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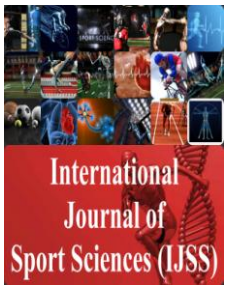


# The Relationship between Information Technology and Knowledge Management and the Productivity of Managers and Employees in Youth and Sports Departments of East Azerbaijan Province

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**ABSTRACT**

The main objective of this study is to investigate the relationship between information technology and knowledge management and the productivity of managers and employees of Youth and Sports Departments in East Azerbaijan province. The research population (n=178) included all managers and employees working in Youth and Sports Departments of East-Azerbaijan province. Out of which, 22 subjects were managers and 114 subjects were employees. According to the nature of study, the research method is based on correlation and is applied study concerning purpose, which was done in the field. To collect data, three types of questionnaires were used which were IT questionnaire of Fathi (2010) (consistingof 36 questions with 5-point Likert scale),knowledge management questionnaire of Askari (2012) (consisting of 42 questions with 5-point Likert scale) and the questionnaire of employees' productivity. The obtained reliability for the questionnaires of IT, knowledge management and organizational performance (productivity) were 0.85 and 0.79, respectively. Cronbach's Alpha was used for internal reliability of questions, which was calculated 0.87. To analyze data, descriptive and inferential statistics were used. The findings showed that there is a positive and significant relationship between information technology (IT) and managers' productivity, there is a significant relationship between the reinforcement of senior management support systems and employees' productivity, there is a significant relationship between knowledge creation and managers' productivity, there is a significant relationship between knowledge management and employees' productivity, there is a significant relationship between network systems and employees' productivity and there is a significant relationship between knowledge application and managers' productivity.



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## INTRODUCTION

Nowadays some issues are presented that we can't solve them with past strategies. The main characteristics of today issues is the vast amount of data and information that need to be collected, preserved, , processed, retrieved and analyzed.This property, which is considered as the creator of organizational complexities, cause to move toward a modern technology called Information Technology (IT) that helps to facilitate the work with data and information [2]. Despite the short life of IT and its rapid development, different definitions and perceptions are presented about it that by exact look we can find some inconsistencies among them [12]. These definitions cover the broad range of concepts that sometimes are quite limited in the computer processing of operations and sometimes are remembered broadly as a technology that organization life is dependent on them. According to Mantel [9], information technology is to collect, store, organize, process and disseminate information including audio, image, text or number that is done by computer and telecommunication tools.

In another definition by Haysiman Oghlu [8], information technology and multimedia technologies including computer, software, internet, telephone, television as well asinternet business projects, email, blogs, satellite ant etc. similarly, Dika and Hamiti [4] consider IT as a combination of communicative and computer equipments .In fact, IT is a phenomenon that is created by applying computer systems in organizations and society and its transformation resulted from its application [7]. On theother hand, the study of literature review

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and experts' opinion indicate that the need to use knowledge management is undeniable in organization. Factors like globalization, governments and citizenship-orientation cause an special attention should be pay to knowledge management [1].

Nowadays some issues are presented that we can't solve them with past strategies. The main characteristics of today issues is the vast amount of data and information that need to be collected, preserved, , processed, retrieved and analyzed. This property, which is considered as the creator of organizational complexities, cause to move toward a modern technology called Information Technology (IT) that helps to facilitate the work with data and information [2].

This technology came to the field of academy and industry two decades ago and now it is among the global modern technologies by combining computer science, mathematics, telecommunication and knowledge management. Despite the short life of IT and its rapid development, different definitions and perceptions are presented about it that by exact look we can find some inconsistencies among them [5].

These definitions cover the broad range of concepts that sometimes are quite limited in the computer processing of operations and sometimes are remembered broadly as a technology that organization life is dependent on them. Information technology is to collect, store, organize, process and disseminate information including audio, image, text or numberthat is done by computer and telecommunication tools [9].

However, information technology (IT) nowis something more than a direct connection among people. It is donevia applications such as Email, chat rooms, video-conference and other group tools. IT as adata base for knowledge sharing and storing can be regarded as the best method to preserve the intellectual investments of organization [14].Therefore, it seems that organizations like sport federations which are in competition with their foreign rivals continuously, need to pay special attention to IT in order to maintain their competitive advantage. Thus, sport federations should make familiar their employees and experts with the existing technologies and provide the opportunity for progress and competition. Descriptive findings of knowledge management indicate that knowledge creation has higher mean than knowledge transfer. Administrative automation includes all formal and informal electronic which are related to the link between entities in the inside and outside of organization and vice versa. The link or communication is a term that distinguishes administrative automation from data processing, management information system and decision support system. Administrative automation does communication both orally and in written form [13]. Deployment of ICT in America during 1973 to 1995 resulted in a 1.4% increase of labor productivity.

Goodarziand Abu Torabi [7] studied the relationship between information technology and knowledge management of administrators in Physical Education Organization. The findings showed that there isn't a significant relationship between ICT infrastructure and knowledge creation, but there is a significant relationship between this infrastructure and knowledge transfer. Qolipurand Amiri [11] conducted a study titled "Introduction to Knowledge Management emphasizing three principles of Knowledge Management namely human, process and ICT and stated that the successful implementation of knowledge management needs to consider human being, process and technology simultaneously. Azizi and Islamnejad [3] studied and compared the dimensions of knowledge management between public and private organizations and concluded that there isn't significant difference within these organizations in terms of information technology and knowledge management within these organizations. Vahedi (2010) studied "Information Technology Knowledge Management" and stated that probably the best way to use information technology in the field of knowledge management is a combination of two factors:one is to be aware of the limitations of information technology and the other is that any information technology will be negligible without considering the changes of global culture in relation to knowledge value. In this study, the researchers emphasize that the presence of information technology plays a major role in supporting organizational knowledge.

Debirlomir (2002) states explicitly the effect of IT on organization design. On the other hands, IT eliminates organizational complexities and decreases organizational levels. Tseng [15] studied the relationship between information technology and knowledge management on Taiwanese companies and concluded that there is a significant relationship between IT and knowledge management. Also, Neels [10] investigated knowledge management in the industry of South Africa and came to the conclusion that IT can be effective in improving knowledge management. Madadi (2011) studied the use of ICTby experts and members of Agriculture faculty in Tehran University. Results showed that the familiarity of study sample with ICT components just is related to popular sites like Google, Yahoo, and applications such as Microsoft Office and Word.

*Reserarch methodology:*

According to the nature of study, the research method is based on correlation and is applied study concerning purpose, which was done in the field. Research population (n=178) included all managers and employees of the Youth and Sports Departments in East-Azerbaijan province, which was obtained using census. Since the size of population was small, all population (n=178) were selected to participate in the study through census. There were 22 managers and 114 employees. Questionnaires were distributed among all managers and employees. Aftercompletion, 136questionnaires were obtained. The measurement tools of this questionnaire

were Fathi'sIT questionnaire [6], Asgari's knowledge management questionnaire (2005) and the questionnaire of employees' productivity which were standard and had used in various studies. The obtained reliability for the questionnaires of IT, knowledge management and organizational performance (productivity) were 0.85 and 0.79, respectively. Cronbach's Alpha was used for internal reliability of questions, which was calculated 0.87.

*Research findings:*

There is a significant relationship between information technology and managers' productivity in theYouth and Sports Department.

To obtain the results of this hypothesis, Pearson's correlation coefficient was used.

**Table 1:** Correlation coefficient (Pearson)between IT and managers' productivity, of Youth and Sports Departments.

| Variable Significance level Number Correlation coefficient |
|---|
| IT and managers p<0.01 22 0.92 |
| productivity |
| Significant at 0.01 |

The results of Pearson correlation showed that the relationship between the two variables of information technology (IT) and managers' productivity is positive and significant (p<0.01 and r=0.922).Thus, the null hypothesis that there is significant relationship between IT and managers' productivity is not rejected and it can be concluded that there is a significant and positive relationship between IT and managers' productivity.

There is a significant relationship between the reinforcement of senior management support systems and employees' productivity in Sports and Youth Department.

To obtain the results of this hypothesis, Pearson's correlation coefficient was used. The results of Pearson correlation coefficient showed that the relationship between two variables of senior management support systems and employees' productivity is positive and significant (p<0.01 and r=0.875).Therefore the null hypothesis that there is a significant relationship between IT and employees' productivity is not rejected and it can be concluded that there is a significant and positive relationship between IT and employees' productivity.

There is a significant relationship the reinforcement of management information systems and employees' productivity in Sports and Youth Department.

**Table 2:** Correlation coefficient(Pearson) between the reinforcement of management information systems and employees' productivity of Sports and Youth Departments.

| Variable Significance level Number Correlation coefficient |
|---|
| reinforcement ofmanagement p<0.01 114 0.82 |

*Information systems:*

The relationship between the two variables of management information systems and managers' productivity is positive and significant (p <0.01and r=0.823). Therefore, the null hypothesis that there is significant relationship between IT and employees' productivity is not rejected and it can be concluded that there is a significant and positive relationship between IT and employees' productivity.

There is a significant relationship between knowledge creation and managers' productivity in the Youth and Sports Departments of East-Azerbaijan.

The results of Pearson correlation coefficient showed that there is a positive and significant relationship between the two variables of knowledge creation and managers' productivity (p <0.01and r=0.768). Therefore, the null hypothesis that there is a significant relationship between knowledge creation and managers' productivity is not rejected and it can be concluded that there is significant and positive relationship knowledge creation and managers' productivity.

**Table 3:** Correlation coefficient (Pearson) between knowledge creation and managers' productivity of Youth and Sports Department.

| Variable Significance level Number Correlationco efficient |
|---|
| Knowledge creation andmanagers' p<0.01 114 0.76 |

*Productivity:*

There is a significant relationship between knowledge management and employees' productivity of Youth and Sports Departments.

To obtain the results of this hypothesis and its sub-hypothesis, Pearson correlation coefficient was used.

**Table 4:** Correlation coefficient (Pearson) between knowledge management and employees' productivity of Youth and Sports Departments

| Variable Significance level Number Correlation coefficient |
|---|
| Knowledge management p<0.05 114 0.72 |
| employees' productivity |
| Significant at 0.05 |

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The results of Pearson correlation coefficient showed that there is no significant relationship between the two variables of knowledge management and employees' productivity (p <0.05andr=0.893).Thus, the null hypothesis that there isn't any significant relationship between knowledge management and employees' productivity is not supported and it can be concluded that there is a significant relationship between knowledge management and employees' productivity.

There is a significant relationship between network systems and employees' productivity of Youth and Sports Departments.

**Table 5:** Correlation coefficient (Pearson) between network systems and employees' productivity of Youth and Sports Departments

| Variable Significance level Number Correlation coefficient |
|---|
| Network systemsp<0.01 114 0.79 |
| Significant at 0.01 |

The relationship between network systems and employees' productivity is positive and significant (p <0.01, r=0.791). Therefore, the null hypothesis that there isn't any significant relationship between information technology and employees' productivity is rejected and it can be concluded that there is a significant and positive relationship between information technology and employees' productivity.

Is there any significant relationship between knowledge application and managers' productivity in the youth and sport department of East-Azerbaijan?

The relationship between two variables of knowledge application and managers' productivity is positive and significant (p <0.01and r =-0.709).Thus, the null hypothesis that there is a significant relationship between knowledge application and managers' productivity is not rejected and it can be concluded that there is a significant and positive relationship between knowledge application and managers productivity.

**Table 6:** Correlation coefficient (Pearson) between knowledge management and managers' productivity of youth and sports departments

| Variable Significance level Number Correlation co efficient |
|---|
| Knowledge application |
| and managers' productive p<0.01 114 0.79 |
| Significant at 0.01 |

*Discussion:*

According to the obtained results and the results of previous studies, generally in terms of information technology sports and youth departments of East-Azerbaijan province are in a very good to excellent rank.

However, information technology now is more than to create direct relationship between people through applications such as electronic email, chat rooms, video conference and other group equipments. IT as a database for the storage and sharing of knowledge can be the best practice for maintaining intellectual investments and increasing productivity in the organization. Therefore, it seems that organizations such as youth and sport departments of East-Azerbaijan province which are continuously in competition with their rivals in the country are obliged to pay special attention to IT in order to maintain their competitive advantage. The youth and sport departments of East-Azerbaijan province need to make all of their experts and employees familiar with the existing technologies and create the situation for their progress and competition by providing the required trainings. Descriptive findings related to knowledge management suggest that knowledge creation in organization has higher mean than knowledge transfer. Goodarzi and Abu-Torabi [7] showed that there is a significant positive relationship between knowledge creation and knowledge transfer. In the traditional model, organizations and individuals are often unwilling to transfer and exchange their knowledge. Since instead of looking at knowledge as an organizational resource, consider knowledge as a source of power and a guarantee for the continuity of their jobs and are not willing to share it with others because they are afraid to lose the control of their organization knowledge. In fact, a knowledge that is not circulated in organization won't be developed and eventually will be obsolete and will be changed into an obstacle. In short, knowledge circulation through sharing, business and trade will lead to the production of new knowledge that would seem impossible without the use of information technologies. An organization that supports information sharing and knowledge creation among its employees can define efficient and effective processes and improve its organizational performance and productivity. Therefore, sports and youth departments should have holistic approach to these two components and provide the opportunity for transferring and sharing organizational knowledge among employees by creating teamwork spirit. Considering that there is a significant relationship between knowledge management and employees productivity, it is suggested that the managers of sports and youth departments measure and revaluate productivity, the productivity of human recourses and the components of knowledge management in their organization. This cause the promotion of knowledge management and productivity that is required for turning into a successful and intelligent organization. Also, this facilitates our movement toward the twenty years outlook of country, as Shronin (2004) found the principles and mechanisms of learning and knowledge management can be used to improve organization productivity. Considering that there is a significant

relationship between knowledge creation and employees' productivity, it is suggested to finance those plans that promote knowledge management and productivity of human resources.

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