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Original article

EFFECT OF DECISION SUPPORT SYSTEMS ON ENHANCING THE TACIT KNOWLEDGE AND DECISION QUALITY FOR EGYPTIAN SPORTS FEDERATION

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Abstract

Objective. Knowledge is essential for decision-makers and creators. This knowledge is generated through training, practice, and friction, and is the result of acquired information, which develops implicitly or ostensibly. The aim of study is to reveal effectiveness of Decision Support Systems on Enhancing the Tacit Knowledge and Decision Quality for Egyptian Sports Federation.

Methods. The sample contain (17 manager) from the Egyptian Sports Federation (Soccer, Tennis and Basketball). The researchers designed a questionnaire contains 44 item, through three axes (Tacit Knowledge which contain Experience, Skill, thinking (9 item), the Decision Support Systems characteristics which contains Simplicity, Easier Control the System, Flexibility and the ability of Adaptive and Communication easiness and Capability. (20 item) and Strategic Decision Quality Criteria which contain Rare, Consequential and Directive (15 item). the format of a typical five-level Likert item was Strongly Disagree (1 degree), disagree (2 degree), Neutral (3 degree), Agree (4 degree) and Strongly agree (5 degree).

Results. The results indicated that,

- Significant influence of Tacit Knowledge (Experience, Skill and Thinking) on Decision Support Systems characteristics (Simplicity, Easier Control the System, Flexibility and the ability of Adaptive and Communication easiness and Capability) for the Egyptian sports federations at a significance level (0 .05).
- Significant influence of Tacit Knowledge (Experience, Skill and Thinking) on the quality of strategic decisions (Rare, Consequential and Directive) for the Egyptian sports federations at a significance level (0 .05).
- Significant influence of Tacit Knowledge (Experience, Skill and Thinking), the quality of strategic decisions (Rare, Consequential and Directive) and Decision Support Systems characteristics (Simplicity, Easier Control the System, Flexibility and the ability of Adaptive and Communication easiness and Capability) for the Egyptian sports federations at a significance level (0 .05).

Conclusion. The managers of the Egyptian sports federations have technical and managerial experience in their field of work which enables them to make fundamental decisions regarding the nature of their work.

Keywords: Decision Support Systems, Tacit Knowledge, Decision Quality, Egyptian Sports Federation.

Introduction:

Knowledge played a fundamental role in organizations whether knowledge as a framework or knowledge as a subject. Knowledge of accelerated development has thus become the result of the vast evolution of knowledge-based strategies, with knowledge becoming the primary source of new knowledge creation and application development in new products, services, processes and practices (H. Lee & B. Choi. 2003)

Since decision support systems were a product of the development of information technology during the 1970s and developed during the 1980s, this development was not in itself an artistic revolution as much as it was the way computers were used. The decision support system simply focuses on providing appropriate support to improve the quality of decisions and the quality of decisions depends on several factors, the most

important of which is the adequacy of the information available, the adequacy of the information available to the number of alternatives presented, the suitability of the models used to analyze the problem and the appropriate time for information to reach decision.

(M.W.McElroy, 2000) has shown that complex adaptive systems theory considers that organizations organize themselves and try to adapt organizationally (individually and collectively) and continuously to changing circumstances, as this theory assumes that they modify their knowledge to lead to change in behavior and then systems to create permanent systems to generate knowledge to help them become creative.

In the same context, the theory of (I. Nonaka, & H. Takeuchi, 1995) explains how knowledge is formed through the interaction between two types of knowledge, implicit and manifest, implicit knowledge includes cognitive

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and technical elements. The cognitive elements include mental models such as schemas, models, expectations, beliefs and perspectives, Technical elements include know-how, crafts, and skills.

(R. Jennifer, 2000) stated that knowledge has been identified as a core resource of organizations working to enhance their competitive advantages. Therefore, organizations must have a clear strategic vision in terms of their knowledge, both in terms of their production through their internal sources, or their polarization and access from external sources, and thus employ them to reduce their knowledge gap.

Therefore, (Misdolea, 2010) argues that decision support systems are the fruits of cognitive and technological development during the 1970s, and then developed during the 1980s. Decision support systems rely on appropriate support to improve the quality of decisions by integrating data, models and software into an effective decision-making system.

(M. Selamat, & J. Choudrie, 2004) determined that computer-based information systems seek to facilitate interaction between the human element and information technology. Decision support systems, through human interaction with information technology, aim to provide the necessary support to streamline the decision- Where decision support systems are useful to support administrative decision makers in the case of semi-structured decisions. The system also provides managers with information tools, tables, drawings, models, and simulations that help solve semi-structural and non-structural problems.

(H. Lee & B. Choi, 2003) indicated that Decision support systems are computer-based information systems that collect data, information, and models in an attempt to solve sub-structural problems with user participation, including a knowledge base system that supports decision-making activities. Decision support systems are not the task of decision-making. Managers are not a substitute for them but provide them with a range of facilities that generate the information they feel they need when making decisions.

Many researchers addressed the concept of knowledge from a binary perspective, which is most relevant to the current study, because knowledge processes, strategies, inputs and sources were not viewed from a comprehensive perspective.

(E. Turban, et al. 2001) defines knowledge as the information that is organized and processed for the purpose of understanding, studying, practicing, learning, and then applying to work, solving problems and accomplishing work.

(I. Fernandez, et al. 2001) suggests that knowledge differs from data and information from two points of view: the first is knowledge at the top

level of the administrative hierarchy, and then the information at the intermediate level. Data is at the lower level, Be higher than the two. The second view defines knowledge as the prevailing belief of relationships about related concepts within a limited scope. Knowledge helps produce information from data, information that is more valuable than information of lower value.

(K. Laudon, & I. Laudon, 2008) points out that knowledge is an intellectual construct that arises through the power of the human mind.

(W. Ian, 2003) as the third of the four stages of the data series towards wisdom. When data is organized for a specific purpose, it is placed in a special content, it becomes information, and when information is analyzed to reveal unusual patterns, hidden trends, the information becomes knowledge, and when it accumulates from different directions and their application results in wisdom, which is applied in the normal life-making positions.

With the launch of the third millennium, knowledge has become the decisive organizational resource that challenges and competes. For this reason, many organizations have sought to strengthen and develop the knowledge available to their working members, and to consider them and knowledge quality in the organization (A. Hitt, Michal et al. 2001).

(K. Laudon, & I. Laudon, 2008) points to the importance of knowledge by saying that products are goods and services, information provided by competitors at the lowest prices based on knowledge, know how the primary source of profit is, and knowledge assets are intrinsic Effective and strategic organization, which is more important than financial and material assets to ensure survival and competitiveness. In this respect, Drew states that knowledge is used by experts and specialists.

Based on the above, it is difficult to develop a unified and comprehensive concept of the term knowledge, because of the different views of the writers and schools to which they belong, but most of their focus was that knowledge is a cumulative set of information and ideas, hence it is clear that information and ideas have a prominent role in the production and development of knowledge of organizations.

(I. Nonaka, & H. Takeuchi, 1995) deals with the generation of knowledge from the angle of interaction between its two types: tacit knowledge and explicit knowledge.

(R. Daft, 2001) and gave each a different concept. Knowledge is defined as official and organized knowledge, which is encoded, written, and transmitted to others through general documentation and guidance, and refers to its knowledge of knowledge about a given topic. Tacit knowledge is defined as knowledge based on

personal experience, evidentiary rules, intuition and personal judgment. It is often difficult to place them in symbols or words and refers to its knowledge of how-know.

(R.T. Herschel, 2000) that the apparent knowledge as knowledge can be expressed using the system of symbols and therefore can be easily communicated and found in the form of product specifications, patents and schemes, either implicit knowledge is not symbolic and difficult to spread and difficult to utter because it is expressed across Work-based skills are learned. One approach was to develop the concept of knowledge (1998, Polany; Tuomi 1999; 1999; Vail; 2000, Duffy; 2000, King; 2000, Rastogi).

(M.W. McElroy, 2000) referred to Complex Adaptive Systems Theory, which sees that organizations regulate themselves and attempt to adapt individually, collectively and continuously to changing circumstances, and assume that they modify their knowledge leading to change in behavior and thus permanent systems of generation Knowledge that helps them to become creative.

The aim of study is to reveal effectiveness of Decision Support Systems on Enhancing the Tacit Knowledge and Decision Quality for Egyptian Sports Federation

Methods:

The sample contain (17manager) from the Egyptian Sports Federation (Soccer, Tennis and Basketball).

The questionnaire

The researchers designed a questionnaire contains 44 item, through three axes (Tacit Knowledge which contain Experience, Skill, thinking (9 item), the Decision Support Systems characteristics which contains Simplicity, Easier Control the System, Flexibility and the ability of Adaptive and Communication easiness and Capability. (20 item) and Strategic Decision Quality Criteria which contain Rare, Consequential and Directive (15 item). the format of a typical five-level Likert item was Strongly Disagree (1 degree), disagree (2 degree), Neutral (3 degree), Agree (4 degree) and Strongly agree (5 degree).

Statistical analysis

All statistical analyses were calculated by the SPSS statistical package. The results are reported as means and standard deviations (SD). Differences between responding were reported as mean difference $\pm 95\%$ confidence intervals (mean diff $\pm 95\%$ CI). Student's t-test for independent samples was used to determine the differences in responding parameters. The $p < 0.05$ was considered as statistically significant.

Results.

Table 1 the age, Academic degree and experience of the subjects.

Federation	N.	Age	Academic degree	Experience
Soccer	8	53.34 \pm 3.67	14.36 \pm 5.67	24.20 \pm 4.11
Tennis	4	55.77 \pm 3.78	15.47 \pm 6.02	21.47 \pm 5.02
Basketball	5	54.05 \pm 2.98	15.90 \pm 4.88	19 \pm 4.67

Table 1 shows no significant differences were observed in the all characteristics of the subjects.

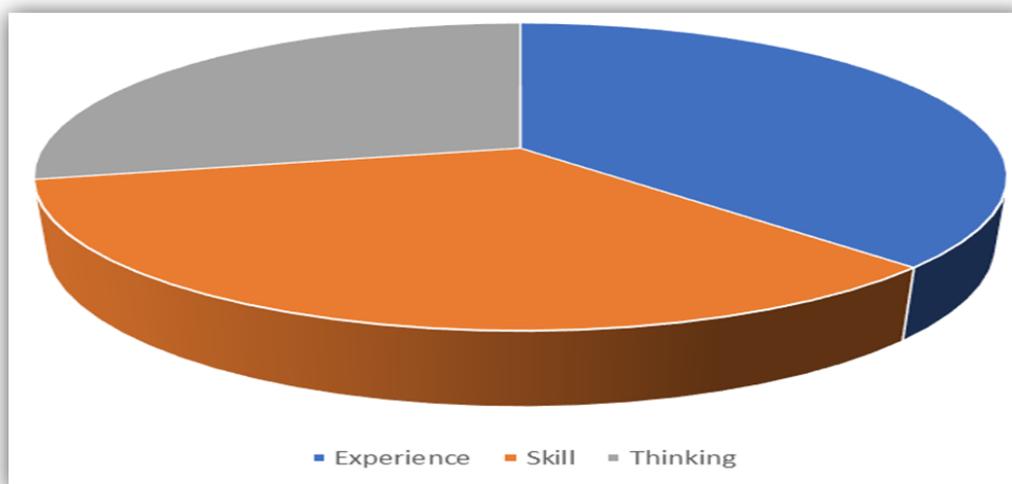


Fig.1 explain average of Tacit Knowledge (Experience, Skill and Thinking).

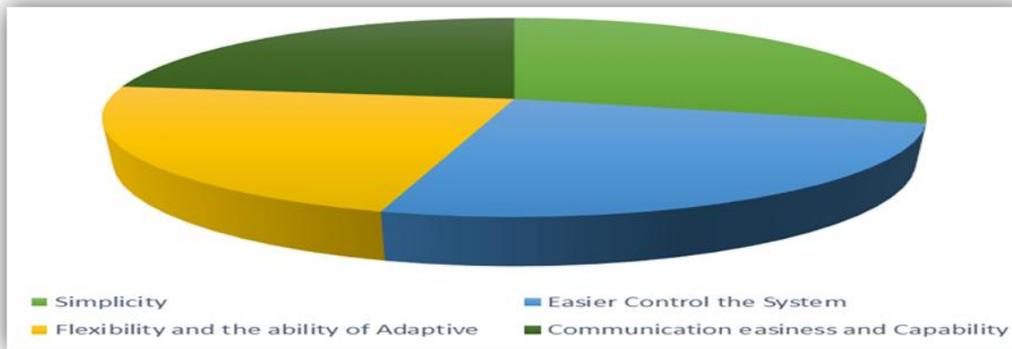


Fig.2 explain significant influence of Tacit Knowledge (Experience, Skill and Thinking) on Decision Support Systems characteristics (Simplicity, Easier Control the System, Flexibility and the ability of Adaptive and Communication easiness and Capability) for the Egyptian sports federations at a significance level (0 .05).

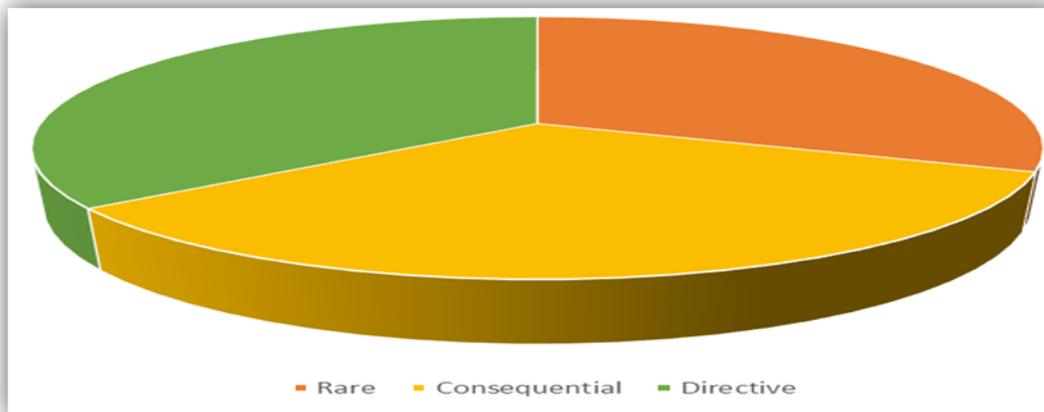


Fig.3 explain significant influence of Tacit Knowledge (Experience, Skill and Thinking) on the quality of strategic decisions (Rare, Consequential and Directive) for the Egyptian sports federations at a significance level (0 .05).

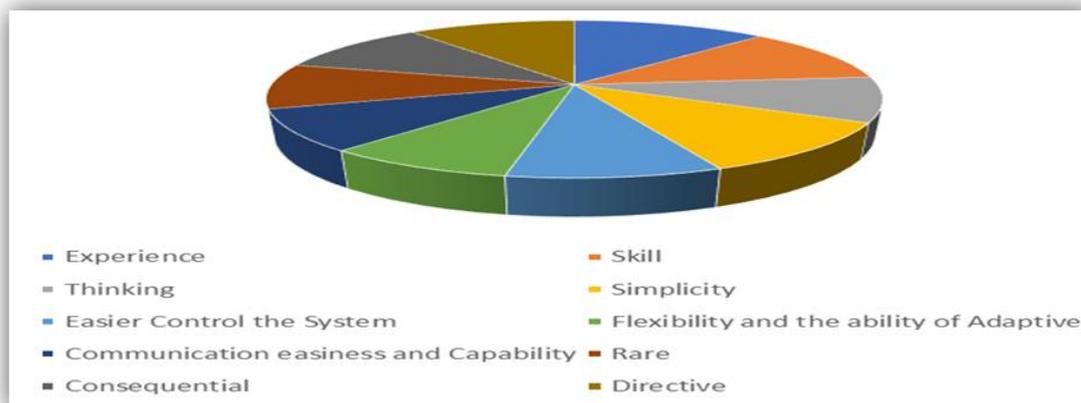


Fig.4 explain significant influence of Tacit Knowledge (Experience, Skill and Thinking), the quality of strategic decisions (Rare, Consequential and Directive) and Decision Support Systems characteristics (Simplicity, Easier Control the System, Flexibility and the ability of Adaptive and Communication easiness and Capability) for the Egyptian sports federations at a significance level (0 .05).

Discussion.

The main findings from this study were the significant influence of Tacit Knowledge (Experience, Skill and Thinking) on the quality of strategic decisions (Rare, Consequential and Directive) for the Egyptian sports federations at a significance level (0.05).

Knowledge is essential for decision-makers and creators. This knowledge is generated through training, practice, and friction, and is the result of acquired information, which develops implicitly or ostensibly.

This result is consistent with (K. Laudon, & I. Laudon, 2008) study, which showed that there is a positive impact between the quantity and accuracy of information. The most influential information in managers' decision is their reliance on external information as well as personal information that increases effective decision-making. (H. Lee & B. Choi, 2003) showed that most of the sample managers are aware of and agree on the importance of the information and data in the organization and its structures in terms of their knowledge and its important role in the future planning process of the organization.

This finding is in line with the study by (M.W. McElroy, 2000) which pointed to the relationship between the common use of knowledge management and information technology and the high value of the business banks. It also found an impact on the increase in business value in banks due to joint use of information technology and knowledge management

Effectiveness and ease of communication on the quality of strategic decisions in the Egyptian sports federations the at a level of significance (0.05 =) This result is consistent with the result of the study of (K. Laudon, & I. Laudon, 2008) which showed that there is a very strong relationship between the organizational level of the Information Systems Department and the quality and use of information in the decision-making process and the existence of modern techniques generally J components of information systems in these universities have made the users of these systems rely heavily on decision-making, and the study proved that there is a strong positive correlation between the quality of information and the use of information systems in decision-making process Strategy.

Acknowledgments

Thank you to all of subjects who participated in this study.

Conclusion.

- The managers of the Egyptian sports federations have technical and managerial experience in their field of work which enables them to make fundamental decisions regarding the nature of their work.

- The managers of the Egyptian sports federations have a sample of the study ability to train and educate their employees to help them complete their work.
- The managers working in the Egyptian sports federations to consider the environment for external in terms of needs and requirements of customers.
- Information and data used by decision makers in the Egyptian sports federations the sample of the study and extracted from the decision support system in force is shortened to the extent that it does not help the decision maker to have a high degree of confidence in the quality of the decision taken.
- The data, charts and graphs presented by the decision support system in the Egyptian sports federations. The is as required.
- The decision support system used by the Egyptian sports federations enables to predict the internal and external environmental changes to a certain extent.
- The decision support system in the Egyptian sports federations is a sample of the study to contribute to the mechanisms of service delivery that distinguish each union from another.
- Decision Support System in Egyptian Sports Federations The provides information that helps to make decisions.
- Decision support systems in Egyptian sports federations help to provide information relevant to the planning of their financial, material and human resources.

References.

- Daft, R, 2001, "Organization Theory and Design", West publishing, New York
- Drew, S., 1999, "Building Knowledge Management into Strategy; Making Sense of A new Perspective", Long Range Planning, Vol.32, No.1: 130-136
- Duffy, J. 2000, "The Knowledge Management Technology Infrastructure", Information Management Journal, April, Vol. 34, No.1.
- Fernandez, I. B. Gonzales, A&Sabherwal, R, 2001, "Knowledge Management; challenges, Solutions, and Technologies", 1st Ed, Pearson Prentice, Hall, New Jersey.
- Gupta, G Uma, 2000, "Information Systems", Prentice Hall, New Jersey.
- Herschel, R.T., 2000, "Chief Knowledge Officer: Critical Success factor for Knowledge Management: Information Strategy ", The International of Human Resource Management, Vol.16, Issue.4: 41-42
- Hitt, Michal A, Ireland R, Hoskissom, 2001, "Strategy Management ", USA.

- Holsapple, C.W., and A. B. Whinston, 2008, "Decision Support Systems: A Knowledge-Based Approach", St. Paul: West Publishing.
- Ian, W., 2003, "Applying Knowledge Management: Techniques for Building Corporate Memories", Boston, U.S.A.
- Jennifer, Rowley, 2000, "From learning organization to knowledge entrepreneur", The Journal of Knowledge Management, Vol. 4, No.1.
- Laudon, K. & Laudon, I., 2008, "Management Information Systems. Managing the Digital Firm", 13th ed. Upper Saddle River, New Jersey: Prentice Hall Person Education.
- Lee H. & Choi, B., 2003, "Knowledge Management Enablers, Process and Organizational Performance: An Integrative View and Empirical Examination", Journal of Management Information Systems, Vol. (20), No. (1), summer.
- Lee H. & Choi, B., (2003), "Knowledge Management Enablers, Process and Organizational Performance: An Integrative View and Empirical Examination", Journal of Management Information Systems, Vol. (20), No. (1), summer.
- McElroy, M.W., 2000, "Integrating complexity theory, knowledge management and organizational learning", Journal of Knowledge Management, 4(3): 195-203.
- Mintzberg, M. & Quinn, J. B., 1996, "The Strategy Process: Concepts, Context, Cases", U.S.A., Prentice-all International, Inc.
- Nonaka, I. and H. Takeuchi, 1995, "The knowledge creating company: how Japanese companies create the dynamics of innovation", New York: Oxford University Press.
- Power, D. J., 2002, "Decision support systems: concepts and resources for managers", Westport, Conn., Quorum Books.
- Schwartz, David, 2006, "Encyclopedia of knowledge management", Idea Group Reference, U.S.A.
- Salamat, Mohamad Hisyam & Choudrie, Jyoti, 2004, "The diffusion of tacit knowledge and its implications on information systems: the role of meta-abilities", Journal of Knowledge Management, Vol. 8 No. 2: 128-139.
- Turban, E., Aronson, Jay E., 2001, "Decision Support Systems: Intelligent Systems", 6th Ed, Upper Saddle River, New Jersey: Prentice – Hill.