

## Surveying the Status of ICT literacy Index Islamic Azad University Students (Case Study in 8<sup>th</sup> District)

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### ABSTRACT

The present study aims to investigate the current status of ICT literacy indexes (ICT) has been conducted by 8<sup>th</sup> district Azad university students. The population was over 164,245 containing all students of Islamic Azad University units in 8<sup>th</sup> district. Stratified random sampling was used and the sample size was obtained method 382 according to the Cochran's formula.

Gathering information, a standard questionnaire based on the ISST model was used. According to one sample t-test at significance level of 0.01, the results indicated that the ICT literacy indexes were favorable among Islamic Azad University students in 8<sup>th</sup> district.

**KEYWORDS:** ICT Literacy, University.

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### INTRODUCTION

Utilization of ICT is considered as a necessity to create a network community which has triggered virtual assemblies since a last decade so far as information age. Network community intends to insert complexity and comprehensiveness and technology development into the education system and optimally exploit technology to improve the quality of teaching - Learning process (1). A discussion as computer literacy has been raised in developed countries since two decades ago. In recent years, it expansively entered into all grounds of human life and significantly influenced the fundamental pillars of community such as economy, policy, culture and specially education (2). Applying ICT in traditional classrooms and increasing the availability of new learners is one of the changes that are being created slowly in the thought horizons and well-matured in educational organizations (3).

Among this, students and pupils are less afraid of computer and Internet than the adults, so they can readily adapt themselves to its exploiting. If ICT and its dependent tools are managed well, it will be a suitable and attractive tool for teaching and learning. To cope with the contemporary complexities, the necessity to use the latest technology and benefiting from the modern ones, especially engaging computers and Internet in teaching and learning process is an inevitable affair. Nowadays knowledge and information become a common net to access to efficiency, competitiveness, wealth and welfare, also countries give priority to human capital development and thus governments focus on the strategies to enhance education availability with better quality (4).

The most important issue on ICT literacy among students is paying attention to the structure and quality of educational content. Obviously, if the content production is based on the standards, it will be associated with the least executive problems to be presented in standard-based education. But it is also necessary to note that along with the general standards, University is obliged to have required expertise and technical capabilities in planning and producing course content through experts and professors to avoid disrupting the procedure. Simply we can say that ICT is consequence of combined learning skills which are introduced as skill tool in the twenty-first century (5). Also, studies indicated that, although teaching the information skills and e-learning is a necessity in schools and universities, it is not properly included in the curriculum, however trainers value the information skills, their awareness are little on teaching the skills so the ICT literacy is not supported fundamentally in educational space especially in schools, therefore it is so difficult practically to be practiced owing to lack of proper plans to professionally develop teacher and education practitioners (6). The learners and educators must work, talk and exchange information together as well as create knowledge. Trainers are not just teachers, but they also are facilitators for mentioned process, the learners are not only learning, but also they are creators of knowledge means that they need to be creative and innovative (7). Although ICT has not been formed in educational institutions and organizations in the country, we can feel the emergence of a new world named as a virtual world around us. Virtual world will transform the identity of the teacher and student and will create new roles and tasks for them (8).

"Managing higher education systems and organizations via traditional method is not so much efficient at current state. Universities as a gravity center of scientific-investigative transformation in any country should be reorganized and restructured as well they have to specify their strategies in interacting with ICT" (9).

Accordingly, the present study aimed to investigate the current status of Azad university students` ICT literacy indexes (ICT) in 8<sup>th</sup> district. Given that the study is evaluated based on the ISST model, thereby the model and its indexes have been defined as follow.

**Model ISST:** It is a conceptual model for designing the content of ICT literacy and includes the following components: information society, information devices, information processing, and information handling (10).

**Information society:** "It is the obligation for accepting fulfillment the information society, the necessity to be accompanied with transformation in higher education, observing educational justice, everybody accessibility to information as a right and so many other issues".

**The information processing:** "It is, in general sense, refers to receiving the data, creating comparison process and arithmetic operations, and ultimately turning or not-turning the information to other form. Thus, whatever happens in the world, can somehow be seen as a form of information processing".

**Information handling:** "Taking advantage of the global network, learners can access to information that previously was not available and knowledge is transferred from teacher to students effectively".

The results obtained from the research had been carried out in the field will be mentioned in follows.

Mayby (2005) in his research measured the perception of female undergraduate students in using data at the California Miles School. This study was conducted through interviews with 18 female students and they are asked about their communicative knowledge in using data. The results showed that the research is a conceptual issue and a student can access to information when he/she possesses information literacy skills.

Wema and Hope Worth (2007) had conducted a research titled as assessing the project of teaching information literacy at Dar al-Salaam University. This study examined the impact of various approaches on information literacy of students in final term of B.A. degree at Dar al- Salaam University from Tanzania. The findings indicated that the data has been gathered via various methods, conferences and sessions orally and audio-visually. The methods help learners` critical knowledge, problem-solving skills, team skills and direct learning strategies. The results demonstrated the successfulness in applying information literacy plans through acquiring ICT basic skills by learners.

Peterson (2009) conducted a study entitled "Analysis of the needs in order to adopt Information Literacy for Research: A Case Study at Dublin University". This study aimed to found information literacy among M.A degree students. The findings showed that most of the studied students faced research problems such as lack of confidence in understanding research questions and using advanced search techniques.

For reading and writing data, computer literacy is necessary and without computer skills it would not be possible to access to information literacy standards.

### Research Question

How is the current and desired status of ICT literacy indexes and its aspects (including the information society, information devices, data processing and information handling) for Islamic Azad University students in 8<sup>th</sup> district?

## METHODS

According to the indexes and research purpose, the descriptive survey method was used.

**Population:** The research covers all of the 164,245 students from Azad University in 8th district.

**Sample and sampling procedure:** Since the distribution of students was separately not uniform in Islamic Azad University units of 8th district, so stratified random sampling was applied in which the sample size was calculated by Cochran formula.

$$\text{Cochran formula: } n = \frac{Nt^2 \cdot p \cdot q}{Nd^2 + t^2 \cdot p \cdot q}$$

$$= \frac{164245 \times (1.96)^2 \times 0.5 \times 0.5}{164245 \times (0.05)^2 + (1.96)^2 \times 0.5 \times 0.5} = \frac{157741}{412} = 382$$

(The sample Number)  $n = 382$

(Population size)  $N = 164245$

(Possibility of an attribute)  $p = 0.5$

(Impossibility of an attribution)  $q = 0.5$

(Possibility of correct speech)  $t = 1.96$

(Sampling error)  $d = 0.05$

As you can see, the sample size was estimated 382 based on the Cochran formula.

**Methods and data gathering tools:** The data in the research was gathered through questionnaires and based on the field investigation that distributed among sample students. The Questionnaires were designed using constitutive components of ICT literacy in the ISST model and accordingly it will be attempted to gather the data. The research

tool (questionnaire) is provided via Likert five options scale in which the grade 5 is the maximum (most important or agreement) and 1 score is minimum (the less important or disagreement).

**Reliability and validity of the instruments:** The mentioned questionnaire was prepared based on the standards and the various theories, so in order to determine its psychometric properties; the content validity was confirmed by experts. Also, Cronbach's alpha was used to estimate its internal consistency between Questions and components and in a primary study with the size of 30 students it was obtained equal to 0.98.

**Data analysis Methods:** A one sample t-test method was used for data analysis.

### FINDINGS

How is the current and desired status of ICT literacy indexes and its aspects (including the information society, information devices, data processing and information handling) for Islamic Azad University students in 8<sup>th</sup> district?

**Table 1: A snapshot of the results for one-sample t-test on the current and desired ICT indexes**

theoretical Mean	df	Significance level	t value	Mean	Number
3	381	0.000	30.38	4.12	832
3	381	0.000	29.53	4.11	832
3	381	0.000	29.91	4.13	832
3	381	0.000	30.14	4.10	832
3	381	0.000	30.11	4.15	832

The calculated t of 30.38 at significance level of 0.01 and df 381 is greater than (table) critical t of 2.58. Thus the index of ICT literacy and its indexes are desirable among Azad university students in 8<sup>th</sup> district.

As well as the calculated mean of 4.12 is significantly larger than the theoretical average of 3.

### DISCUSSION AND CONCLUSIONS

The results indicated that ICT literacy is desirable among Azad university students in 8<sup>th</sup> District. The result is consistent to Miby (2005), Wema and Hope wose (2007) and Peterson (2009) conclusion. In today's world information technology influenced higher education more than other economic, social, cultural aspects of the countries and the effect was such fast and considerable that cannot be ignored at all. Briefly, it can be said that ICT as a new man-made technology is able to gather, reserve, reflect data in textual and audio-visual form which is fulfilled by computer devices and telecommunication systems. Today, surprisingly, ICT recall governments, trading and business, security issues, higher education and so many global phenomena to challenge because it, due to its capabilities, makes it possible and simple to achieve to a chain of valuable data.

ICT can create new opportunities for lifelong learning; it develops professional skills, individual activities among students and teachers and enables them in educational problem solving. Also, by introducing into educational environment, ICT made the one-tailed teacher centered classrooms turn to an alive and creative space and made it possible to develop modern teaching styles in them. Today computers as a main training tool allows students and learners to be able to benefit from existing science better.

The kind of deep ICT effects on human social life get us not to suppose it as a simple procedure of information processing and publication but take a more step and scrutinize beyond it carefully and deeply as well as analyze its inevitable consequences. Since the most important purpose of higher education is to flourish students` talents and creativities, therefore it is expected that along with ICT development, not to fall behind the quick caravan particularly from curriculum dimension. Therefore the important point should be to note that taking the ICT advantages would be possible through long years that assured providing the field and conditions including paving the way for cultural and social areas to accept IT and funding for curriculum evolution.

To achieve these benefits, the following should be observed:

1. Educational content should be consistent with training special purposes and be effective on learning and teaching processes.
2. Teachers and students can communicate with the global network.
3. Officials and administrators in higher education should possess enough domination and high motivation and enthusiasm.
4. Facilities for purchasing computer sets should be supplied to higher education institutions and even students.

### Suggestions

Considering world current situation, higher education needs to a variety of new technologies to meet their needs and should strive to transfer it and create necessary technical knowledge and skills to exploit the device. Therefore, the following guidelines are proposed for proper use of ICT by universities and students.

- To develop ICT literacy, ISST components must be considered, because formulating the model to develop information literacy as the most important step taken in human resource training or promoting public percept will be a New Age framework and create new field for information development. The main features of this model is how to operate it at different levels (students, staff, faculty, etc.), to achieve to stable information development.
- For more efficiency about information literacy, the components such as the information society and information handling should be considered; because applying ICT and integrating ICT in higher education may develop creative thinking and in turn it can increase spreading the culture for using ICT via presenting it and encouraging its using.
- \* It is suggested to the experts that in assessing various type of ICT, the efforts such as holding congress to discuss about information and experiences on ICT in universities, executing a computer and internet course for professors, increasing the number of computer proportion to the students in universities may help to fortify the skill of using information literacy.

#### **Acknowledgment:**

The authors gratefully acknowledge the financial and other support of this research, provided by the Islamic Azad University, Shar-e Rey, Tehran, Iran

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