THE REALITY OF TECHNOLOGICAL LEADERSHIP IN SOME FACULTIES OF PHYSICAL EDUCATION AND SPORTS SCIENCES FROM THE STANDPOINT OF FACULTY MEMBERS

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Abstract

The purpose of this paper is to building a scale for technological leadership in some faculties of physical education and sports sciences from the standpoint of faculty members, and identifying the reality of technological leadership in some faculties of physical education and sports sciences from the standpoint of the faculty members. The two researchers used the descriptive approach with two survey methods, the researchers determined the research community in a deliberate way from the faculty members in some of the faculties of physical education and sports sciences, which number (297), either the research sample represented the entire research community so that the most important conclusions were building the technological leadership scale for the members of the body Teaching in some faculties of physical education and sports sciences, and the most important recommendations were to use this scale in all educational and sports institutions, to conduct studies similar to the (technological leadership) scale and all of its axes to benefit from this study.

Keywords: Physical education. Sports sciences

Introduction

The twenty-first century witnessed a tremendous scientific revolution that carries with it many variables, the most important of which is the technological revolution, and the production of large quantities of information capable of increasing growth, and the future has become dependent on the ability to reduce it, employ it and transmit it efficiently, with high performance and the use of the Internet according to the conditions and requirements of life that our age is going through. Reliance on it in managing public and educational institutions through its leaders' adoption of all behaviors that contribute to its application in all areas of the institution, thus contributing to its development and upgrading its ability to compete and excel, and then technology brought about radical changes in all areas of life, which led to changing lifestyles in various economic forms The role of information technology is considered an important role in all areas of life, and the creation of a great civilized development commensurate with the requirements of life and the conditions we are going through, and the abolition of all temporal and spatial barriers between individuals or countries around the world so that it turns into a small village, the computer is considered the main means used in transferring the information revolution and also contributes to expanding the knowledge horizons of individuals due to the large presence of knowledge resources that can be resorted to through it, and the ease of obtaining information from it, and the global revolution in the field of information contributes to creating a new future.

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Technological leadership is an approach based on the ease of use of technology for employees of the faculties of physical education and sports sciences, with the possibility of contracting with technology providers inside or outside faculties or sports institutions in order to make the work of technological leadership successful, and as a new trend, technological leadership came to simulate the reality of change and The development that the field is witnessing in various institutions and society, especially educational and educational institutions, and the conditions they are going through, which was the role of the technological leadership in line with the modern directives and that would launch the title of technological leader on the director or president, as the leader deals with technological sites and attention to the numbers of students for a technological future by giving more weight to technology more compatible with technology and educational goals, the director of the educational and educational institution as a leader plays a leading role in the field of technology and mobile technology.

The practice of technology by faculties and its use in the faculties' management system is an urgent necessity to raise the level of faculty members, improve and develop them. An essential element in it, as the new role of the dean of the college within the requirements of the modern college administration, places upon him great responsibilities that require special preparation, training and qualification to enable him to manage and lead technology, and this is what called those interested in educational and educational administration to the increasing interest in developing technological leadership, so there is a refers to the need for more efforts to radically develop the overall management, including familiarization with modern technological methods and their uses in the field of total management.

Hence the importance of the research in describing and analyzing a new concept of leadership, which is technological leadership, as technological leadership needs many accurate scientific methods and techniques that require expertise and pioneering disciplines, which requires those in charge to perform their work in a high manner by achieving technological leadership.

Research Problem

The problem of the research lies by informing the two researchers of some references and scientific sources that were concerned with recent developments through the use of technology in many tasks and fields, and although the current era suffers from many problems, the most important of which is the cause of the spread of the Coronavirus , as educational institutions and Educational use of technology in many of its fields, as the two researchers decided to study technological leadership in educational and educational institutions, as the technological leadership practiced by the manager and the leader in his supervision of his subordinates greatly affects the quality and effectiveness of the educational institution's activity and the acceptance and commitment of workers to implement his orders This is as a process of influencing others that works to direct their abilities and interests in the direction that ensures the achievement of goals and with the requirements of the organizational environment that the educational institution enjoys in its cadres, thus achieving successes for this institution and gaining success for the educational institution. The role of the director, dean or leader depends mainly on his characteristics and his personality traits that determine the leadership style that he exercises in influencing his subordinate, so the research problem revolves around identifying

- What is the nature of technological leadership in some faculties of physical education and sports sciences from the standpoint of faculty members?
- What is technological leadership in some faculties of physical education and sports sciences from the standpoint of faculty members?

Research Objective

- Building a scale for technological leadership in some faculties of physical education and sports sciences from the standpoint of faculty

members.

- Identifying the reality of technological leadership in some faculties of physical education and sports sciences from the standpoint of the faculty members.

Research Fields

- Human field: Faculty members in the faculties of physical education and sports sciences, in Baghdad.
- Time field: (7/11/2021) to (12/12/2021)
- Spatial field: Faculties of physical education and sports sciences.

Research Methodology and Field Procedures

Research methodology

The two researchers used the descriptive approach using the survey method.

Community and sample research

The two researchers identifying the research community in an intentional way from the faculty members in some of the College of Physical Education and Sports Sciences in Baghdad for the academic year (2021-2022), whose number is (297), either the research sample represented the entire research community, and thus the proportion of the research sample reached (100%).) from the research community, and the research sample was divided in a simple random way and by lottery method, and as shown in Table 1 (Table 1).

Means, devices and tools used in the research:

- Arab and foreign sources and references.
- Expert opinion questionnaires.
- Search metrics.
- A laptop computer ((DELL) count (1).
- Hand-type calculator (kenko) count (1).

Field Research Procedures

Identifying the two-scale Search:

After searching and investigating the literature, references, sources and previous studies related to the concept of (technological leadership) and using the opinions of experts and specialists in order to reach the final version of the research procedures, the two researchers built the scale (technological leadership), and scientific procedures were applied for the purpose of making these two scales appropriate to the nature of the study sample current:

The two researchers decided to build a special scale for technological leadership for the research sample represented by faculty members in some faculties of physical education and sports sciences. Provided that these statements are distributed on the axes so that for each statement there are five alternatives that represent the respondent's opinion as follows (always agree, mostly agreed, agree sometimes, rarely agree, disagree) and with degrees of correction (1,2,3,4,5) for the positive statements, Thus, the two researchers suggested the number of statements of the school principal's confidence scale (40) phrases distributed on (6) axes, and the researchers relied on the (Likert) method to correct the weights of the five alternatives in the positive direction only for the technological leadership scale as follows: (always agreed) 5, (mostly agreed) 4, (agree sometimes) 3, (rarely agree) 2, (disagree) 1, according to this, the highest score obtained by the respondent on the school principal's confidence degree is (200) and the lowest degree is (40).

Validity of statements (scale honesty)

In order to identify the honesty of the expressions, their content, their alternatives, the type and method of calculating the weights of their alternatives, their belonging to the axes in which these expressions are included, and their belonging to the scale, after the experts and specialists expressed their opinions on the expressions of the scales, the expressions were processed statistically through the application of the law (chi-2) as shows in the table 2 (Table 2).

Table 2 shows that the number of phrases amounted to (40) phrases distributed on the axes of the scale, and the number of alternatives and the method of calculating the weights of these alternatives and the affiliation of the phrases to the axes separated from each other was kept.

The scale is in its initial form

The technological leadership scale in its initial form consists of (40) phrases distributed over (6) the axes of the scale, the leading performance and vision axis consists of (8) phrases, the vocational training axis consists of (6) phrases, and the learning and education axis consists of (6) The axis of social impact consists of (10) statements, the axis of experience consists of (5) statements, and the axis of performance evaluation consists of (5) statements. In addition, with five answer alternatives (always agree, mostly agreed, agree sometimes, rarely agree, disagree) and upon correction, grades (5, 4, 3, 2, 1) are given respect, and the highest score for the scale is (200) and the lowest score is (40).

The exploratory experience of building the scale:

The exploratory experiment for two scales (technological leadership) was conducted on a sample of (15) faculty members in some faculties of physical education and sports sciences, who were randomly selected from among the teaching staff in the research sample on Sunday (14/11/2020) on Sunday. For knowing the extent of the clarity of the scale's instructions to the respondents and their understanding of its statements, to identify the effectiveness of the answer alternatives, and to identify the difficulties facing the researchers.

Apply the scale to the building sample in its initial form

The two researchers applied the two scales to the construction sample of (193) members of the teaching staff in some faculties of physical education and sports sciences for the period from (11/11/2020) on Sunday to (28/12/2020) on Sunday, and after completing the process of final distribution of the questionnaires and their answers The researchers obtained (180) answers on the technological leadership scale that the researchers relied on to apply the scale, after collecting and arranging them in preparation for statistical analysis.

Statistical analysis of scale expressions

The internal consistency coefficient of the scale:

First: the internal consistency of the statements (the relationship of the statement to the total score of the scale): The two researchers used the internal consistency coefficient of the phrases as an indicator of the homogeneity of the phrases through which we can decide that the scale measures a specific specificity and with complete accuracy, to find this indicator, the correlation coefficient (Pearson) was used between the degree of the paragraph and the total score of the test for two scales (technological leadership), and for individual construction sample, The number of (180) members and this type of honesty is achieved from the correlation of the degree of the phrase with the total score of the scale, that the phrases for the scales achieved significant values, because the error level values for the correlation values are less than the significance level (0.05), which showed the significance of all correlation coefficients and for all scales (Table 3).

Table 1: Shows the division of the research sample and its percentages.

No.	Faculties Name	Total number	Experimental sample	preparation of sample	Application sample
1	Faculty of Physical Education and Sports Sciences / University of Baghdad	176	9	114	53
2	Faculty of Physical Education and Sports Sciences for Woman / University of Baghdad	54	3	35	16
3	Faculty of physical education and sports sciences / Al-Mustansiriya University	67	3	44	20
Total		297	15	193	89
percentage		100%	5.051%	64.983%	29.966%

Table 2: Shows Calculated (chi-2) degree for the experts' answers to each statement of the Technology Leadership Scale.

	Technology Leadership Scale									
	First: Leadership performance and vision axis									
No.	**No. of experts**		**Chi-2 value**		**Type sig**	**No.**	**No. of experts**		**Chi-2 value**		**Type sig**
	Invalid	**Invalid**		**Sig**			**Invalid**	**Invalid**		**Sig**	
1	15	0	15	0,000	Sig	5	15	0	15	0,000	Sig
2	15	0	15	0,000	Sig	6	15	0	15	0,000	Sig
3	15	0	15	0,000	Sig	7	15	0	15	0,000	Sig
4	15	0	15	0,000	Sig	8	15	0	15	0,000	Sig
	Second: Vocational Training axis									
No.	No. of experts		Chi-2 value	Sig	Type sig	No.	No. of experts		Chi-2 value	Sig	Type sig
	Invalid	Invalid					Invalid	Invalid			
9	15	0	15	0,000	Sig	12	15	0	15	0,000	Sig
10	15	0	15	0,000	Sig	13	15	0	15	0,000	Sig
11	15	0	15	0,000	Sig	14	15	0	15	0,000	Sig
	Third: Learning and Teaching axis									
No.	No. of experts		Chi-2 value	Sig	Type sig	No.	No. of experts		Chi-2 value	Sig	Type sig
	Invalid	Invalid					Invalid	Invalid			
15	15	0	15	0,000	Sig	18	15	0	15	0,000	Sig
16	15	0	15	0,000	Sig	19	15	0	15	0,000	Sig
17	15	0	15	0,000	Sig	20	15	0	15	0,000	Sig
	Fourth: The Social effect Axis									
No.	No. of experts		Chi-2 value	Sig	Type sig	No.	No. of experts		Chi-2 value	Sig	Type sig
	Invalid	Invalid					Invalid	Invalid			
21	15	0	15	0,000	Sig	26	15	0	15	0,000	Sig
22	15	0	15	0,000	Sig	27	15	0	15	0,000	Sig
23	15	0	15	0,000	Sig	28	15	0	15	0,000	Sig
24	15	0	15	0,000	Sig	29	15	0	15	0,000	Sig
25	15	0	15	0,000	Sig	30	15	0	15	0,000	Sig
	Fifthly: the axis of experience									
No.	No. of experts		Chi-2 value	Sig	Type sig	No.	No. of experts		Chi-2 value	Sig	Type sig
	Invalid	Invalid					Invalid	Invalid			
31	15	0	15	0,000	Sig	34	15	0	15	0,000	Sig
32	15	0	15	0,000	Sig	35	15	0	15	0,000	Sig
33	15	0	15	0,000	Sig						
	Sixth: The performance evaluation axis									
No.	No. of experts		Chi-2 value	Sig	Type sig	No.	No. of experts		Chi-2 value	Sig	Type sig
	Invalid	Invalid					Invalid	Invalid			
36	15	0	15	0,000	Sig	39	15	0	15	0,000	Sig
37	15	0	15	0,000	Sig	40	15	0	15	0,000	Sig
38	15	0	15	0,000	Sig						
Significance is less than or equal to (0.05)											

The results of the correlation in the above table show that all the scale statements fulfilled the scientific conditions for accepting the correlation that is in the internal consistency so that the scale remains containing (40) phrases.

Psychometric properties of the scale:

Honesty:

First: Honesty of the content: The two researchers intended to achieve this kind of honesty by presenting the criteria's statements to a group of experts and specialists to validate their validity, as mentioned in the previous tables of the fields, Table No. 2, during the extraction of (chi-2).

Secondly: the Honesty of the construction: This type of Honesty was achieved by extracting the internal consistency coefficient of the scales as shown in Table 3.

Stability:

Stability is a prerequisite in psychological and educational tests of good quality, and the reliability coefficient was extracted using the alpha-Cronbach coefficient. Which reached (180) members, as it was found that the value of the stability coefficient is high for the scale, whose value was (0.883).

Apply two metrics to the sample application:

After completing all the requirements and procedures for preparing for two scales (technological leadership) and its procedures, the scale became ready for application. The two researchers applied the scale to the application sample of (89) members of the teaching staff in some faculties of physical education and sports sciences for the period from (11/28/2021- 5/12/2021), as (70) valid forms were returned.

Statistical methods: The search data was processed through the Statistical Package for the Social Sciences (SPSS).

Presentation, analysis and discussion of the results:

This section deals with the presentation and analysis of the answers of the individuals of the application sample that we reached and discussed after processing them statistically and for each of the two scales (technological leadership) (Table 4).

Presenting the statistical description of two scales:

It was found from the above table that the application sample on the results of the scale scores were distributed normally in terms of the skew coefficient (1.125), which lies between (± 3).

Table 3: Shows the internal consistency of each phrase of the technological leadership scale with the total score of the scale.

No.of phrases	correlation coefficient	Sig	Type sig	No.of phrases	correlation coefficient	Sig	Type sig
1	0.435	0.000	sig	21	0.372	0.002	sig
2	0.470	0.000	sig	22	0.241	0.044	sig
3	0.437	0.000	sig	23	0.495	0.000	sig
4	0.597	0.000	sig	24	0.489	0.000	sig
5	0.385	0.001	sig	25	0.405	0.000	sig
6	0.496	0.000	sig	26	0.471	0.000	sig
7	0.439	0.000	sig	27	0.475	0.000	sig
8	0.337	0.004	sig	28	0.367	0.000	sig
9	0.264	0.027	sig	29	0.555	0.000	sig
10	0.423	0.000	sig	30	0.611	0.000	sig
11	0.525	0.000	sig	31	0.291	0.014	sig
12	0.540	0.000	sig	32	0.637	0.000	sig
13	0.430	0.000	sig	33	0.496	0.000	sig
14	0.337	0.004	sig	34	0.429	0.000	sig
15	0.433	0.000	sig	35	0.546	0.000	sig
16	0.611	0.000	sig	36	0.544	0.000	sig
17	0.538	0.000	sig	37	0.452	0.000	sig
18	0.408	0.000	sig	38	0.356	0.003	sig
19	0.375	0.001	sig	39	0.546	0.000	sig
20	0.429	0.000	sig	40	0.544	0.000	sig
Significant at significance level (0.05)							

Table 4: Shows the Statistical description of the technological leadership scale on the application sample.

Scale	Arithmetic mean	Mediator	Standard deviation	Skew ness
Technological leadership	150	148,50	6,782	1,125

Table 5: Shows the arithmetic means, standard deviations, and the calculated t value between the arithmetic means and the hypothetical means of the technological leadership scale of the research sample.

No.	scale	Count.	Arithmetic mean	Standard deviation	hypothetical mean	T value for one sample	Level sig	Type sig
1	technological leadership	40	150	6,782	120	10,835	0,000	sig
Significant at error level (0,00) and significance level ≤ 0.05								

Presentation, analysis and discussion of the results of two technological leadership measures: To verify the second objective of the study (recognizing the reality of technological leadership in the faculties of physical education and sports sciences from the standpoint of faculty members). The arithmetic means, standard deviations, calculated t value and hypothetical means were extracted for the answers of the application sample for the scale and for each of the axes, and as shown in Table 5 (Table 5).

It is evident from the above table that the technological leadership scale achieved the arithmetic mean (150), standard deviation (6,782), and hypothetical mean reached (120), and the calculated T value reached (10,835), with an error level of (0.000), since the arithmetic mean is greater than the mean. The hypothesis and the level of error for the value of (T) are less than the level of significance. This indicates that there are significant statistically significant differences in favor of the arithmetic mean. As the technological leadership seeks to achieve the goals set by the college by achieving dynamic goals and accomplishing the work achieved by the faculty members "The technological job requires the presence of technological leaders who seek to activate the role of dynamic goals and work to achieve them. It also depends on the presence of leaders who are able to deal effectively in an electronic way and work with other individuals Through the ability to motivate and cooperate with them to accomplish the required work, and the efficient application of electronic guidance depends on the use of advanced electronic networks so that all orientation operations are completed and implemented through them" (Mohamed. 2004), The introduction of information and communication technology into the administrative system is considered an important revolution in the world of leadership. "The introduction of technology aims to bring about the transformation of business and administrative services from their traditional image to electronic business and services, in order to achieve the best use in efficiency and effectiveness for the benefit of any organization, especially colleges" (Al-Ani and Jawad. 2014), Where information and communications can be used to achieve a qualitative leap for institutions to contribute to the rehabilitation of an electronic administrative apparatus in facilitating the process of integration into the e-government and interdependence with all state agencies, and it also has a role in the participation of the institutions' instructors in electronic management. (Nasser and Al-Quraishi. 2011), Encouraging and motivating all faculty members in the college, holding visual meetings between administrators, deans, and branch heads, transferring conferences related to the tasks of the dean, department heads and faculty members to benefit from them, holding training or qualification courses for teachers, and creating mailing lists for faculty members To facilitate the process of sending and communicating, and creating mobile message groups for faculty members for quick communication when needed (Al-Ghamdi).

Conclusion and Recommendations

Conclusion

- Building the technological leadership scale in some faculties of physical education and sports sciences from the standpoint of faculty members
- A current scale is a tool for detecting the positive level of technological leadership from the standpoint of the faculty members.

Recommendations

- Using this scale in all educational and sports institutions.
- Conducting studies similar to the (Technological Leadership) scale with all its axes to benefit from this study.

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No.	Phrases	always agree	mostly agreed	agree sometimes	rarely agree	disagree
1	Facilitate the participation of faculty members in developing the vision for technology in the college					
2	Urging faculty members to participate in the technological planning processes in the college					
3	Engaging faculty members in activities aimed at identifying the best technological applications					
4	Informing faculty members of technological planning requirements and ways to implement it in the college					
5	Participation of faculty members in the technology planning process					
6	Providing promotion opportunities for faculty members with rewards for those who excel in their performance to develop their capabilities					
7	Overcoming the obstacles that reduce the performance level of faculty members until achieving the best results in leadership					
8	Generate trust for faculty members through technology leadership practices and promote a clear vision to achieve college goals					
9	It seeks to motivate, develop and improve performance, knowledge and skills, and develop what is learned by participating in technological training units					
10	Training faculty members to use technology to communicate between members, students and employees					
11	Training in the use of assistive technology in completing daily tasks (such as developing professional skills, developing budgets and collecting information)					
12	Continuing to spread awareness of emerging technology and its importance in education by participating in training courses					
13	Participate in professional development activities to improve and expand the use of technology in the college					
14	Training on the use of technological management systems to access data for members of the training body and employees					
15	Facilitate or provide the use of development-related technology for faculty members					
16	Facilitate the use of technology to support and enhance teaching methods that develop higher levels of thinking, decision-making, and problem-solving skills					
17	Providing assistance to faculty members using technology to interpret and analyze data and evaluate students					
18	Provide and ensure that faculty members benefit from relevant learning opportunities to develop learning and teaching using technology					
19	Providing a better model for school faculty members by using technology in learning and teaching.					
20	Organizing or conducting an assessment of the needs of faculty members using technology related to professional development					
21	Participation of faculty members in exchanging information among themselves through technological programs					
22	Work to achieve stability for faculty members in the college					
23	Taking into account the humanitarian aspects when dealing with faculty members in the college					
24	Encouraging faculty members to participate in social events					

25	Listen to your problems at work so that you can come up with appropriate solutions					
26	Working on instilling a culture of moral excellence intellectually, mentally and artistically					
27	Ensuring equal access to and use of technology in college					
28	Enhancing opportunities for environmentally and health-safe contributions in the use of technology					
29	Ensure equal access to technology resources that empower all faculty members					
30	Implementing policies or programs aimed at increasing the social communication of technology to all faculty members					
31	Ensuring the localization of expertise in the technological field					
32	Possess the ability to predict the demand oriented towards teaching					
33	Possess the ability to train faculty members to understand the requirements of technological leadership					
34	Having the ability to influence the behavior of faculty members using technological means					
35	Encouraging technology sharing among all faculty members					
36	The use of technology to collect and analyze data, and to interpret and disseminate results to improve teaching practices and student learning					
37	Evaluate the knowledge, skills, and performance of faculty members in technology and use the results to facilitate the quality of professional development and to inform administrative decisions					
38	Develop or enhance a model of a technology system for collecting student assessment data					
39	Promote and evaluate applied practices based on technology to assess their effectiveness					
40	Commitment to the effective use of technology as a criterion for evaluating the performance of faculty members					

Appendix 1: Technology Leadership Scale Final Formula.