INFLUENCE OF PHYSICAL EDUCATION TEACHERS ON THE USE OF INFORMATION AND COMMUNICATION TECHNOLOGY IN THE LEVEL OF CREATIVITY AND COMMUNICATION SKILLS

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Abstract

The present study was conducted to link the use of information and communication technology with creativity and communication skills in physical education teachers. The statistical population of this study included all physical education teachers were randomly selected. Data collection was done by library and questionnaire. The tools used in the research were also valid. Data analysis was performed at two levels of descriptive and inferential statistics. In descriptive statistics, mean and standard deviation were used. In inferential statistics, first one-sample t-test and after confirming the parametric statistics and normal distribution of data using Kolmogorov-Smirnov test, Pearson correlation method, t Independently, used in SPSS software. The results showed that there is a significant relationship between the use of information and communication technology with the level of communication skills and creativity.

Keywords: Physical education teachers, creativity, communication skills

INTRODUCTION

Information and communication technology (ICT) is a component of modern societies during the short time, so that the understanding of ICT and mastering the basic skills and concepts of ICT have been considered as a part of the core of the high training and the education of communities in many countries along with reading, writing, and counting (1). Human resources must understand that the lack of ICT will lead to the inequality in the use of training opportunities (2). The depth of these inequalities is very different among the advanced and growing countries. Societies that do not have the ability to use technology or use it less are cannot be a society that is based on science and technology (3). ICT is considered as one of the most important parts of training development in the world and information technology (IT) development is as one of the most important development infrastructures for many countries in the world (4). The integration key of ICT in training and the competencies of ICT is the educator and his/her experiences, so that his/her skill for training leads to the integration of ICT with the teaching and learning process. Many innovations in training depend on his/her professional competence (5).and the creation of a quality education system that has the capable of individuals' training to live in a changing world is one of the most important priorities of modern society (6). ICT has a significant effect on learning that includes the change of learners and educators' roles, teachers' more participation, the increasing of the use of external resources of textbooks, and the development and improvement of design and presentation skills (7). Today, the understanding of the real role of knowledge in organizations helps to find an answer to this question that why some organizations are always successful. It is necessary to understand the underlying factors for the possibility of vivacious survival of organizations. The knowledge age or the age of information that is the result of human' passage from the industrial age and his entry into the third millennium requires a different education than the past. ICT that is increasingly expanding can positively affect education and change its strategies and methods (8). The use of knowledge management in organizations needs some prerequisites (9). The use of the information and communication field is one of the most important prerequisites for knowledge management (10). A training institution must identify and obtain its required knowledge and store it so that it can be used in the required cases (11). Knowledge management is the pay attention to a new method of thinking about organization and the sharing of intellectual resources and a method for productivity and the improvement of performance. The attention is paid to the optimization of organizational knowledge for the increasing of performance through different procedures in this management (12). Today, intelligent and knowledgeable employees as the most important capitals of an organization with regards to the power of creativity and innovation, the creation of new organizational processes, and new technologies lead the organization to a sustainable competitive advantage (13). Organizational knowledge is rapidly becoming the main competitive advantage of organizations. The benefit of ICT advantages in business is one of the competitive advantages of the past that today is not a competitive advantage and is only

a requirement. Today, the study of the effects of ICT in the workplace is a topic at many researchers' the center of attention (13,14). Today, many countries consider ICT as a potential factor that can create creativity and innovation in education and those have large investments to integrate ICT in their educational institutions. For example, Turkey spent about $ 400 per person, and allocated 11.7% of its budget to ICT. Europe and Central Asia allocated 22% of their budget to ICT (15). Evidences have showed that each of educational centers that were pioneers in the use of ICT at universities had increasingly developments in terms of students' learning (16). On the other hand we can see the relationship between ICT and creativity, so that many university professors use IT for a better understanding of concepts and the effectiveness of curriculum and the fertility of students' creativity (17). The effective learning can be achieved through the use of innovative information and communication technologies. These technologies develop educational opportunities and help students to develop their skills (18). Research evidences shows that the correct use of IT can has a positive effect on learners' involvement, teachers' positive attitudes, and students' facilitating of learning and creativity (19). Today, the concept of creativity is not as a need, but it is as a survival condition of any organization or society. It has been emphasized on the training and acquiring of necessary skills to apply this special human talent. It is one of key issues in our society and all developing societies and we have not dealt with these issues properly (20,21). Creativity has a positive relationship with them (22). So, ICT can increase the creativity in the society as an effective source and a way to share information quickly in today's society. On the other hand, the technology can also be effective in communication and can play the facilitation role. Also, the emergence of technologies can develop the human communications domain in all fields. The subject of ICT and communication skills is researchers' undisputed subject in the technology field so that is effective on students' knowledge, attitudes, values, and clothing (23,24). Human has new problems along with the growing complexity of different aspects of life in today's societies, so communication has more importance. Communication skills are those skills that individuals can involve in the interpersonal interactions and communication process by them (25). Individuals exchange their information, thoughts, and feelings during this process through verbal and non-verbal messages (26). The development of IT is an unavoidable necessity not an option in educational systems and it is an important step in the reform of educational systems. ICT has become more important in

physical education and sports sciences in recent years. Also, it is a part of the physical education and has guidelines as other daily routine of physical education (27). Rapid changes of technology have affected on educational institutions and higher education institutions implement slowly new technologies in the learning process and curriculum. Teachers and students can produce communications by technology and university professors can send homework, projects, and last information. Therefore, students' interest increases for their course (28). Courses of physical education are theoretical and practical at different levels. Thus, this field should use IT and keep pace with these changes in the teaching of physical education and sports sciences (29). On the other hand, the need for the acquiring of information communication of other fields and scientific and research centers is very noticeable due to the nature of physical education and sport sciences and it's interdisciplinary. The use of new technology can accelerate effectively the produce of knowledge and its transmission speed in scientific studies (30).

Since physical education teachers have a significant role in the growth and excellence of society and due to the high importance of the subject, the purpose of this study is to influence the use of information and communication technology skills on creativity and communication skills to improve the performance system. Physical education teachers were trained to theoretically understand and identify communication barriers, by providing appropriate solutions, to improve and enhance these skills and ultimately lead to an increase in the quality level of the subset.

MATERIALS AND METHODS

This research was applied in terms of achievement or result of the research and cross-sectional descriptive-survey in terms of research objectives and field in terms of data collection method. The statistical population consisted of 570 physical education teachers were randomly selected. Data collection was done by library and questionnaire. The research instruments are the Property Information Technology Questionnaire (2010), Barton GA Communication Skills Questionnaire (1990) and Torrance Creativity Questionnaire (1995) and they have appropriate authority and validity for conducting research. Cronbach's alpha of the questionnaires was 0.81, 0.83 and 0.80, respectively. Data analysis was performed at two levels of descriptive and inferential statistics. In descriptive statistics, mean and standard deviation were used. In inferential statistics, first one-sample t-test and after confirming the parametric statistics and normal distribution of data using Kolmogorov-Smirnov

test, Pearson correlation method, t Independently, used in SPSS software version 23. Significance level of tests was also considered p <0.05.

RESULTS

Teachers' access to ICT was average in most dimensions at the 95% confidence level (Table 1). There was a significant and positive relationship between the use of IT and creativity in physical education teachers (Table 2). It means that the increasing of the use of IT can increase teachers' creativity in physical education teachers.

Table 1. The rate of access to ICT in physical education teachers

statistic / Variable	The amount of test:3			
	t	df	Sig	mean
Access to software for academic orientation	1/79	229	0/074	3/14
Access to needed databases	3/768	229	/0010	3/41
Access to Iranian digital journals and libraries	1/61	229	/1070	3/10
Access to foreign digital journals and libraries	-1/07	229	/2840	2/93

P≤0.05

Table 2. The relationship between the use of IT and creativity in physical education teachers

Dependent variable	N	r	Sig
Creativity	230	0/464	0/001

P≤0/01

Table 3. The communication skills in physical education teachers

statistic / Variable	The amount of test:3			
	t	df	Sig	mean
istening skill	0/91	229	0/359	3/07
Verbal skill	-1/08	229	0/279	2/92
Feedback skill	-7/04	229	0/001	2/65
Communication skills	-2/68	229	0/008	2/88

P≤0.05

Table 4. The relationship between the use of ICT and communication skills in physical education teachers

Variable	N	r	Sig
Listening skill	230	40/63	0/001
Verbal skill	230	0/558	0/001
Feedback skill	230	0/486	0/001
Communication skills	230	0/583	0/001

P≤0/01

Table 5. The comparison of study variables in female and male physical education teachers

Variable	Gender	Mean	t	df	Sig
Access and use of ICT	Male Female	2/75 2/60	2/49	228	0/022
communication skills	Male Female	3/26 3/85	3/17	228	0/005
Creativity	Male Female	2/67 2/57	1/14	228	0/12

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DISCUSSION AND CONCLUSION

The current world indicates the explosion of information from ICT developments (31). The movement of industrial societies has started towards the information society and has accelerated in these decades, so that the speed of this movement is well known in the less developed countries (32). Acceptance of the transformation in the present world is one of the most important factors in the survival of organizations. The intensity and depth of these changes are such that they require new and evolved techniques for coping, coordination, and adaption (33). This approach would increase the need for the use and application of ICT in different fields, as it seems that IT is one of the tools that we can win today in the field of competitive arena through its proper and quick application. Today, sports organizations expose to discontinuous changes(34).

The communication and interaction of these organizations with various factors such as the government, sponsors, and other national and international sports organizations and the social, economic, political, and cultural factors have created a turbulent environment for these organizations. The creation of knowledgeable and creative organizations in sport can protect sports organizations against environmental changes to a large extent (18). ICT developments in the executive field has created a new form of training in the name of online training or simultaneous training that its goal is the provision of access to knowledge by different learners around the world (19). The findings of the present study indicate a strong relationship between the variables of this study. The results of this study are consistent with the results of Johnson (2005); Wang, et al., (2007); Walsh, et al., (2009); Ming, et al., (2007); Dewettinck, et al., (2011); and Kamalian, et al.,' s (2013) study. It can be concluded for the explanation of the consistency of the results of this study with the results of other researches that knowledge is the focus of all activities in the new approach of dynamic organizations and human resources have a particular importance than natural and financial resources, so that the role of knowledge, information, innovation, creativity, discipline, and management are recognized as actual sources of the creation of economic and social values in this system of thought (35). This has put heavier responsibility on the part of ministries and research centers, so that the need for the creation of intellectual transformations in the management and review of the missions has become a fundamental necessity (36).

Therefore, the creation of a suitable platform for the establishment of IT systems in organizations is a factor for the creation and development of employees' creative thinking in the departments. It increases employees' attention to the details of a problem and employees examine the root of issues are rooted and the attention to the details of a problem along with the whole aspect of the questions leads to the emergence of employees' system thinking (22). The dramatic growth of ICT and its effect on all aspects of human life are the most important phenomena of the third millennium. The discussion of important sports organizations at the executive level is one of these aspects that is heavily affected by this phenomenon. Today, we can find through a look at these changes that organizations have changed fundamentally in a variety of ways such as speed, accuracy, and easiness of doing things. Thus, the traditional structures of organizations have been broken and undergone fundamental changes(31). when we look from the organizational perspective to the use of ICT in organizations, it should be acknowledged that officials who accept the changes of this important phenomenon and adapt their organization to it can have a successful management in sports organizations due to the importance and position of ICT at different levels of societies (17).

The sport field also pays attention to the maximum utilization from this powerful technology. Several factors have affected the increase of sport popularity across the world including information by mass media and internet and satellite networks that report events and sports events (7,14,22). The managers and employees of the Ministry of Sports and Youth as the people who will shape the sport future of the country play an important role in the scientific development of sport in the country. The use of ICT functions in three areas of training, communication, and research can have a significant effect on the quality of individuals' perception of the state of knowledge and creativity. However, there are always challenges in this way(37).

Thus, there is this possibility that the use of ICT can increase in physical education teachers with the reinforcement of mentioned reasons and the removing of barriers. This enriches the training in this field. Today, communication skills appear as an essential need between humans who communicate to each other. Human relationships provide after the life satisfaction, self-confidence, motivation, and mutual trust that is affected by communication skills(8,18). The effective communication is one of important pillars of progress and human excellence. Many personal and social problems that today's society is involved with them are due to the lack of effective communication, communication system, and incorrect communication interpretations. Teachers can communicate with others through effective communication skill in a way that leads

to positive responses not negative responses. The human's social nature requires that a person communicates with different aspects of the community and its collection. Communication skills affect on students relationships and effective performance in society and at university. The results of this study showed that there was a significant relationship between ICT and communication skills in physical education teachers. This result is consistent with results of Ozkana, et al., (2014); Weiland, et al., (2013); Siddiq, Scherer, and Tondeur (2016)'s study. The use of verbal skill, listening skill, the presentation of feedback to others, and the ability to receive suggestions and criticisms that are physical education teachers' characteristics with high skills can be a main reason for the explanation of a significant relationship between these two variables. Although some mentioned subscales were statistically about medium and low, there was a significant relationship between these two variables. This result is consistent with result of Ulukan and Dalkili's (2012) study. Communication skills have been expressed the perception of messages by individuals using their judgments and assessments. it has been stated that messages and data are not and information. Those are the source of information(38).

Also, those are important when those are used in a complex process and are interpreted. Here are converted to information that it can be a confirmation for the relationship between ICT and communication skills. Physical education teachers as future teachers and coaches teachers need the strong expression, good listening skills, and feedback skills(39,40). They will not be able to induce teaching concepts without these skills so the reinforcement of these skills is very important. Generally, physical education teachers were moderate and weak in communication, verbal, listening, and feedback skills.

Communication skills are an integral part of human life so we recommend that we consider the teaching of these kills in all areas such as personal, family, and business relationships. If individuals learn these skills, they will make more effective communication and these skills will increase the quality of their family, friendly, and business relationships. There was a significant difference between male and female teachers in this study.

Also, there was a significant difference between male and female teachers in the creativity. It is recommended that Physical Education Faculties improve online methods, multimedia, and hypertext methods, online education, virtual education, virtual libraries, virtual laboratories, and interactive environment and use modern teaching methods such as group practices, project, and research due to the relationship between the use of ICT and communication skills. Teachers are encouraged to accept the collaboration with others using new technologies. We recommend the creation of an appropriate environment for teachers to gather experience and to perform group activities due to the increasing of creativity and communication skills.

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CONFLICT OF INTEREST

No potential conflict of interest was reported by the authors

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