

EFFECTIVE FACTORS ON UTILIZATION OF INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT) IN SMART SCHOOLS

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Abstract

This study was to investigate the structural, process and individual factors effective to work on information and communication technology (ICT) in managers and department heads of Smart schools from vision secondary school of Isfahan in the academic year 2013-2014, and the collection of descriptive- survey research method was done. The statistical community secondary school, all managers and department heads have 6 district of Isfahan (3388), respectively. The number of samples of 210 people was calculated. A random stratified sampling method appropriate to the research question of instruments with a volume researcher contains 51 questions in three forms response packet structure a process an individual based on a variety of Likert 5 grades was to use. Sustainability is a tool based on the coefficient of cronbach's alpha 0.98. Estimation of face and content validity, and it was approved by experts. Data in two levels of descriptive statistics and inferential statistics can be. The findings of the study showed that from the perspective of managers and department heads have any amount of secondary school of structural factors, the process and the individual, on the deployment of information and communication technology in the smart schools are higher than the average. Thus the impact of any research results based on the application of the first priority for the individual factors (knowledge, attitude, manufactured) and structural factors (complexity, focus, recognition) and was a process agent. Compare the views of participants about the above factors according to gender, field of study, age, qualification, and experience and area location, there was no significant difference. But between the views of the participants according to the type of school, there was a significant difference.

Keywords: *Structural Factors, Process, Information and Communication Technology (ICT), Smart Schools.*

1- Introduction

The necessity of transformation in education shall be and schools in the twenty-first century are clear all over. Change in schools necessitates relocation and change of philosophy of public education. And it is the starting point of such changes in terms of having insight. The future learning environment to create sustainable changes in education shall be necessary.

The 21st century is the century of information revolution a century of wisdom have change from the industrial society to the information society is a society of industrial or arrived. If the culture of learning – learn the scopes in the education system is not only a transformation of ICT will not change but also to strengthen the conservative traditions of training will last because it's not that information technology alone make the change, but the main factor is the evolution of humans and human resources is the most important element--the dissemination of technology.

Without a doubt, one of the most important achievements of the education technology development is a serious transformation. Virtual classes, smart schools and virtual universities and e-learning in General, capacity and more can be relied on to develop these skills. The fact is that all these developments quickly all the training component shall make influences [1].

2- Expression of Problem

Twenty-year-old prospect, a comprehensive map of the fundamental transformation of the country and the document's scientific education on the basic concept of the traditional with the emphasis schools may not be graduates prepare for tomorrow's life and to achieve this the wise and capable and committed graduates in domestic and international arenas have a need for change in all areas of education reform [2].

Today main indicator of development of human resources development intellectual countries a huge portion of the human expert analyzed progress done and training shall be responsible for identifying these talents and underlie its prosperity. Why invest in the training of national investment shall be deemed [3].

One of the goals of universal access to all countries and ensure UNESCO developed and developing countries to the best training facilities necessary to prepare young people to play a role in modern society and participate in the creation of a nation is aware [4].

Putting aside the Central teacher practices and learning-based activities and the way that memory, thinking, creativity and responsibility in all students create new technology role in the hive as a facilitation in this transformation [5].

Smart schools include the intertwined components in order to arouse students ' curiosity and active participation, they are designed to coordinate the efforts of students, teachers, and administrators a comprehensive environment and brought down to the compilation, all educational requirements individuals take action [6].

The school is to learn where the smart institutional and individual learning in three levels, is such a group and organizational management, teachers, and schools. the staff has always been to strengthen their professional skills and experiences of migration, in cooperation with each other and create added value. The use of ICT in education shall be a common need has become an effective application of ICT in the education system; the process is complicated because the items on e-learning, education, and organizational readiness, more important in the long run the financing take place.

Today, ICT as a component and complements the educational system is known around the world, the role of department heads and professors. ICT in increasing the quality of teaching and learning and the rest of the process are undeniable. With a diverse and complex society that the process for the preparation of independent thinkers as teenagers, more productive citizens and leaders of the future and more complex nature of the educational experiences of students. change, learning, teaching and assessment, significant implications for the efficiency of all changed the way they have been training [7].Despite the increasing development of the smart schools and accelerating developing countries move towards a small collection in the field of research that challenges the development of these schools has taken place [8].

With regard to the use of technology, especially the approaches, which transition approach to ICT for the reconstruction of the school system to a logical overview of all components used to organize it and causes the transformation and change in the schools and on participatory management, student-centered curriculum, creating a unified learning environment stresses and where the third millennium education more transnational challenges such as globalization, log in to the community Global information network and the expansion of telecommunications is growing and growing in line with the realization of the vision of the national document macro development education in the fifth five-year plan and the strategic development of information technology in education is necessary at the same time with the progression of technology, smart young people are no more than ever before, we need that creative and innovative ability to critique and constructive communication, analysis, and reasoning with respect to the issue of the impact of research and measurement of ICT Training and development in promoting the process of teaching and learning decisions.

The main concern of the present study on this, which is why despite being equipped schools to technology and very large sums and spend the cost of capital, time and energy in this regard at the secondary school in Isfahan for traditional teaching practices, accepted as true and modern technology is not your special place with the development of communication technology and the development of technological capabilities in the field of communication, all our instrument to propel up to the mechanized side of this Through the work performed on the added speed and accuracy, and the possibility of error by reduce staffing. One of these efforts in recent decades to create smart school is that if properly these systems help organizations set up the country's education system and makes possible the scientific and educated people leaving the back-to-school system [9]. We are today in the midst of the powerful waves of the revolution have information. to be allied with the foot of the schools require students to go ahead, the philosophical society of Norwegian should change in the assessment of the community perception of training shall be the inventions and technology with deep effects., the central core of this transformation is the necessary instruments to create educational professionals on the tour puts the information on schools if the intellectual skills and further up the kid and use tools such as computers, in The integration of teaching and learning methods in teaching English as well as the expectations of teachers, administrators, and on the other as a result of these changes will be GON physical structure and internal organization of schools will change [10].

The ultimate goal of enabling the smart schools, work force training, equipped with a computer and information literacy skills that can meet the needs of life in the world of new information is brought to the school is a consolidated approach [6]. today's citizen to flexibility, dynamism and creativity needs. The rapid advances and quick access to the Internet, ICT and new learning environments, Web created with the new method of learning, a profound reform in education has created (Benny c and a poor, 1382) today. The most important a concern for the country's educational system to create an appropriate intellectual capital for growth and excellence in knowledge and information-driven is society [5]. On the other hand Internet-based education in the classroom, learning support increases in students. the development of information technology in each school to support its effective implementation and managers require a great fashion.

Therefore, the present study was designed to examine factors affecting the deployment of information and communication technology (ICT) in secondary schools (governmental, non-governmental) theoretical and structural factors to what extent discovers (complexity, focus and recognition) process agent (activities) and individual factors (knowledge, attitude, and local) and with a vision system to determine the extent of the impact of each of the factors that can facilitate the process of intelligent, and it's time to determine the extent of the impact of each of the factors in accordance with the To demographic variables (gender,

teaching experience, level of education, field of study, the, age, location, type of school district) is paid.

3- Methodology of Research

Research methodology in this research was descriptive-survey . All managers and department heads the theoretical high school has been 3388. In this study a preliminary study on the estimation of the variance with 20 people do and use a formula to estimate the sample size was 210 Cochran. The rate of return of the questionnaires has been 98%. Random sampling method stratified proportional to size according to the variable gender and area location was selected. Measuring instruments which includes the researcher based on a variety of answers depending was likert on question 51. Formal validity of questionnaire in order to assess the validity and factor analysis has been used for content and reliability of the questionnaire method of coefficient of cronbach's Alpha has been used 0.98. The analysis of survey data on two levels of descriptive statistics and inferential statistics is carried out. In the descriptive statistics (frequency, average, percentage specified criteria and factor analysis) and of single t-test statistical inference in order to meet the basic research questions and compare the averages and test the consistency of the variance that is F test prerequisite and test being normal for Wilkes Schapiro data variance analysis test and ultimately a one-sided test (LSD) at least a meaningful difference for Respond to questions related to demographic factors have been used.

4- Findings of Research

First Question

What is extent Structural factors (Complexity, Centralize, Recognizes) ICT in schools in making theoretical impact of secondary in smart school?

Table-1 average score structural factors

| <i>Component</i> | <i>Mean</i> | <i>SD</i> | <i>SM</i> | <i>T</i> | <i>Df</i> | <i>Sig.</i> |
|---------------------------|-------------|-------------|--------------|---------------|------------|--------------|
| <i>Structural factors</i> | <i>3.57</i> | <i>0.65</i> | <i>0.052</i> | <i>10.925</i> | <i>156</i> | <i>0.001</i> |

Based on the findings of the structural factors that impact the average score table is equal to the calculated t 3.57 with a degree of freedom and also significant level p 156 10.925 and from the t-table is. The structural factors affecting the score in employing ICT is more than the average level of smart schools. The structural variables i.e. schools based on the complexity, focus, and organizational recognition can be half-mechanical organizational structure of flexible mechanical civilian relations, communication channels, clear description of the tasks and the official decision is focused. On the contrary the organizational structures of cooperation and burden-sharing, they stressed. Schools usually have too much complexity, concentration and a good storage medium and official in the three components are (Complexity, Centralize, Recognition) affect the entire school system. Therefore, the standardization of the structure of the schools in these three dimensions can be found in the use of ICT in smart schools have an important role and impact of education and training structure for domestic use, however, indicate that the Ministry has a centralized structure that finally, employees, managers and department heads in accordance with the prescription of a linear system and the Act.

This issue focuses on the creativity of ICT managers and department heads will impact deployment of drummer. In our schools, schools Council participation is ceremonial, non-active Editor in the administration of schools and the lack of research articles in the field of editing, academic interaction with other schools, working with the Secretaries for their research activities in the field and to encourage participation in the seminars will be sufficient

motivation to make applying new technology in schools, there is therefore not need to create appropriate. For global education, participation and interaction to be established and space science for schools In order to strengthen the critical and creative thinking to move.

Second question

What extent impact is to Agent process (activities) ICT in smart schools to work in secondary school theoretical?

Table 2 average of impact factor process score

| <i>Component</i> | <i>Mean</i> | <i>SD</i> | <i>SM</i> | <i>T</i> | <i>Df</i> | <i>Sig.</i> |
|-----------------------|-------------|-------------|--------------|---------------|------------|--------------|
| <i>Process factor</i> | 3.85 | 0.84 | 0.061 | 13.969 | 186 | 0.001 |

Based on the findings of the table (2) the average impact factor score is equal to the process of 3.85 and calculated t are with a degree of freedom is also a significant level of $p > 0.01$ and $Df = 186$ is 13.969 and a larger table t has been operating according to this score is more than the average level of the impact of the process.

Education is a very complex and delicate process. To achieve its goals as a result of the deliberate activity requires proper use and provision of resources and equipment. One of the basic steps in the way of advancement of education based on the Islamic values of the fundamental transformation of the Iranian document, editing and is one of the major goals of this transformation and improvement of educational planning system and transform the curriculum, finance, Administrative Secretary of the skeletal construction technology in schools in need. Is there a hardware and software facilities and strengthening of modern education equipment, essential learning fast, and a lot of facilities and resources for the academic progress of students could benefit. Has always been the role of infrastructure and resources and the lack of key equipment and they will be a factor that was not attractive and the need for teaching the younger generation will not overcome us. For example, discuss the use of virtual labs in schools requires easy access to the facilities. In the third millennium, the Internet as a medium that can most benefit from training range used properly it can lead to upgrade the quality of the education system. High-speed access to the Internet to search for scientific education content that these two items together are necessary and interdependent of each other and eventually lead to the creativity of learners and as impressive in the perspective of the use of ICT managers and department heads will be raised. Our young generation every day more than before wishing to use the Internet if our Secretaries of students to computers and Internet for research and do the homework they use other incorrect usage of this tool will not.

Third question

What extent impact is to individual factors (knowledge, attitude, manufactured) ICT in smart schools to work in secondary school theoretical?

Table 2 average of impact individual factors

| <i>Component</i> | <i>Mean</i> | <i>SD</i> | <i>SM</i> | <i>T</i> | <i>Df</i> | <i>Sig.</i> |
|---------------------------|-------------|-------------|--------------|---------------|------------|--------------|
| <i>Individual factors</i> | 3.85 | 0.84 | 0.061 | 13.969 | 186 | 0.001 |

Based on the findings of the table (3), the average score of the impact of individual factors is equal to 79/3. T are calculated with a significant level of $p > 0.01$ degrees of freedom= 186 and is also 10.925 and has been a bigger table. So as many factors influence individual score the middle level. In explaining this question it must be said more results of this research on

the impact of computer knowledge and a positive attitude towards it and use it for him are meaningful relationship. In the third millennium the world towards knowledge-orientation goes ahead in the education system requires managers and department heads for more familiar to science is already felt.

On the other hand shall also be liable for a heavy responsibility in education needs to be bred with human resources through the implementation of suitable courses to upgrade capabilities try. Our current generation of secondary of many activities in the field of technology and this issue requires the knowledge and skill of our managers, Department heads in schools must not be less than them. Today, no longer based on information and prior knowledge and practices pivotal memory cannot be paid to adolescents ' talent education.

Rapid developments in technology, because in such a way that even the content of courses should also be commensurate with the new and updated information is. Today, our Secretaries will have the ability to synthesize and integrate technology with education will have. In addition to traditional practices rather than give their new procedures it is necessary to make changes in the attitude of the people. Any resistance against the new practices emerged comes due to the lack of a positive attitude towards it.

Today, dating and the ability to use the electronic resources and familiarity with the English language and be familiar with the content of the software and the ability to connect to the Internet network of teaching profession will be considered a necessity. Teens in community of human society come into account and a reserve is one of the duties of the education authorities to pay attention to is the flourishing talent.

With the potential talents flourish, those personal and social competencies necessary to win in the field work in the community will not be a problem. " Therefore, education on human capital for this massive sense of responsibility and their managers and department heads in terms of the knowledge and attitude of local and should be prepared to work up to an effective way to make efforts on ICT.

When the necessary knowledge in the field of ICT application is provided, then the discussion of ICT skills and the ability to apply as well as the means to spend having knowledge in the field of technology may not be correct, but it was the application of claim shall be filed with the necessary skills through retraining courses can be run, the active presence of the spirit. The ability to use your computer to help the editor to the pivotal book based on the training course and training system speech and terminated the partnership operates, and this entails improving the ability to use ICT in the teaching of our Secretaries and administrators would be if the required skills in the application of ICT is not equipped with the successful entry of new technologies speaks will.

5- Discussion and Conclusion

With the arrival of the 21st century and the rapid developments in various areas of life that are affected by the new knowledge-based world of technology and the increasing need to become more complex with training live is required knowledge and skills related to the issues challenging the present century are ready. The advent of new technologies, especially information and communication technologies, globalization, the rapid flow of information and knowledge, can be the characteristics of the information age.

Nowadays, the most fundamental pillars of knowledge as known and developed it as the most important source of power and increasing progress recall. as a result of these developments the human dependence on Science and technology to more than has been previously so that all aspects of life on the other hand, the entry of information and communication technology as well as education system shall be the length of is lead.

Through focused education system and being focused and flexible curricula in terms of course content for each subject, for all urban students, rural, nomadic and with any kind of talent, interest and economic and social origin, sex, race, language, each administered.

Through this focus, set the curriculum and lead the learning process, which is the main skills of application of information technology in education is considered in the development of teachers is not necessary, therefore, educational Committee. Consists of different modules of Secretaries around the country in the field of dating and content production to present the content of courses tailored to each region is preparing.

On the other hand secondary school course of the formation of identity and volume abstract intelligence is necessary for education with effective and targeted steps to coordinate with such global developments and as a result, high school graduates can enter the next period to the importance and the application of new technology in all dimensions of life and experiencing the confusion and they need educational, cultural economic and etc. In the age of information and communication brought on their assumed.

Therefore, the necessity of the other training centers are able to work in the factors that affect ICT to use the results of this research can help them And therefore the necessity of effective factors (structural, process and individual) to work on information and communication technology in smart schools related from the perspective of those involved with this issue on necessity, so their views can be considered important on the one hand taking into account the above factors move in the direction of a new technology has been facilitated, and finally the new practices in learning will change.

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