



P-ISSN: 2394-1685  
E-ISSN: 2394-1693  
Impact Factor (ISRA): 4.69  
IJPESH 2015; 2(1): 84-86  
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www.kheljournal.com  
Received: 05-06-2015  
Accepted: 09-07-2015

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## The Relationship between Information Technology (IT) and Organizational Structure of Physical Education Departments of Khuzestan

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### Abstract

**Objective:** Previous research on information technology identified that it plays a decisive role in the introduction of novel forms of organizational structure in variable environments. On the other hand, information technology obviates organizational complexity and decreases organizational levels. The present study investigates the relationship between information technology and organizational structures in physical education departments of Khuzestan, Iran.

**Materials and Methods:** Statistical population included all the official staff in Ahvaz as well as the sub-branches and federations. A total number of 165 included 115 official staff and 50 employees of federations, served as the participants of the study. Research methodology was descriptive-surveyed. Pearson Correlation coefficient was used to the statistical analysis utilized for the detection of probable differences among the variables. Furthermore, compare means was used to determine variables ranking.

**Results:** Results showed a significant relationship between IT and organizational structure ( $P=0.033$ ). Also, the significance relationship was found between IT and formalization ( $p=0.003$ ) and between IT and complexity ( $P=0.005$ ). However, there was not significant relationship between IT and Centralization ( $P=0.114$ ).

**Conclusion:** In general, it was found that IT has effects on the organizational structure of the physical education department of Khuzestan.

**Keywords:** Information technology, Organizational structure, Centralization, Complexity, Formalization.

### 1. Introduction

Today we live in a world which is called the world of information. Communication and information is the most important phenomenon in the late twentieth century and early twenty-first century was developed. With the development of Internet and other communication devices in 199, a new phase of the industrial revolution happened that changed everything. The use of IT in the organization brings new changes that have different impacts on the organization, including organizational structure, (Ramlt, 1995) [8]. One of the topics that will be discussed today in management is organizational structure. Amount of complexity and centralization or decentralization and institutional recognition of the topics are considered in the organization structure. By entering a new era where it is called information age, human life and the relationships between them have been changed. Extensive developments in the field of "IT" has occurred. Internet, personal computers, mobile phones, satellites and other advanced communication devices will change the way we work, the way of business, education, culture and other aspects of human life. The use of information technology in the organization is created new changes that have different impacts on the organization, including organizational structure. The use of information technology in organizations requires appropriate organizational structure, to make the best use of information technology. The massive information flow makes managers to need accurate and complete familiarity with information technology (Saadatmandi, 2004) [9].

Dibrell & Diller (2002) [5] expressly refers to the impact of information technology on organizational design, and believe. Information technology in the production of new forms of organizational structure plays the role of an organizer in environment variable. Hence role of technology in the structure is quite obvious that this makes it important to consider their impact on different aspects of organizational structure. On the other hand IT eliminates organization complexity and reduces the levels of organization. Levitt and White (2001) [7],

Believe that IT will have the greatest impact on middle management. They also stated that IT causes concentrating on decision making and believe that computer programs facilities focusing. IT reduces organizational levels. IT also has an inverse relationship with organizational complexity (Sehanovic, 1997). In a study investigating the relationship between technology and organizational structure as the National Iranian Copper Industries Company concluded was no significant relationship between IT with a focus and IT formality, but there that there is a significant relationship Between information technology and complexity (Ebrahaminasab, 2000) [6]. In other sports, IT also plays an important role including technical, equipment develops, promote events, announcement systems and seminars (Bryan and Martin (2008) [3]. Unfortunately, most organizations today are not aware of the impact of technology in the organization or they do not use technology to reduce levels of the organization structure and more communication in organization parts.

Given the above statements, the following question arises:

Is there a relationship between information technology and organizational structure?

Is there a relationship between information technology and organizational structure dimensions?

Regarding the first question, the research has been done that show the impact of information technology on organizational structure. There is a significant relationship between information technology and organizational structure of the physical education.

On the second question, researches have been done in the country and abroad that some researchers find a significant relationship between information technology and organizational structure dimensions. Some also did not a significant relationship (Azizi, 2007) [2].

But given that most of the research done by organizations other than the Physical Education Department, the results can help to solve structural problems and administrative complexity in sports organizations and avoid wasting time and money and human resources to these organizations.

## 2. Materials and Methods

Based on objective, the present study is applied research and based on the data collection is a survey descriptive study. In this study, the studied population is all staff and experts of sport boards within the Office of Physical Education Sports Khuzestan province. The total number of administrative staff of the departments of Physical Education in Khuzestan province is 115 that the Service Employees do not include these figures due to the low population size, they are not sampled and all of them were selected as sample. Among the Sports Board staff, a total of 75 people, 50 people were selected as sample, randomly and the sizes of the target population, a total of 165 subjects were evaluated. Data collection tool for this study is the standard questionnaire structure and technology Robbins (1996). The validity of this questionnaire, was calculated by Azizi in 2008 at Tehran University and also the reliability was obtained 0.81. Meanwhile, after a questionnaire distributed among 40 employees, the Cronbach's alpha coefficient was obtained  $r = 0.79$  that is relatively good coefficient. Data analyses was done using SPSS software version 14 for windows.

## 3. Results and discussion

The purpose of this study was to examine the relationship between information technology and organizational structure

of the Department of Physical Education in Khuzestan province. In this study, the organizational structure includes three dimensions as recognition, concentration and complexity. The results of hypotheses are analyzed respectively.

The findings show that there was a significant relationship between the use of IT and organizational structure of the Department of Physical Education in Khuzestan province.

**Table 1:** Relationship between IT and organizational structure of the Department of Physical Education in Khuzestan province.

Test	Error	correlation	P-value
	0.05	0.195	0.033

The organizational structure has different dimensions. Dimensions shown in this research, is including recognition, concentration and complexity.

one of the important features of IT is reducing paperwork and reducing the role of individuals who share similar or parallel tasks, thus reducing the levels of vertical and horizontal. In recognition, the documents have to be considered. And the information technology converts these documents from paper to computer. On the issue of focus centralized and non-centralized decision making system is discussed. Information technology to accelerate data processing and computer techniques for decision-making, facilitate the authority of top-level management to the lower levels.

Due to the above statistical analysis, Achieved a significant level of the relationship between IT and organizational structure of the Department of Physical Education in Khuzestan province is equal to 0.033. And this number is smaller than 0.05. Therefore, there is a significant relationship between the use of IT and organizational structure of the department of Physical Education in Khuzestan province.

The results show that there was a significant relationship between Information Technology and the recognition of the Office of Physical Education in Khuzestan province.

**Table 2:** Relationship between IT and the recognition of the Office of Physical Education in Khuzestan province.

Test	Error	correlation	P-value
	0.05	0.273	0.003

Recognition means available documents that IT usually brings these documents from paper in the form of the computer and mechanization. However, the tendency of people greatly reduced that everything must be in writing and signed copies of several people in the organization and the amount of paperwork and bureaucracy reduced.

But in all cases the use of information technology does not reducing organizational recognition, but in some cases and some organizations, it can increase the organizational recognition. One reason is increasing recognition of our organizations, despite the use of information technology, is the willingness of managers and staff to receiving and issuance of written instructions and written information.

Given to the above states and the fact that the significant level achieved in the relationship between information technology and is recognition is equal to 0.003 and this number is smaller than 0.05. Therefore, there is a significant correlation between information technology and recognition in physical education department in Khuzestan province.

The results showed that there is no relationship between information technology and concentration in physical education organization on Khuzestan.

**Table 3:** Relationship between IT and concentration in physical education organization on Khuzestan province.

Test	Error	correlation	P-value
	0.05	0.145	0.114

About The concentration, it is raised the issue of centralized and decentralized decision-making system. Information technology by accelerating data processing and use of computer techniques to decide, Facilitate the authority of top-level management to the lower levels.

Therefore, after statistical analysis of the data, given the significant level on the relationship between information technology and concentration of physical education organization in Khuzestan province is equal to 0.114, and this number is larger than 0.05. So there is no relationship between information technology and the recognition in physical education department in Khuzestan province.

The results showed that there was a significant relationship between information technology and the complexity of physical education organization in Khuzestan province.

Test	Error	correlation	P-value
	0.05	0.195	0.005

On complexity, the vertical levels and the hierarchy are raised that reducing individual and organizational levels in an organization is one of the important features that IT has.

Since IT reduces duplication, It usually makes reduce people who do shared and repetitive jobs parallel. Due to the high capacity of information technology in the storage, processing, retrieval and transfer of information, it effects on middle management and will change the form of the future of the organization.

Regarding the analysis of data, given the significant level of complexity achieved between the IT and complexity in organization is equal to 0.005 and this number is smaller than 0.05. Therefore, there is a significant correlation between the use of information technology and the complexity on the physical education department in Khuzestan province.

**4. Acknowledgements**

This article was supported, granted and prepared from Master Thesis of Mehdi Abbasian, in Shahid Chamran Univesity of Ahvaz, Supervisor by Dr Mehdipour, Advisor by Dr Heydarinejad. Authors would like to thanks Department of Sport Management, School of Physical Education, Shahid Chamran University of Ahvaz.

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