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The Techno-Strategy of the Management Information System and its Role in Enhancing Risk Management in the General Directorate of School and Sport Activity

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The importance of this research lies in shedding light on the concept of techno-strategy for information management from vital and important topics that showed response for change in all areas of life. As this necessitates the updating and changing of it in order to achieve its strategic goals and enhance its technological advantage. The research problem looked at the role of the information technology system (ITS) in enhancing risk management in general directorates for sports and school activity from the viewpoint of its department heads. The research aimed at the relationship of information techno-strategy in risk management and the ratios of the contribution of information techno-strategy in risk management from the viewpoint of heads of sports and school activity departments to the general directorates in the Ministry of Education. The descriptive method was used in the survey method and relational relationships to solve the problem. The community and the research samples were from all heads of sports and school activity departments in the General Directorate of Sports Education and School Activity in the Ministry of Education. The research samples were chosen intentionally and the number of the research samples was 20 individuals, and after collecting the results and treating these reached the following conclusions: The General Directorate of Sports and School Activities gave clear attention to the requirements of techno-strategy in all its aspects. In addition, the

strategic axes of strategic planning, the efficiency of information technology, skill, and experience of human resources have a relationship with and association with risk management. The recommendations implied the necessity for the sporting and school activities departments' heads to adopt the concept of techno-strategy as it is a system that enhances their ability to achieve the vision and mission of the General Directorate and its goals and thus improve the adequacy of their performance.

Key words: *Techno-Strategy, Information Systems, Management, School Sport*

Introduction

The current era is the era of progress and development in the field of information and technology management that represents a major force for educational institutions. It is an important resource that can be described as a pillar for any institution. In this era, the information and knowledge are intertwined in a more complex and difficult way, which leads to competition among the large educational institutions of different activities.

Techno-information management strategy is one of the vital and important issues that have emerged in response to change in all areas of life, which necessitates the updating and changing of it in order to achieve its strategic goals and enhance its technological advantage. Techno-strategy and information management dimensions are included, strategic planning, the efficiency of information technology, skill and expertise of human resources, and contributed to a wide development at the significant strategic level, because of the high accuracy and great speed in obtaining information and data (Abdel-Hakim,2017), which works to enhance risk management in the contemporary environment. It is characterised by intense competition between educational institutions, especially the General Directorate of Sports and School Activity, which has become most in need of the promotion and the application of the concept of information management technology and risk management. Attributed to it are basic requirements upon which the success of educational institutions depends, particularly in the General Directorate of athletic and school activity in the near future.

Importance of Study

The importance of the study lies on helping with the techno-strategy of the workers in the General Directorate of Sports and School Activities and to develop their capabilities, to shift from the information age to the age of knowledge. The new challenges were imposed on educational institutions, and interest in addressing the phenomenon of its loss of many experts' individuals, and thinkers, and those with skills because of many changes. The

changes included the re-engineering and strategy change of the administrative pyramid, and with the few research and studies that presented in this field, the researchers sought to study one of the important topics, which represents a resource that contributes to strengthening risk management in the sports and school activities facing challenges.

Problem of the Study

Techno-Strategy of information management plays several roles in the field of risk management with rapid access to the risk or by providing information and scenarios electronically or by providing various information systems, including decision support systems and others, and therefore the research problem can be formulated through the following question: What is the role of the techno-strategy of the management information system in strengthening risk management in general directorates for sports and school activity from the viewpoint of their department heads?

Aims of the Study

The current study aims at:

1. Determination of the relationships of information techno-strategy in risk management based on the heads of sports and school activity departments at the general directorates in the Ministry of Education.
2. Identifying the percentages of management's information techno-strategy contribution to risk management based on the heads of sports and school activity departments at the general directorates in the Ministry of Education.

Hypotheses of the Study

1. Techno-information management strategy has a correlation relationship with risk management based on the viewpoint of heads of sports and school activity departments at the general directorates in the Ministry of Education.
2. Techno-information management strategy has a contribution rate in risk management based on the viewpoint of the heads of sports and school activity departments at the general directorates in the Ministry of Education.

Fields of the Study

1. The Human field: Heads of sports and school activities departments at the general directorates in the Ministry of Education.
2. The Time field: Duration from (22/12/2019) to (1/3/2020).
3. The Spatial field: The General Directorate of Sports and School Activity in Iraq.

Terms of Study

Techno-Information Management Strategy

It is an important source of work inside and outside the organisation and this source is able to support the work and other activities that support the processes and rapid capabilities of decision-makers (Al-Hadrawi & Al-Ali,2012).

Study Methodology and Field Procedures

Study Methodology

In the field of scientific research, the choice of the research methodology to solve the problem depends on the nature of the problem. Therefore, the descriptive approach in the survey method and the relational relationships to solve the problem were adopted.

The Community and Study Samples

The study community was determined from all heads of sports and school activity departments in the General Directorate of Physical Education and School Activity in the Ministry of Education, for the academic year (2019-2020), since they are primarily concerned with the subject of the research. The research samples were chosen in an intentional method. In addition, the number of the research sample is 20 individuals, and they constitute the entire study population at 100% for the heads of the sports and school activity departments in the General Directorate of Physical Education and School Activity in the Ministry of Education, where all 20 individuals subjected to the main experiment and participated in the experiment.

Tools, Devices and Means Used in the Study

- Field visits to collect information and data.
- Arab and foreign references
- International Information Network (Internet).
- Assistant Work Team
- Data removing off the form.

The Two-Scale

The scale is one of the most common research tools used by educational researchers, and the scale is valid for multiple purposes such as collecting data that relate to facts and information from the sample by using directions measures or assessment measures... etc. (ibid). The

researchers sought to build the two measures of research variables, (the scale of information management techno-strategy were represented in the fields (strategic planning 7 phrases) and (information technology efficiency 6 phrases) and (skill and expertise for human resources 7 phrases), while the second measure is risk management and represents 20 words.

Statistical Means

SPSS used statistical data and Excel software to process data according to the following laws (percentage, arithmetic mean, hypothetical mean, standard deviation, simple correlation coefficient (Pearson), correlation coefficient (Cyberman Brown), T-test for independent samples, T-test for single-sample, Skewness coefficient and regression coefficient.

Presenting, Analysing and Discussing the Results

Presentation and Analysis of the Results of the Scale of Techno-Strategy for the Management Information System and Risk Management

Table 1: Shows the statistical parameters of the results of the techno-strategy for the Management Information System and risk management

Risk management scale	Technology Strategy system scale	Statistical means
44.9	46.05	arithmetic mean
40	42	hypothetical mean
10.64	11.37	Standard deviation
0.74-	0.99-	skewness
18.86	18.11	T value for sample
0.000	0.000	Error level
0.05	0.05	
Significant	Significant	Significant

It is clear from Table (1), through the answers of the research sample, that the arithmetic means of the scale of the techno-strategy management information system has reached (46.05) and the hypothetical mean (42). Thus, the arithmetic mean is greater than the hypothetical mean, also for the risk management scale, the answers showed a research sample mean of (44.9) and the hypothetical mean as (40).

With the arithmetic mean greater than the hypothetical mean in the risk management scale as well, the researchers attribute that to the heads of the departments, in the General Directorate of Physical Education and School Activity in the Ministry of Education, having technical management information system techno-strategy represented in strategic planning, information technology efficiency, skill and experience of human resources. In their

directorate through the positive practices followed by the General Directorate of Physical Education and school activity in risk management with a strategic plan for risk management in the General Directorate which is working to confront the risks to which it is exposed and then is processed, and then these plans are developed, discussed and reviewed by senior and middle management. As the development of plans for managing and identifying possible risks is done by calling up individuals with scientific competence and technical expertise to help in setting and defining the basic steps that are followed before, during and after the risk, for quickly obtaining digital technology that improves performance by providing skill and human expertise. In addition, the following mechanisms, controls and instructions of the techno-strategy in risk management are developed by the General Directorate of Physical Education and School Activity, and it works to implement it at specific time periods according to what was set for the sake of it while addressing the issues that need to be developed in some negative practices that the General Directorate is exposed to in terms of the internal environment and the external environment of the General Directorate. (Mustafa, 2005) emphasises the environmental survey (internal and external) for an organisation. Then the main goals are determined, by evaluating and selecting the appropriate ones, and designing the strategies of follow-through programs and schedules that employ specific resources in them to reach these goals, which are considered criteria for the actual performance. This is an ongoing process for designing and developing plans included in jobs of the Foundation (Al-Hadrawi & Al-Ali,2012).

Presentation and Analysis of the Relationship Results and Contribution Ratios between the Techno-Strategy Scale Management Information System and the Risk Management Scale and Its Discussion

Table 2: Shows the correlation between the techno-strategy scale and the risk management scale

Indication of correlation	The direction of the relationship	Error level	Correlation coefficient	The scale
Significant	positive	0.000	0.77	Techno-strategy Management Information System
				Risk Management
P ≤ 0.05				

As it becomes clear from Table (2), it showed that there is a significant correlation between the scale of techno-strategy for administrative information system and the risk management scale. As the correlation coefficient reached (0.77) and the error level was (0.000) at the level of significance (0.05). This indicates a positive relationship, and the researchers attribute this to the primary role of the techno-strategy of the administrative information system and its

field in risk management, which is one of the most important roles that contribute to achieving the required educational goals in the sports and school activity section.

Whenever a techno-strategy is able to be applied to risk management, its principles and determinants, it seeks to ensure the administration's efforts to preserve the higher interests of workers and beneficiaries of the General Directorate of Physical Education and Sports Activity to reach the highest levels of work efficiency. This is then able to manage their risks by setting the system for risk management and knowledge of the full details of the administrative work and its uses. As well as its ability to quickly make alternative decisions and plans and its ability to act well and then evaluate the administrative process, all of which reduce the risks within the General Directorate of Physical Education and School activity.

(Al-Asadi, 2014) emphasises the administrative side that exercises administrative functions in planning, organising, directing and controlling with the aim of making optimal use of available resources and thereby achieving efficiency and effectiveness (Al-Hadrawi & Al-Ali, 2012).

Table 3: It shows the percentage of contribution and the value of the change in the scale of the techno-strategy in risk management

Percentage of change	Adjusted contribution rate	Contribution ratios	Simple regression coefficient	the scale
9.02	0.574	0.596	0.772	Techno-strategy Management Information System
				Risk Management
P ≤ 0.05				

Table (3) shows that the value of the simple linear regression coefficient between the techno-strategy management information system and risk management tool reached (0.77) with a contribution rate of (0.596). That means the correlation between the techno-strategy management information system and risk management was a significant correlation and direction. The researchers attribute that to the effective role of the management information techno-strategy in risk management in the General Directorate of Physical Education and School Activity.

In terms of managing the administrative and technical risks, it is directed so that it invests opportunities in the external environment that is presented to it and faces the challenges it comes across which leads to exploiting the potential points in its internal environment and

addresses the shortcomings in the performance of the General Directorate of Physical Education and School Activity. (Abdel Hakim, 2017) found, for the contribution of the techno-strategy of the management information system to risk management, that it plays an important role in facing risks by contributing to defining the organisation's general policies and its goals. Moreover, contribute to the preparation of a working team to be facing the risks by the persons who have experience and training in the field of risk management and maintain the flow of information to the risk management centres in the institution to take the appropriate decision to face the reactions. And in addition, contribute to the analysis of risks and the reasons of their occurrence and put results in place that can be benefitted from later, and help in identifying deviations related to facing risks and the possibility of correcting it to avoid facing similar future risks (Al-Asadi, 2014).

The Conclusions and the Recommendations

The Conclusions

The study concluded the following:

1. The General Directorate of Sports and School Activity gave clear attention to the requirements of technology in all its dimensions.
2. Techno-strategic axes of strategic planning, information technology efficiency, skill and expertise for human resources have a correlation with risk management through the responses of the research samples. Moreover, this indicates the ability of heads of sports and school activity departments to understand the planning, organisational and technological environment and invest in it for human resource capabilities, skills, and expertise to achieve the best performance.
3. Techno-strategy has a positive impact on evolution of the adequacy of the General Directorate for Sports and School Activities, as the heads of its departments' monitor and follow situational events through the internal and external environmental information and data they receive, and assess their risks and confront them.

The Recommendation

Based on the study findings, the researchers recommend:

1. The necessity for the heads of departments the sporting and school activities adopting the concept of techno-strategy, as it is a system that enhances their ability to achieve the vision of the General Directorate and its aims and thus improve the adequacy of their performance.



2. The necessity of establishing a system for techno-strategy inside the General Directorate of Sports and School Activities in a formal manner because the changes that are made require the heads of its departments to adapt to these changes and to achieve the ability to take effective decisions and confront risks.
3. The necessity of involving all department heads and workers in the General Directorate of Sports and School Activities in training courses and conferences that support techno-strategy in order to raise the reality of administrative and sports work, which has a positive impact on the adequacy of their performance.
4. Emphasising working with the spirit of one team among the heads of departments and workers in the General Directorate of Sports and School Activities when analysing, interpreting, processing and exchanging information, recreating and formulating it creatively, and then making the right decision so that the decisions are not due to the awareness of only one individual.



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Appendix Research Metrics

1- Techno-strategy for Information Management System

rare	Sometime	Always	Techno-strategy for Information Management System technology field	N
			Strategic Planning	
			A strategic plan is drawn up that takes into account the internal and external variables of information technology in the directorate	1
			It takes into account the vision, mission and future goals of the General Directorate and its relationship is interrelated and complementary between its various aspects and activities between them and its environment	2
			Strategic planning aims to achieve integration between information systems and align them with the goals of the Directorate	3
			Strategic planning provides decision-makers with prompt and immediate information	4
			Strategic planning uses information technology and networks as knowledge tools and technology projects to convert inputs into outputs and publish them	5
			The methodology aims to select and acquire technology in the e-business environment	6
			Evaluating the strategic plan and monitoring institutional performance so that the actual performance can be compared to the desired performance	7
			The efficiency of information technology	
			Using information technology strategically through information technology tools	8
			The directorate's strategy is concerned with exploring, capturing, developing and disseminating knowledge with the help of technological capabilities	9
			It provides the necessary and basic requirements such as modern devices and equipment, fast and efficient means of communication, and their suitability for work	10

			Integration and homogeneity between current and planned information systems will be achieved in the future	11
			Verifying the follow-up of information technology systems and networks to the development of technology and raising its efficiency and capabilities, as required by its strategic role	12
			Technical innovation is continuing and rapid in the sector of legalization of information and communications	13
			Skill and expertise for human resources	
			Designing strategies that are followed through programs and timetables that use a range of resources to achieve these goals	14
			Strategic planning is based on the scientific foundations resorted to by the administration in monitoring and employing available human resources and managing them to achieve the desired goals	15
			The optimal use of human resources (energies and capabilities) and the available physical capabilities	16
			Available resources (human, material) bring modern technology and techniques	17
			The Directorate is investing its resources heavily in order to achieve the required efficiency	18
			Encouraging individual and organisational skills and expertise for human resources to be developed and developed	19
			There is an actual observation or practical knowledge of facts or events	20
			Providing the Directorate with a suitable climate for creators and innovators	21

Risk Management scale

Modify	Not suitable	suitable	Risk Management	N
			Risk Management	
			It helps administrators administratively face the future changes facing the sports and school activities departments	1
			Techno-strategy makes an effective contribution to achieving risk management	2
			Able to provide material and information needs in a timely manner	3
			There is technology in place to respond to and avoid emergency situations and make the necessary preparations	4

		It works to attract qualified individuals who are able to take responsibility and new and modern skills and knowledge are required.	5
		Present management leaders who make informed decisions to deal with risks	6
		There is an interest in the administrative and technical problems facing the directorate, which leads to reducing the aggravation of the risk	7
		It regains balance and activity from the material and moral aspects that lost through short-term plans and programs that have been prepared and selected previously	8
		Information and communications technology plays several roles in the field of risk management	9
		Define deviations for facing risks and the possibility of correcting them to face similar future risks	10
		Present flexibility in decision-making to facing the risk and its potential consequences	11
		The possibility of controlling the available alternatives during the escalation stages	12
		Achieve coordination and synchronisation in the work among the risk management crews	13
		Updating the basic database for the different risk management centres	14
		Survey the environment and shorten the potential danger that might explode in the future	15
		Learn from previous experiences and update the risk management plan based on feedback	16
		Allocating specific resources and a team that they assigns to deal directly with risk	17
		It lays the foundations for a new risk prevention plan	18
		The ability to communicate, dialogue, craft and draw tactics needed to deal with risk	19
		It carries on its various activities after the occurrence of normal danger	20