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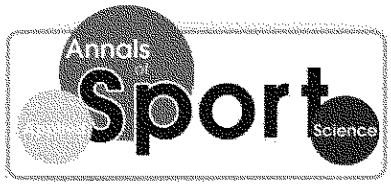


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# Presentation of a Suitable Model for Knowledge Management Establishment in Sport Organizations: Delphi Classic Method

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**ABSTRACT**

In today's increasingly competitive business environment, the use of knowledge to gain a competitive advantage is vital. However, despite the increasing number of studies on sport management in developed countries, few studies have explored knowledge management in sport organizations. This paper aims to propose a model through an in-depth investigation of the previous and current studies on knowledge management establishment in sport organizations according to Delphi classic method. It is envisaged that this model can play a role in guiding the factors of knowledge management implementation in order to maximize its beneficial effects in sport organizations.

**Key Words:** knowledge management, sport organization, Delphi classic method.

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## INTRODUCTION

Knowledge workers are people who generally say, "think for living" (1).Within the current economic atmosphere, organizations are facing many difficulties and challenges due to a multiplicity of factors such as globalization and the resulting intensification of competition between organizations. This situation is encouraging the use of new management concepts and paradigms such as KM that has been recognized as an important tool for improving the efficiency and success of organizations (2). The metaphor of transferring knowledge from hands into brain, changing information into knowledge, and finally into works or a determined output with the value added means that variety, creativity, technology, and knowledge-orientation of organization is an inevitable choice for the organizations in 21st century. Nowadays, organization must be able to gain required knowledge to produce innovation, improve the processes, disseminate knowledge among employees, and implement it in daily life. That's the only way through which the organizations can fulfil the requirements of competitive environment and highly variable needs of customers (3). The decision to implement knowledge management is often difficult for organizations. Sustainability or downfall of an organization can be based on this decision, and thus it is essential to consider internal and external perspectives of an organization before achieving consensus on knowledge management initiation. Because of the rapid growth in knowledge-based expert systems, previous studies on knowledge management primarily focus on the technological aspects of identifying applications and solutions (4-9). However, recent studies have demonstrated that successful knowledge management projects do not result from the installation of information systems alone (10). Numerous influential factors determine the success of knowledge management implementation. Factors requiring consideration include not only financial issues but also organizational culture, harmony, management, control, and measurement; problems in integrating new and old operational processes; human coordination and relationships; effectiveness of strategic management; CEO character and vision; definition of new roles in the organization and so on (2, 3, 11-27).

Other similar researches have evaluated key elements for the establishment of knowledge management separately. Their findings, however, have usually been heterogeneous, presenting too general, too detailed, or they lack a proper methodology. This research hopes to predict such problems of previous studies and provide a solution named "using expert system".

With this interpretation, the main purpose of this paper is to identify effective factors on establishment of knowledge management in sport organizations and provide a model and tends to answer the following questions:

- Which factors are effective on establishment of knowledge management in sport organizations?
- What are the possible models of knowledge management establishment in sport organizations?

## MATERIALS AND METHODS

The present paper, regarding the research design, focuses on the analysis and exploration of effective factors on establishment of knowledge management in order to create a modern analytical and operational model. Regarding the access to variables, it is a descriptive-explanatory study and regarding the purpose, it is an applied research. Thepurpose of using this research methodology is to have an objective and a real and systematic description of the characteristics of a situation or subject. In other words, the author attempts to report

whatever exists without any interference or subjective inference in order to draw objective conclusions.

The statistical population comprises of all experts of knowledge management who have experience of continuous research activities in knowledge management field in sport organizations and also those involved in the field of sports who have implemented knowledge management in their organizations. The statistical sample comprises of experts and specialists who **1-** have the experience of continuous research activities for 5-10 years in knowledge management particularly in the establishment of knowledge management **2-** have written or published at least one valid paper in scientific communities (meetings, societies) **3-**are in charge or involved in the field of sport and knowledge management implementation in their organizations. Based on the defined features, 20 people were chosen, including 10 university professors and 10 heads of sport organizations who had successfully established knowledge management.

In order to perform this study, 2 stages were defined as follows:

**The first stage:** By referring to information in different valid websites, books and journals, the effective factors on successful establishment of knowledge, the reasons of failure in knowledge - based projects, and a deep review of theoretical principles and background were assessed.

**The second stage:** The purpose of this stage was to identify the variables and to remove the non-native variables of the first stage. 10 primary factors and 81 secondary factors were identified in the first stage of the research. According to the knowledge management experts, limited and non-systematic insights put the success of knowledge management establishment in danger

Regarding the importance of the subject, with the research methodology based on nature of the subject and sensitivity in selecting research components, it seems that the main way to come to the correct and applicable result in sport organizations is to use the viewpoints of experts and specialists. Therefore, Delphi technique was considered and selected by authors, because it is a technique that can evaluate research variables by collection and analysis of experts' opinions.

**The third stage:** This stage is the repetition of the second stage to more screen the variables and finalize the research.

**Delphi method procedures:** Delphi method is realizable in classic and advanced forms. In this study, the classic form was used for more flexibility. In this method, at first a small team with few members named designer and analyst team is determined. For next stage, this team determines a larger group with more members of experts and specialists named Delphi group to be interviewed. Then, the first questionnaire is designed by the designer and analyst group. This questionnaire is then submitted to Delphi group to answer the questions. After collecting the answers, comments are summarized and rated based on values. This stage is named as the first round of Delphi. In another stage, the designer and analyst team designs the second round questionnaire based on the results of the first stage. Subsequently, the whole actions taken with Delphi technique are described as follows:

***a)*** Designer and analyst team: In order to design the questionnaires, this team comprises of a four-man group including experts among whom there are a researcher, a supervisor, and two advisers.

***b)*** Delphi group: This group comprises of 10 university professors and 10 heads of organizations who are successful in knowledge management establishment.

***c)*** Designing questions of the questionnaire: In this stage, based on information derived from the first stage of the research (by reviewing literature),

designer and analyst group designs a particular questionnaire for Delphi group to provide feedback. Considering this purpose, the questionnaire has a table that its rows include the variables detected from the first stage of the research as the main variables and its columns contain yes or no options.

***d)*** The first round of Delphi: The respondents must answer yes or no according to the research purpose and main variables in each section of the questionnaire and eventually add variables if needed to the end of each section of the questionnaire. By the end of the first stage of Delphi, questionnaires are collected and those variables to which 60 percent of the respondents have answered yes remain within the questionnaire and those variables to which less than this percent of respondents have answered yes are removed. Afterwards, those cases suggested by each respondent are added to the questionnaire.

The second round of Delphi: by the end of the first round of Delphi, the prepared questionnaire is resubmitted to the respondents to give their opinions once more. After this stage, questionnaires are collected and those variables to which 60 percent of the respondents have answered yes are sent to give their opinions once more. By the end of this stage, questionnaires are collected and those variables to which 60 percent of the respondents have answered yes remain within the questionnaire and those variables to which less than this percent have answered yes are removed.

## RESULTS

After reviewing the research background, 10 primary factors and 81 secondary factors were detected and after the assessment of analyst team, regarding the emphasis on model establishment and repetitiveness, these factors were reduced to 5 primary and 40 secondary factors. Five primary factors are as follows:

Culture, human resources, organizational structure, IT infrastructures, strategy, and leading

Being sent to Delphi group in the first round, these factors were reduced to 24 and no option was added to research in Delphi round which suggests comprehensiveness of research factors.

Table 1 indicates the removal of factors in the first round of Delphi and their presence in the second round.

Variables marked as black were removed in the first round of the research and analyzed by experts in the second stage and 16 primary factors were detected. The results of Delphi's second round are also shown in table 2.

## Discussion

Results show that knowledge share culture, learning culture, and organizational affiliation culture in organizational culture; human resources understanding of knowledge, employee training, appropriate incentives and motivational factors, and using full capacity of human in human resources; communication channels, organizational open space and organizational structure flexibility in organizational structure; providing knowledge perspective, supporting knowledge management projects, and targeting knowledge transfer in strategy; and leading and IT infrastructure, database, and e-commerce technology development are effective factors in knowledge management establishment in sport organizations. Today's competitive pressures in sport organizations for athletes training and support with the purpose of developing political and economic infrastructures is so increasing that quality promotion and fulfilling instant requirement of athletes and citizens are not only an option but also a strategic necessity. Since organizations can't be effectively managed with traditional approaches, a new subject

called knowledge management is introduced which tries to grow and flourish organizations by managing the minds of employees. Besides, according to the fact that several factors may affect the establishment of knowledge management in organizations and some organizations have faced failure in establishment of knowledge management, the establishment of knowledge management model is introduced which may have challenged the implementation procedure of knowledge management. Thus, it is necessary to detect factors which can guarantee the establishment of knowledge management in organizations and providing a model is deemed more necessary. Results show that ,based on experts' opinions, knowledge share culture, learning culture, and organizational affiliation culture in organizational culture; human resources understanding of knowledge, employee training, appropriate incentives and motivational factors, and using full capacity of human in human resources; communication channels, organizational open space, and organizational structure flexibility in organizational structure; providing knowledge perspective, supporting knowledge management projects, and targeting knowledge transfer in strategy; and leading and IT infrastructure, database, and e-commerce technology development are effective factors in knowledge management establishment in sport organizations.

Table1. Results of the first round of Delphi

| *strategy and leading* | *IT infrastructure* | *organizational structure* | *Human resource* | *Organizational culture* |
|---|---|---|---|---|
| Knowledge strategy | IT | centralization | understanding the concepts of knowledge management | trust |
| remuneration policy | amount of access to applicable software | formalization | employee participation | cooperation |
| senior management support | flexibility | communication channels | employee training | open atmosphere |
| common language and goal | IT employees | Team work | creating loyalty in employees | Learning from mistakes |
| Providing knowledge based perspective | cooperation technologies | organizational open space | creating job security security | creativity and innovation |
| Knowledge bylaws | Information quality | emphasis on learner structure | Appropriate incentives and motivational factors | Knowledge share |
| targeting knowledge creation | virtual discussion structure | structure flexibility | using full capacity of human | Knowledge creation |
| Targeting knowledge transfer | e-commerce technology development | | Experts' experience storage | Empathy |
| | database | | implementing recommendation system Development and approach of Converting tacit knowledge to explicit | organizational affiliation |
| | | | | continuous learning |
| | | | | organizational participation |

Table2. The results of Delphi's second round

| IT infrastructure | strategy and leading | organizational structure | Human resource | Organizational culture |
|---|---|---|---|---|
| IT infrastructure | common language and goal | communication channels | Human resource understanding of knowledge | Knowledge share culture |
| database | Providing knowledge based perspective | organizational open space | employee participation | Knowledge creation culture |
| e-commerce technology development | Supporting knowledge management projects | Flexibility of organizational structure | employee training | Learning culture |
| | targeting knowledge creation | | creating job security | Innovation and creativity culture |
| | Targeting knowledge transfer | | Appropriate incentives and motivational factors | Participation culture |
| | | | using full capacity of human | Organizational affiliation culture |
| | | | | trust oriented culture |

## CONCLUSION

In order provide a new model, we must get opinions of experts to find reliable model that helps knowledge management establishment. We evaluate the model and accept the opinions of experts (See figure 1).

In this model, organizations must have management, resources, and environment as input. On the other hand, organizations need factors effective on knowledge management establishment process. The results possibly help to change the tacit knowledge into explicit knowledge and this model possibly helps organizations to establish knowledge management.

This model showed that the role which can be assigned to knowledge management implication is "change". Change within the organization is effective by absorbing new knowledge on one hand and administration on the other hand. But modern organizations are mistaken in their knowledge management. Major part of their effect is devoted to visible knowledge management, while main part of knowledge is invisible that can be very useful in productivity and excellence of organizations.

Therefore, in order to establish knowledge management model in sport organizations it is suggested that:

1. Managers pay attention to the strategies and plan knowledge management programs based on strategy and purpose.
2. Since motivation and support of manager is effective on knowledge management establishment, incentive and motivational systems and financial support is regarded necessary and requires planning and orientation.
3. To develop and create IT infrastructure such as internet, intranet, and networks
4. To create and consolidate a structure based on freedom of speech and eliminate bureaucratic and flexible structures
5. To encourage participation and cooperation culture among employees

6. To develop and motivate training classes for knowledge transfer.

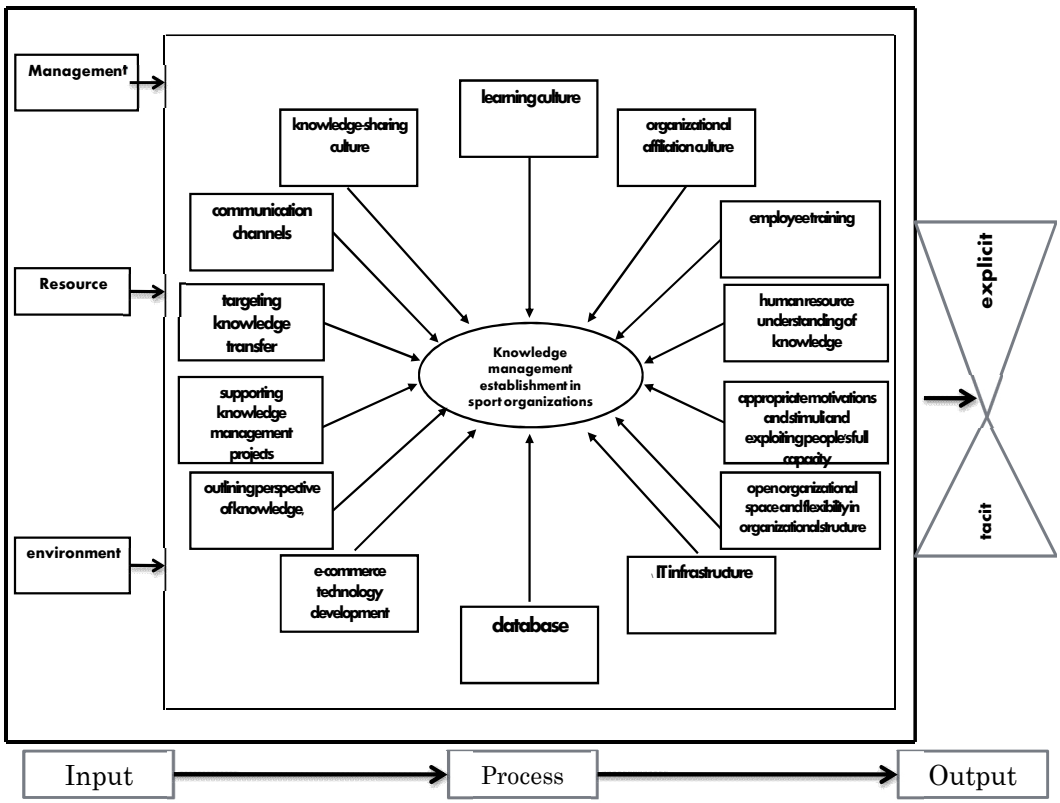


**Figure 1.** Model of establishment knowledge management

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**تازه‌های علوم کاربردی ورزش**
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# ارائه مدلی مناسب برای استقرار مدیریت دانش در سازمان‌های ورزشی: روش دلفی کلاسیک

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## چکیده

امروزه با گسترش روزافزون رقابت در محیط تجاری، کاربرد دانش برای دستیابی به چنین رقابتی امری ضروری است. با این حال، علی‌رغم مطالعات رو به افزایشی که در کشورهای توسعه یافته به حوزهٔ مدیریت ورزش اختصاص یافته است، مدیریت دانش در سازمان‌های ورزشی چندان مورد مطالعه قرار نگرفته است. مدل پیشنهاد شده در این مقاله بر اساس بررسی عمیق مطالعات پیشین و کنونی در زمینه استقرار مدیریت دانش در سازمان های ورزشی بر اساس روش دلفی کلاسیک ارائه شده است. بدین ترتیب پیش‌بینی شده است که این مدل می‌تواند در پیشبرد عوامل مؤثر در کاربرد مدیریت دانش در جهت کارآیی بهینه سازمان‌های ورزشی نقش مهمی ایفا کند.

**واژگان کلیدی:** مدیریت دانش، سازمان ورزشی، روش دلفی کلاسیک.

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