358	0.036	Sig
	Within groups	47338.12	397	119.240			
	Total	48138.96	399				

The results of the analysis of variance (ANOVA) in the above Table indicate that there are statistically significant differences at ($\alpha \leq 0.05$) level between the different groups according to years of experience in the total score of smart leadership. The value of $F = 3.358$ with a $P = (0.036)$ level, indicating that years of experience significantly influences the variation between groups in the total score of smart leadership among participants of technical education and vocational training colleges in the capital, Sana'a, and Amran Governorate.

As for the sub-dimensions of smart leadership, the results showed no statistically significant differences in emotional intelligence ($F = 2.982$, $P = 0.052$), spiritual intelligence ($F = 1.737$, $P = 0.177$), and mental intelligence ($F = 2.363$, $P = 0.095$). This shows that the effect of years of experience is limited to the total score of smart leadership, with unobserved effect on the sub-dimensions.

To identify the source of differences between different groups in the smart leadership variable and its dimensions, post-hoc comparisons were conducted using the Tukey and Scheffé tests, which are considered appropriate tests for identifying multiple variances while controlling for the level of Type I error. The source of differences was between the experience groups (less than 5 years vs. more than 10 years) and between (5-10 years vs. more than 10 years) in favor of those with more than 10 years of experience. This means that the performance associated with smart leadership increases with increasing years of experience. The group with more than 10 years of experience benefits the most or

performs best, while the less experienced groups are less distinctive in smart leadership, according to Scheffé's analysis.

This argument can be explained by the fact that practical experience contributes to improving the overall level of smart leadership, as an individual's ability to practice smart leadership increases over time and they acquire diverse skills in managing situations and making decisions. However, experience alone is not sufficient to independently change the capabilities of each dimension of smart leadership, such as emotional, spiritual, or rational intelligence. These dimensions require other factors such as training, institutional guidance, and administrative support.

3. Representation and discussion of the results related to the third hypothesis:

The t-test was used to analyze the differences in the mean scores of institutional performance according to gender (male/female), in addition to a one-way analysis of variance (ANOVA) to compare the mean scores of smart leadership and institutional performance according to years of experience. The results are presented in **Table (7)**: below:

1. Differences in institutional performance according to gender:

Table (7): shows the differences in the mean scores of institutional performance according to gender (male/female).

Variables	Gender	N	Mean	Std. de	Df	t	p.v	Sig
Efficiency	Male	272	3.10	0.42	398	0.629	0.530	No sig
	Female	128	3.07	0.44				
Effectiveness	Male	272	3.26	0.37		0.350	0.726	No sig
	Female	128	3.25	0.35				
Quality	Male	272	3.27	0.83		-0.426	0.670	No sig
	Female	128	3.31	0.83				
Productivity	Male	272	3.34	0.86		-0.835	0.404	No sig
	Female	128	3.42	0.87				
Overall score of institutional performance	Male	272	3.24	0.46		-0.316	0.752	No sig
	Female	128	3.26	0.46				

The results from the above Table indicate that there are no statistically significant differences between males and females in the mean scores for institutional performance and its dimensions. The t-test values and significance are as follows: efficiency ($t = 0.629$, $p = 0.530$), effectiveness ($t = 0.350$, $p = 0.726$), quality ($t = -0.426$, $p = 0.670$), productivity ($t = -0.835$, $p = 0.404$), and the overall score for institutional performance ($t = -0.316$, $p = 0.752$).

These findings show that the effect of gender on the institutional performance is insignificant among participants at technical education and vocational training colleges in the capital, Sana'a, and Amran Governorate, and all employees, male and female, demonstrate similar levels of ability to achieve efficiency, effectiveness, quality, and institutional productivity.

2. Differences in institutional performance according to years of experience:

Table (8): Results of analysis of variance (ANOVA) for institutional performance according to years of experience.

Variables		Total squares	df	Mean	F	p.v	Sig
Efficiency	Among groups	11.72	2	5.86	0.898	0.408	No sig
	Within groups	2588.72	397	6.52			
	Total	2600.44	399				
Effectiveness	Among groups	9.71	2	4.85	1.024	0.360	No sig
	Within groups	1881.65	397	4.74			
	Total	1891.36	399				
Quality	Among groups	200.74	2	100.37	4.151	0.016	Sig

Variables		Total squares	df	Mean	F	p.v	Sig
Productivity	Within groups	9599.66	397	24.18	5.044	0.007	Sig
	Total	9800.40	399				
	Among groups	182.59	2	91.29			
Institutional performance	Within groups	7185.17	397	18.10	4.926	0.008	Sig
	Total	7367.76	399				
	Among groups	1069.29	2	534.65			
	Within groups	43084.87	397	108.526			
	Total	44154.16	399				
	Among groups						

Based on the analysis of variance (ANOVA), the results in the above Table indicate that there are statistically significant differences at a ($\alpha \leq 0.05$) level between the different groups according to years of experience in some dimensions of institutional performance. The significance was as follows: quality ($F = 4.151$, $p = 0.016$), productivity ($F = 5.044$, $p = 0.007$), and the overall score for institutional performance ($F = 4.926$, $p = 0.008$).

In contrast, the differences in the dimensions of efficiency ($F = 0.898$, $p = 0.408$) and effectiveness ($F = 1.024$, $p = 0.360$) were not statistically significant, indicating that experience had no significant effect on these dimensions.

To identify the source of differences between the different groups in the institutional performance variable and its sub-dimensions, post-hoc comparisons were conducted using the Scheffé test. The results of the pairwise comparisons (Scheffé) tests for differences in institutional performance dimensions by years of experience are presented below:

- **Quality:** Statistically significant differences were found between the group with more than 10 years and each of the other two groups (<5 years and 5-10 years), with quality tending to be higher among those with more experience.
- **Productivity:** Comparisons showed that the group with more than 10 years significantly outperformed the other two groups, indicating that productivity improves with increasing years of experience.
- **Overall institutional performance:** The results indicate that institutional performance is higher among those with more than 10 years of experience compared to the other two groups. The main differences appear in favor of those with more experience (>10 years), as this group achieves higher levels of quality, productivity, and overall institutional performance, while experience had no significant effect on efficiency and effectiveness.

This can be interpreted by the fact that increasing years of experience contributes to raising the level of some aspects of institutional performance, such as quality and productivity, due to individuals gaining practical experience and the ability to improve work processes and produce high-level outputs. Meanwhile, the dimensions of efficiency and effectiveness remain less affected by experience alone, as they also depend on organizational factors, training, and institutional administrative support.

Conclusion

Based on the study findings, the researchers have come up with certain conclusions:

1. The study results demonstrated the positive and significant impact of smart leadership on the institutional performance in the technical education and vocational training colleges in the capital, Sana'a, and Amran Governorate. This finding reflects the ability of smart leadership to enhance institutional efficiency, effectiveness, quality, and productivity.
2. The study showed that the dimensions of smart leadership (emotional intelligence, spiritual intelligence, and rational intelligence) are positively and consistently related to the dimensions

of institutional performance, indicating that promoting these dimensions contributes to improving institutional performance.

3. The results revealed that years of experience have a significant impact on smart leadership and some dimensions of institutional performance (quality and productivity). Those with greater experience (>10 years) outperformed those with greater experience, indicating that experience enhances leaders' ability to practice smart leadership and achieve higher institutional performance.
4. The results found that gender has no any significant effect on smart leadership or institutional performance, indicating that the relationship between smart leadership and institutional performance is independent of differences between men and women. That is, gender differences have no impact on the levels of these two variables.

Recommendations:

In light of the findings, the researchers recommended the following:

1. Enhancing Smart Leadership Development Programs: Design specialized training programs targeting the three dimensions of smart leadership (rational, emotional, and spiritual) for academic and administrative leaders, linking them to improving institutional performance indicators.
2. Leveraging Practical Experience in Administrative Policies: Utilize personnel with extensive experience (>10 years) in leading institutional projects and integrate smart leadership principles into organizational policies and procedures to ensure sustainable efficiency and effectiveness.
3. Developing Evaluation Systems and Institutional Awareness: Create evaluation indicators linked to smart leadership dimensions, along with organizing awareness campaigns to disseminate this culture among educational institution personnel to enhance overall performance.

Disclosure Statement

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List of Abbreviations

OECD: Organisation for Economic Co-operation and Development

UNESCO: United Nations Educational, Scientific and Cultural Organization

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References

1. Al-Alaya, Fathia Ahmed; Al-Ansi, Abdulrahman Ahmed (2023). The Level of Job Performance in the General Administration of the Ministry of Technical Education and Vocational Training in the Republic of Yemen. *Journal of the Arabian Peninsula Center for Educational and Human Research*, 2(17), 26-48. <https://doi.org/10.56793/pcra2213172>
2. Al-Amrani, A. (2023). *Contextual approaches to educational leadership in fragile states*. Sana'a: University of Sana'a Press.
3. Al-Attar, Hamoudi. F., Al-Ghanimawi, Rabah Najm H., Kazem, J. R. (2020). Smart Leadership and Its Role in Achieving Organizational Prosperity (An Analytical Study in the Wasit Health Department). *Wasit Journal for Humanities*, 16(1), 133-166. <https://doi.org/10.31185/.Vol16.Iss45.216>
4. Al-Ayubi, Mansour Muhammad, and Salman, Moin Jihad (2020). Talent Management as an Approach to Improving Institutional Performance in Technical Colleges in the Gaza Strip. *Arab Journal for Quality Assurance in Higher Education*, 13(45), 65–96. https://search.shamaa.org/PDF/Articles/YEAjqah/45AjqahVol13No45Y2020/ajqahe_2020-v13-n45_065-096.pdf
5. Al-Azab, Khaled Hamoud Qasim Lutfi, and Al-Sharjabi, Abdulrahman (2025). The Reality of the Performance at the Technical Education and Vocational Training System in Yemen and the Importance of Development. *Sana'a University Journal for Humanities*, 4(7), 245-275. <https://journals.su.edu.ye/index.php/jhs>
6. Al-Hadhrami, M. (2022). *The impact of administrative innovation on the quality of technical education outputs*. Aden: Higher Council for Technical Education.
7. Al-Maqri, Mahmoud Abdullah Abdul Rahman Saeed, Al-Mahmoudi, Fadl Muhammad Ibrahim, Al Sanbani, Jabr Abdul-Qawi Ismail (2023). The Impact of Administrative Creativity on Improving Organizational Performance: A Field Study on Yemeni Insurance Companies in the Capital Secretariat. *Sana'a University Journal for Humanities*, 5(1), 86-118. <https://journals.su.edu.ye/index.php/jhs>
8. Al-Mashrei, A. M. (2021). A Proposed Vision for Developing the Performance of Administrative Leaders in Community Colleges and Technical and Vocational Education Institutes in Al-Hodeidah Governorate in Light of Contemporary Challenges. *Journal of Educational and Psychological Sciences*, 5(12), 1-40.
9. Al-Masoud, Munira Abdullah, and Darwish, Zainab Awad Mufleh (2023). Smart Leadership as an Approach to Achieving Competitive Advantage in Education Administration in Al-Kharj Governorate. *Journal of Educational and Psychological Sciences*, 7(35), 1-21. <https://doi.org/10.26389/AJSRP.B130623> .
10. Al-Matari, M. M. A., & Abdullah, A. S. I. (2024). The Impact of Strategic Objectives on Institutional Performance: An Applied Study at Al-Razi Private University - Sana'a - Republic of Yemen for the Period 2012-2022. *Al-Qulzum Scientific Journal*, (38), 133–166. <http://search.mandumah.com/Record/1471195>
11. Al-Shamsi, Salem Mohammed Saeed (2017). Technical and Vocational Education and Training in Yemen: An Analytical Sociological Study. *Al-Andalus Journal of Humanities and*

Social Sciences, 15(13), 7-38. <https://search.mandumah.com/Record/855417>

12. Al-Sharjabi, Abdulrahman Mohammed, Al-Maqri, Suhair Mohammed, Al-Hanani, Ibrahim Taha Ali (2024). The Role of Smart Leadership in Improving Job Performance at the College of Education, Sana'a University. *Sana'a University Journal for Humanities*, 3(7), 159-194. DOI:10.59628/jhs.v3i7.1162
13. Amram, Yosi, & Dryer, Cassandra. (2023). The development and validation of the Integrated Spiritual Intelligence Scale (ISIS). *Journal of Humanistic Psychology*, 63(1), 45-67.
14. Bani Yassin, Hanan Muhammad Atallah (2021). *Availability of Intellectual Capital Dimensions and Their Relationship to the Quality of Institutional Performance in Jordanian Universities in the Northern Region*. Unpublished Master's Thesis, Al al-Bayt University, Faculty of Educational Sciences, Jordan.
15. Burns, J., & Hassard, J. (2021). *Navigating organizational change in emerging economies: Leadership and innovation climate*. Oxford University Press. <https://www.routledge.com/Managing-Change-and-Innovation-in-Public-Service-Organizations/Burns-Hassard/p/book/9780367330037>
16. Byrne, B. M. (2016). *Structural equation modeling with AMOS: Basic concepts, applications, and programming (3rd ed)*. Routledge.
17. Dooshima K.V. (2024) The Role of Emotional Intelligence in Effective Leadership and Its Impact on Team Performance: A Study of the University of Ibadan, Nigeria. *International Journal of Business and Management Review*, 12(2), 75-138.
18. Executive Body of the Supreme Council of Community Colleges (2023). *Annual Statistical Book, Ministry of Technical Education and Vocational Training*, Yemen.
19. Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate Data Analysis (8th ed.)*. Cengage Learning.
20. Hassan, Hazem Khaled; and Abdullah, Mahabat Nouri (2023). The Role of Smart Leadership in Enhancing Mathematical Thinking Skills: An Analytical Study of the Opinions of a Sample of Mathematics Department Lecturers at Public University Colleges in the Kurdistan Region of Iraq. *Tikrit Journal of Administrative and Economic Sciences*, 19(63), 239-258. <https://doi.org/10.25130/tjaes.19.63.1.12>
21. Maghawry, Hala Amin (2022). Requirements for Developing Institutional Performance in Egyptian Universities in Light of the Dimensions of the Blue Ocean Strategy. *Journal of Studies in University Education*, (57), 37-78. https://www.researchgate.net/publication/381635697_mttlbat_ttwyr_alada_almwssy_baljama_t_alsryt_ly_dw_abad_astatyjyt_almhyt_alazrq
22. Majid, S. S. (2011). *Evaluating Performance Quality in Educational Institutions*. Amman, Jordan: Safaa Publishing and Distribution House.
23. Malhawi, Rabab Ibrahim Mohammed, Hamdi, Yahya Mohammed Ali Mohammed (2024). The Impact of Modern Leadership Styles on the Institutional Performance in Educational Institutions: A Field Study on Jazan University Employees, *The 2nd International Conference on Qualifying and Empowering Educational and Academic Leaders to Achieve Personal and Institutional Excellence in the Educational Sectors (September 27-29, 2024)*,

- Saudi Arabia, International Journal of Educational Research and Development*, 101-121.
<https://search.shamaa.org/FullRecord?ID=385697>
24. Nasrabadi, Mohammad., Taghvaie, Davood., Mohammadi, Reza; & Ahmadi, Farzaneh. (2023). Spiritual Intelligence and Occupational Resilience: Evidence from High-Stress Work Environments. *Journal of Organizational Behavior*, 44(3), 210-225.
 25. OECD. (2023). *Vocational education and training in developing countries: Digital transformation strategies*. Paris: OECD Publishing.
https://www.oecd.org/en/publications/oecd-digital-education-outlook-2023_c74f03de-en/full-report/digital-strategies-providing-a-common-vision-for-the-future_726a3c8c.html
 26. Quynh, M. P., Van, M. H., Le-Dinh, T., & Nguyen, T. T. H. (2022). The role of climate finance in achieving Cop26 goals: evidence from N-11 countries. *Cuadernos de Economía*, 45(128), 1-12. <https://cude.es/submit-a-manuscript/index.php/CUDE/article/view/253>
 27. Thabet, Hanan Ahmad Muhammad., Al-Sufyani, Abdul Rahman Muhammad. (2024). The Impact of Strategic Planning on Performance Development in Yemeni Higher Education Institutions: A Field Study, Al-Saeed University. *Al-Saeed Journal of Humanities and Applied Sciences*, 7(4), 219 255. <https://search.shamaa.org/FullRecord?ID=409076>
 28. Tuama, Hasan Yasien., Alghiwi, Laith Abdullah. (2014). The Impact of Application of Business process Reengineering on Improvement the Institutional Performance Effectiveness a field Study on the Jordanian Pharmaceutical Companies. *European Journal of scientific Research*, 122(1).
 29. Teece, D. J. (2023). Leadership in the era of increasing technological dynamism. *MIT Sloan Management Review*, 64(2), 30–35. https://www.weforum.org/stories/2023/09/technical-vocational-training-systems-sustainable-development-goals/?utm_source=chatgpt.com
 30. UNESCO. (2022). *Technical and vocational education in Yemen: Status and challenges*. Paris: UNESCO Publishing. <https://unesdoc.unesco.org/ark:/48223/pf0000391232>
 31. Witcher, Barry & Chau, Vinn (2020). *Strategic Management: Principles and Practice*. Southwestern Cengage Learning, China.
 32. World Bank, ILO & UNESCO. (2023). *Improving technical and vocational training in low-and middle-income countries*. World Economic Forum. https://www.weforum.org/stories/2023/09/technical-vocational-training-systems-sustainable-development-goals/?utm_source=chatgpt.com