Digital Leadership And Its Impact On Enhancing Administrative Performance Within Sports Institutions

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Abstract

This research aims to identify the role of digital leadership in developing administrative performance within sports organizations by examining the implementation level of digital leadership dimensions and their relationship with administrative performance indicators.

The study employed a descriptive-survey methodology, utilizing a questionnaire distributed to a sample of 172 leaders and employees within sports institutions. The research instrument comprised four primary axes: digital leadership, infrastructure and digital capabilities, organizational culture and digital governance, and administrative performance development.

The results revealed a positive trend within sports organizations toward adopting digital leadership concepts, particularly regarding senior management's support for digital transformation and keeping pace with modern technological advancements. Furthermore, the findings indicated the availability of digital skills among employees and the existence of supportive training programs. However, the study uncovered a gap in the utilization of digital analytics for decision-making, as well as deficiencies in the application of cybersecurity standards and the use of specialized software for managing sports activities.

Regarding administrative performance, the results confirmed that digital transformation significantly contributes to accelerating transaction processing, improving service quality, and increasing stakeholder satisfaction, while enhancing the overall efficiency and effectiveness of institutional operations.

The research recommends the necessity of upgrading digital infrastructure, activating digital measurement systems, and fostering a culture of innovation and digital governance to achieve institutional excellence and sustainability within sports organizations.

Keywords: Digital Leadership, Performance Development, Sports Organization

1.Introduction

In recent decades, the world has witnessed rapid transformations resulting from the digital revolution, which has directly impacted various sectors, including the sports sector. Technology has become a pivotal element in managing organizations and achieving their efficiency and effectiveness. Traditional leadership is no longer sufficient to keep pace with these shifts; instead, the concept of Digital Leadership has emerged as a modern leadership paradigm. it relies on the integration of digital technologies to support decision-making, improve performance, and enhance the competitive advantage of organizations.

According to Abdel-Gawad (2020), digital transformation is not merely about introducing technology into the workplace; it extends to redefining strategic vision, developing organizational culture, and building human capacities capable of interacting efficiently with modern technologies. Consequently, digital leadership represents an integrated framework that combines forward-looking vision, change management capabilities, and the utilization of data in decision-making, thereby contributing to a qualitative leap in institutional performance (Abdel-Gawad, 2020: 39). Kraay (2021) highlighted that the importance of digital leadership is magnified by the multifaceted nature of these institutions, which integrate administrative, technical, public-facing, and investment dimensions. Modern sports organizations rely on sophisticated information systems to manage athlete affairs, organize championships, handle memberships, execute digital marketing, and analyze athletic performance. This makes digital transformation a strategic necessity to ensure sustainability and excellence (Kraay, 2021: 41).

Furthermore, Al-Sharif (2018) stated that organizations adopting digital leadership possess a greater capacity to adapt to environmental variables and achieve higher levels of efficiency and productivity. This is attributed to their reliance on Big Data and advanced analytics to support planning, organizing, and monitoring processes, which contributes to minimizing administrative errors and enhancing decision-making quality (Al-Sharif, 2018: 47).

Al-Juhani and Hassan bin Abdul-Qader (2023) clarified that digital leadership is intrinsically linked to achieving institutional excellence, as it fosters innovation, improves the work environment, and elevates stakeholder satisfaction. This requires an informed leadership that possesses advanced digital skills and the ability to manage cultural transformation within the organization while addressing resistance to change through scientific and methodical approaches (Al-Juhani & Abdul-Qader, 2023: 29). Ghalib (2018) indicated that the development of administrative performance in sports organizations has become significantly linked to the extent of their adoption of digital leadership concepts. Since the efficiency of planning, clarity of organization, effectiveness of communication, and accuracy of control are all elements influenced by the integration of modern technology into administrative processes, studying digital leadership represents an essential approach to understanding the mechanisms of performance development within the contemporary sports environment (Ghalib, 2018: 41).

Despite the significant global technological advancements, many sports organizations still rely, to varying degrees, on traditional administrative methods. This may limit their ability to keep pace with rapid digital transformations, as evidenced by the underutilization of information systems, slow administrative procedures, and the limited use of data in supporting decision-making.

Furthermore, existing literature points to a gap between technological adoption and the leadership capacity to employ it efficiently. Technologies may be available without a corresponding development in leadership skills or organizational culture, leading to suboptimal utilization. Hence, the importance of digital leadership emerges as a decisive factor in the success of digital transformation within institutions.

In sports organizations specifically, several challenges arise, including limited financial resources in some cases, resistance to change among employees, the absence

of a clear digital vision, and weak technical infrastructure—all of which negatively impact administrative performance and the quality of services provided. Moreover, the insufficient use of digital performance indicators and deficiencies in electronic monitoring and evaluation systems may lead to decreased administrative control and limit the ability to detect and address shortcomings in a timely manner. This underscores the importance of linking digital leadership with the development of control systems and performance evaluation within sports organizations. Additionally, the absence of an organizational culture that supports digital transformation represents a major obstacle to developing administrative performance. The success of digital leadership is not achieved solely through providing technology; it requires building an organizational environment that encourages innovation, supports continuous learning, and promotes transparency and accountability.

Based on the aforementioned points, the research problem is defined by addressing the following primary question:

To what extent does digital leadership contribute to developing administrative performance in sports organizations?

From this main question, several sub-questions emerge regarding the dimensions of digital leadership (strategic vision, infrastructure, digital competencies, organizational culture) and their impact on the dimensions of administrative performance (planning, organizing, directing, and controlling). Accordingly, this research seeks to uncover the nature of the relationship between digital leadership and administrative performance development in sports organizations, determine the level of digital leadership implementation, and demonstrate its impact on improving institutional efficiency and effectiveness, thereby providing scientific recommendations to support decision-makers in the sports sector.

1.1   Research   Objectives
The research aims to identify the role of digital leadership in developing administrative performance within sports organizations by examining the following:
Digital   leadership   in   sports   organizations.
Digital   infrastructure   and   capabilities.
Organizational   culture   and   digital   governance.
Administrative   performance   development.
1.2   Research   Questions
What is the level of digital leadership implementation in sports organizations?
To what extent are digital infrastructure and capabilities available in sports organizations?
What is the prevalence of organizational culture and digital governance frameworks in   sports   organizations?
What is the level of administrative performance development in sports organizations?
2.   Research   Procedures
2.1   Research   Methodology
The researcher employed the descriptive methodology, as it is the most suitable approach   for   the   nature   and   requirements   of   this   study.
2.2   Research   Population   and   Sample
Research   Population:
The population includes all employees and officials within Iraqi sports clubs.

Research   Sample:
The researcher selected a random sample consisting of 200 individuals from among the employees and officials of Iraqi sports clubs. The sample was divided as follows: Pilot Study Sample: Comprised 28 individuals, conducted to validate and standardize the questionnaire. This sub-sample was drawn from the original population but remained outside the primary study sample. Primary Study Sample: Comprised 172 individuals for the purpose of administering the final research questionnaire, as detailed in Table (1).

Table 1. Numerical distribution of the research population and sample

Search sample categories	sample	Exploratory sample		Basic sample	
		No.	%	t	%
Employees of Iraqi sports clubs	200	28	14%	172	86%
Total	200	28	14%	172	86%

2.3 Data Collection Tool

The researcher designed a questionnaire for the study population segments identified in Table (1) as the primary instrument for data collection. The questionnaire aimed to identify the role of digital leadership in developing administrative performance within sports organizations. The researcher established four main axes for the questionnaire as   follows:
Axis I: Digital Leadership in Sports Organizations.
Axis II: Digital Infrastructure and Capabilities.
Axis III: Organizational Culture and Digital Governance.
Axis IV: Administrative Performance Development.

2.4 Scientific Validity and Reliability of the Questionnaire

Validity:
The researcher presented the proposed axes to a panel of nine (9) experts specializing in sports management, all of whom hold doctoral degrees in the field. The purpose was to solicit their professional opinions regarding the suitability of these axes in achieving the research objectives.
The results indicated 100% consensus among the experts regarding the validity of the established axes; consequently, no modifications were made to the questionnaire's primary dimensions.
Subsequently, the researcher drafted the appropriate items for each axis, totaling 36 initial items. The preliminary version of the questionnaire (Appendix 2) was then presented to the experts. The researcher delivered the forms personally to gather expert feedback on the following:
The suitability of each item relative to its designated axis.
The linguistic accuracy and clarity of each item.
Recommendations for deleting, merging, relocating, or modifying items as deemed necessary.
The experts approved the questionnaire items while suggesting the deletion of one item. Table (2) illustrates the item that was excluded based on the experts' recommendations.

Table 2. Modifications made to the questionnaire form

Axis	No.	Phrase before edit	Type after edit	Phrase after edit
second	14	An efficient and fast internal communications network is available.	delete	--------------
	19	Modern technologies are employed to facilitate administrative procedures.	delete	--------------
forth	30	Digital systems enhance the level of coordination and integration between different departments.	delete	--------------

Following the modifications suggested by the expert panel, which included the deletion of certain items, the questionnaire was refined into its final pre-application form (Appendix 3). The final version of the questionnaire consists of 33 primary items.

Internal Consistency Validity

The validity of the questionnaire items was verified by calculating the correlation coefficient between the score of each individual item and the total score of the questionnaire. These results are detailed in Table (3).

Table 3. Correlation Coefficients between Item Scores and the Respective Axis Scores.

N	Axis	Series of phrases	Correlation coefficient
1	First topic: Digital leadership in sports institutions	1- 10	0.475 – 0.821
2	Second axis: Infrastructure and digital capabilities	11 - 17	0.631 – 0.902
3	Third axis: Organizational culture and digital governance	18- 25	0.587 – 0.769
4	Fourth axis: Developing administrative performance	26 - 33	0.620 – 0.818

The critical value for at the significance level (0.05) = 0.367. It is evident from Table (3) that the calculated correlation coefficient values are greater than the critical value at the 0.05 significance level. This indicates the internal consistency of the questionnaire items with their respective axes. Furthermore, the correlation coefficients between the score of each individual axis and the total score of the questionnaire were calculated, as illustrated in the following table.

Table 4. Correlation coefficients between the score of each axis and the total score of the questionnaire   N=28

Axis No.	Axis	Correlation coefficient
First axis	Digital leadership in sports organizations	0.784
Second axis	Digital infrastructure and capabilities	0.802
Third axis	Organizational culture and digital governance	0.699
Forth axis	Developing administrative performance	0.761

The critical value for r at the significance level (0.05) = 0.367. It is evident from Table (4) that the correlation coefficient values between the questionnaire axes, as well as between each axis and the total score, are statistically significant at the 0.05 level. This confirms the validity of the questionnaire and demonstrates that it accurately measures the constructs it was designed to evaluate.

Reliability

A. Cronbach's Alpha Coefficient

Table 5. Reliability Coefficients for the Questionnaire Axes (N = 28)

	Questionnaire topics	Series of phrases	Axis stability	Stability of the form
1	First topic: Digital leadership in sports institutions	1- 10	0.812	
2	Second axis: Infrastructure and digital capabilities	11 - 17	0.872	0.894
3	Third axis: Organizational culture and digital governance	18- 25	0.863	
4	Fourth axis: Developing administrative performance	26 - 33	0.852	

It is evident from Table (5) that the reliability coefficients for the axes and the questionnaire as a whole are high, indicating the stability and reliability of the instrument.

2.5 Application Scopes

The final version of the questionnaire (Appendix 3) was administered through personal distribution by the researcher as follows:

Human Scope: The study was applied to the research sample consisting of 172 employees and officials within Iraqi sports clubs.

Spatial Scope: The research was conducted within Iraqi sports clubs.

Temporal Scope: The questionnaire was administered during the period from November 18, 2025, to December 27, 2025.

Questionnaire Scoring Method: The researcher utilized a 3-point Likert Scale (Agree – To some extent - Disagree), with assigned scores of (3, 2, 1) respectively. Accordingly:

Maximum Total Score = Number of items $\times$ 3 (33 $\times$ 3 = 99 points).
Minimum Total Score = Number of items $\times$ 1 (33 $\times$ 1 = 33 points).

2.6 Statistical Methods

Statistical analyses were performed using SPSS version 2020, utilizing the following methods:

Percentage, Pearson Correlation Coefficient, Cronbach's Alpha Reliability Coefficient, Arithmetic Mean, Chi-Square Test, Predominant Trend.

Results and Discussion

Table 6. Frequencies, Percentages, and Statistical Significance for the Questionnaire Items (N = 172)

Item content	Agree		To some extent		Disagree		Chi^2	Sig. Level	Mean	Likert Scale Response	Approval Percentage
	Rep.	%	Rep.	%	Rep.	%					
The sports organization possesses a clear vision for digital transformation.											
Digital transformation is integrated into the organization's strategic plan.	35	20.35	53	30.81	84	48.84	21.430	.000	1.715	Partly	35.76
Senior management provides continuous support for digital initiatives.	123	71.51	30	17.44	19	11.05	113.872	.000	2.605	Yes	80.23
Measurable digital objectives are defined within the annual plans.	125	72.67	33	19.19	14	8.14	122.942	.000	2.645	yes	82.27
Leadership strives to keep pace with modern technological developments.	23	13.37	39	22.67	110	63.95	74.802	.000	1.494	No	24.71
Progress in implementing digital transformation plans is evaluated periodically.	149	86.63	16	9.30	7	4.07	220.547	.000	2.826	Yes	91.28
There are clear policies regulating digital workflow within the organization.	46	26.74	53	30.81	73	42.44	6.849	.033	1.843	Partly	42.15
Employees are involved in formulating future digital plans.	55	31.98	33	19.19	84	48.84	22.826	.000	1.831	Partly	41.57
Leadership relies on digital analytics in designing administrative policies.	61	35.47	62	36.05	49	28.49	1.826	.401	2.070	Partly	53.49
The organization allocates a dedicated budget to support digital transformation.	31	18.02	43	25.00	98	56.98	44.523	.000	1.610	No	30.52
The organization provides integrated Management Information Systems (MIS).	99	57.56	50	29.07	23	13.37	51.779	.000	2.442	Yes	72.09
Second Axis: Infrastructure and Digital Capabilities											
The organization uses electronic software for managing sports activities.	106	61.63	42	24.42	24	13.95	64.791	.000	2.477	Yes	73.84
The organization relies on electronic archiving instead of paper-based systems.	21	12.21	31	18.02	120	69.77	103.616	.000	1.424	No	21.22
Employees possess the digital skills required to perform their tasks efficiently.	45	26.16	91	52.91	36	20.93	30.360	.000	2.052	Partly	52.62
The organization provides training programs to develop digital skills.	130	75.58	22	12.79	20	11.63	138.186	.000	2.640	Yes	81.98
Accurate databases are utilized in information management.	116	67.44	22	12.79	34	19.77	91.302	.000	2.477	Yes	73.84
Adequate measures are provided for digital data protection.	56	32.56	20	11.63	96	55.81	50.419	.000	1.767	Partly	38.37
Leadership encourages the use of technology in completing daily tasks.	45	26.16	21	12.21	106	61.63	66.988	.000	1.645	No	32.27
Third Axis: Organizational Culture and Organizational Governance											
A culture of digital innovation prevails within the organization.	127	73.84	28	16.28	17	9.88	128.035	.000	2.640	Yes	81.98

Item	Freq	%	Freq	%	Freq	%	Chi-square	Sig.	Mean	Answer	%
Employees are incentivized to submit digital development proposals.	130	75.58	19	11.05	23	13.37	138.291	.000	2.622	Yes	81.10
Teamwork is enhanced through digital platforms.	51	29.65	52	30.23	69	40.12	3.570	.168	1.895	Partly	44.77
The organization adheres to the principles of transparency in electronic transactions.	130	75.58	21	12.21	21	12.21	138.151	.000	2.634	Yes	81.69
There are regulations governing the use of digital systems.	115	66.86	19	11.05	38	22.09	90.151	.000	2.448	Yes	72.38
Cybersecurity standards are implemented within the organization.	92	53.49	49	28.49	31	18.02	34.267	.000	2.355	Yes	67.73
Technical issues are handled with speed and effectiveness.	68	39.53	43	25.00	61	35.47	5.802	.055	2.041	Partly	52.03
Digital technologies contribute to developing the administrative planning process within the organization.	65	37.79	46	26.74	61	35.47	3.500	.174	2.023	Partly	51.16
Forth Axis: Administrative Performance Development											
Digital technologies contribute to developing the administrative planning process within the organization.	114	66.28	37	21.51	21	12.21	86.244	.000	2.541	Yes	77.03
Management relies on accurate data derived from digital systems for decision-making.	90	52.33	45	26.16	37	21.51	28.477	.000	2.308	Partly	65.41
Digital technologies contribute to accelerating the processing of administrative transactions.	157	91.28	10	5.81	5	2.91	260.105	.000	2.884	Yes	94.19
The performance monitoring process relies on clear and specific digital measurement indicators.	128	74.42	28	16.28	16	9.30	131.907	.000	2.651	Yes	82.56
Electronic systems provide periodic reports that reflect the level of administrative performance.	50	29.07	45	26.16	77	44.77	10.337	.006	1.843	Partly	42.15
Digital transformation efforts contribute to improving the quality of services provided.	134	77.91	31	18.02	7	4.07	158.802	.000	2.738	Yes	86.92
Digital administrative services reflect an increase in the level of beneficiary satisfaction.	111	64.53	42	24.42	19	11.05	79.965	.000	2.535	Yes	76.74
Digital leadership enhances the efficiency and effectiveness of institutional work.	141	81.98	29	16.86	2	1.16	189.500	.000	2.808	Yes	90.41

Chi-square value is significant at the 0.05 level, where the significance level 0.05 at degrees of freedom (df=2) is 5.99, and at (df=1) is 3.84.

Likert Scale (Weighted Arithmetic Mean):

1.00 – 1.66: Disagree

1.67 – 2.33: To some extent

2.34 – 3.00: Agree

Table (6), regarding frequencies, percentages, and statistical significance for the questionnaire items, indicates statistically significant differences between responses. The calculated Chi-square values are significant at the 0.05 level for all items, except for items (8, 20, and 25). The agreement percentages ranged from 21.22 to 94.19, with items ranked as shown in the table.

Results for the First Axis (Digital Leadership in Sports Organizations) revealed that the majority of respondents confirmed that leadership strives to keep pace with modern technological developments, recorded with a high agreement percentage. This indicates a positive trend toward digital transformation at both the intellectual and strategic levels. This finding aligns with Imam (2020), who noted that successful digital transformation begins with a clear leadership vision that adopts technology as a strategic choice rather than merely an operational tool.

The results also showed a high level of agreement regarding senior management's support for digital initiatives and the inclusion of digital transformation within strategic plans. This is consistent with Andersson (2022), who emphasized that clear strategy and leadership support are the decisive factors in successful digital transformation, as technology alone is insufficient without supportive leadership that embraces change.

In contrast, the results revealed low agreement levels regarding the setting of measurable digital goals and reliance on digital analytics for policy-making. This reflects a gap between the declared strategic direction and data-driven applied practices. This result concurs with Abdel-Gawad (2020), who pointed out that many institutions suffer from the underutilization of information systems in decision support despite the availability of technical infrastructure.

Regarding the Second Axis (Digital Infrastructure and Capabilities), the results showed a high level of digital skill possession among employees and the provision of training programs, indicating the organizations' interest in developing digital human capital. These findings align with Jadallah (2024), who affirmed that developing digital skills is one of the most important dimensions of effective leadership in the digital age.

However, the results uncovered weaknesses in the use of electronic software for managing sports activities and deficiencies in data protection measures. This indicates a shortfall in completing the digital transformation system from operational and security perspectives. This finding is consistent with Abdel-Basir (2020), who emphasized that cybersecurity and system integration are among the most prominent challenges facing institutions on the path to digital transformation.

Concerning the Third Axis (Organizational Culture and Digital Governance), the results indicated a positive culture toward technology use, encouragement of technological adoption, and the enhancement of teamwork via digital platforms. This is supported by Al-Batly and Abdul-Rahman (2024), who stated that a supportive organizational culture is a critical element in the success of digital transformation.

In the Fourth Axis (Administrative Performance Development), the results showed a clear positive impact of digital transformation, as the item regarding "accelerating transaction processing" recorded a very high agreement percentage. The results also confirmed that digital leadership enhances the efficiency of institutional work. This aligns with Al-Harbi (2025), whose study indicated that advanced digital institutions achieve higher levels of operational efficiency and service improvement.

The researcher concludes that the sports organizations under study possess a positive orientation toward digital leadership in terms of vision and leadership support. However, there is a clear gap between strategic intent and actual implementation, particularly in digital performance measurement, data analytics, and information security. It is evident that the positive impact of digital leadership is most visible in improving processing speed and operational efficiency, confirming a correlative and influential relationship between digital leadership and the development of administrative performance

Conclusions
In light of the research findings, the researcher draws the following conclusions: Sports organizations demonstrate a positive orientation toward adopting digital leadership, evidenced by the high agreement rate regarding leadership's efforts to keep pace with modern technological developments. Digital transformation initiatives receive clear support from senior management, and digital transformation is integrated

into the strategic plans of these organizations. There is a gap between the declared strategic orientation for digital transformation and the actual implementation based on setting measurable digital goals. Digital analytics are not sufficiently utilized in policy-making or administrative decision-making processes. Employees possess good digital skills, and organizations are keen on providing training programs to further develop these competencies. Some organizations suffer from weaknesses in the use of specialized electronic software for managing sports activities. There is a noticeable deficiency in the application of cybersecurity measures and the provision of adequate protection for digital data. A positive organizational culture prevails regarding the use of technology and working via digital platforms; however, the stimulation of digital innovation remains at a moderate level. Digital technologies effectively contribute to accelerating administrative transactions and reducing time and effort. Digital leadership enhances the efficiency and effectiveness of institutional work within sports organizations. Digital systems improve administrative planning processes; however, their use in supporting data-driven decision-making still requires further development. Performance monitoring relies on clear digital indicators in some aspects, yet periodic electronic reporting is not sufficiently activated across all organizations.

Recommendations

Based on the research findings, the researcher recommends the following: Establishing a clear and declared digital strategic vision within sports organizations that includes measurable objectives and specific performance indicators. Activating the role of senior management in monitoring the implementation of digital transformation plans periodically and systematically. Enhancing reliance on digital analytics and databases in policy formulation and administrative decision-making. Allocating independent budgets to support digital transformation projects and technical infrastructure development. Preparing sports leaders who possess advanced digital competencies through specialized digital leadership training programs. Developing integrated administrative information systems that support all sporting and administrative activities. Expanding the use of specialized electronic software for managing championships, memberships, and human resources. Transitioning fully to electronic archiving and reducing reliance on paper-based transactions. Updating and maintaining technical infrastructure periodically to ensure efficiency and continuity. Implementing cybersecurity standards and providing advanced protection systems to ensure data confidentiality and security. Establishing clear regulations that govern the use of digital systems and define responsibilities and authorities. Strengthening the principle of transparency in electronic transactions to support good governance. Linking administrative planning processes with data analysis systems to ensure accurate forecasting and decision-making. Activating periodic electronic reporting systems to monitor performance and analyze deviations. Conducting regular evaluations of administrative performance levels in light of digital transformation standards.

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