

Investigating Payam-e-Noor University Electronic-Training from Computer and Network Skill Perspectives: Case Study, Isfahan Payam-e-Noor University

Sanaz Shafiee

Department of Management Information Technology, Payame Noor University, PO BOX 19395-3697 Tehran, Iran
m.ghalambaz@gmail.com

Abstract— Payam-e-Noor university system was established following Great Britain Open University and its mission was implementing distance education. In Iran communication and information technology growth and development in all aspects of life especially learning and education process and subsequently E-education phenomena advent, was started by proposing the first national plan in this respect called "Techfa" formally in the middle of 2002. Following this move a plenty of activities was carried in the field of E-educational courses in Iran. Information technology was propounded as E-education formation underlying rule. Consequently investigating information technology indications in two different sections such as computer skills and network skills become of special importance and necessity. The present study was prepared by the aim to securitize the Education promotion process using optimization model in two basic indications in network and computer skills among Isfahan Payam-e-Noor university students as a case study in distance-educational system. The findings of the present research prepared are the obtained result of Pearson correlation coefficient test between network skills and computer skills among Isfahan Payam-e-Noor students. The findings of the present research prepared to examine more exact and accurate network skill condition in Isfahan Payam-e-Noor university students, revealed a high statically distribution for students having low network skills of 49.7% just 0.7% of these students have medium or higher network skill through investigating network skill condition of Isfahan Payam-e-Noor university students, as a case study of distance and half attendance educational system, it is necessary to establish regular and purposeful educational and training courses of ICDL skills and the internet and network skills training before students registration.

Keywords— Payam-e-Noor University, ICDL Skills Network and Computer Skill E-education

I. INTRODUCTION

The ability to use and comprehend computer, the Internet the competence to use technical information in the society in various fields, the ability to adjust and constant use of innovation in technological backgrounds, to assess and to combine information in different forms, to suggest

information by using computer opportunities and data analysis and to access to them also data processing are based on user's mastery and their full familiarity with network and computer skills.

The advent of novel learning environments makes education more available and easier to use in very situation, time age, gender via using information technology and communication, and it is one of the human desirable wants in education affairs. These days the most significant proof of such a facilitating educational space which is always available useable in every place and obviating time problem commuting cost for learner's training, is called "Electronic learning environment".

"Electronic-learning" discussion was established for the first time by "Kross" and referred to different types of educations taking advantage of the internet and intranet technologies [1].

The so-called e-learning as a general concept covers an extensive domain of applications, process and expressions such as "web-oriented learning", "Network learning", "Virtual learning", "e-cooperation" and "Computer-oriented learning" [2].

Chen [3] expressed E-learning as a kind of learning through Network-based Electronic-tools. The basic purpose of this new nation is the learner's complete self-training via network.

"Australian national training authority" announced that E-learning is a more comprehensive concept than Web-learning. This type of learning includes an extensive collection of applications and processes using electronic media to deliver professional education and flexible learning. The main goal is to support E-media extensive domain (the Internet, extra net, Intranet), and to provide very flexible professional learning, for clients" [4].

The statistical analysis of obtained findings revealed this fact that in a plenty of items, expressed as Network skill indications or indexes in the mentioned research Network skill means and the related aspects results was less than the middle point

Distance-education is an educational system introduced for the first time 1850 AD as a written from in a correspondence

institution in former Russia and subsequently in Berlin and Sweden in 1856 AD. The history birth and the appearance of virtual university which is a part of successive steps of educational system, data back to 1980 and 1990. A time when "Larry Roberts" in California and "Thomas Merrill" in Massachusetts attempted to develop a communicational system among computers through telephone lines after that personal computers with higher speed and memory appeared. Today designing World Wide Web and sudden spread of the internet caused rapid development of educational and training based on communication and information technology including E-educations and trainings [5].

Payam-e-Noor university system was established following Great Britain Open University and its mission was implementing Distance Education. In Iran communication and information technology growth and development in all aspects of life especially learning and education process and subsequently E-education phenomena advent, was started by proposing the first national plan in this respect called "Techfa" formally in the middle of 2002. Following this move a plenty of activities was carried in the field of E-educational courses in Iran [6].

Quality promotion and optimization of information technology skills in open and Distance systems particularly higher education system were centralized on applying and implementing programs and Self-help learning skills. In addition distance education system as a member Iran educational system needs to raise and train Self-guide students and to create effective informational users in order to achieve educational goals and efficient researches. Raising Self-help or Self-guide students ultimately considered as the most effective factor in optimizing Tele-Education systems is feasible by information technology skills optimization.

Communication and information technology can be considered as powerful and strong tools for promoting quality and educational effectiveness in a way to change traditional approaches [7]. Further more information technology causes educational process efficiency increase.

Learning quality enhancement easy access to the high volume of information educational expenses reduction subject matter accuracy and exactness and quality augmentation and instructors and students scientific promotion have been the most crucial E-education achievements. The communicational technology (especially the internet) and Network tools. Have provided effective capabilities for overcoming learning obstacles and geographical access. High education institutes and universities have performed a lot of researches and attempts due to how to apply and use these capabilities and novel facilities in learning education and research effectively.

The most vital problem is that although E-learning in developing. Countries were adapted to access traditional and non-traditional students increasingly it is still unknown in these countries and it is not used as an educational strategy. E-education however is able to create wonderful facilities for solving a plenty of educational system problems and

difficulties including distance education system (such as financial resources limitations. Location and time constrains. Not pay attention to innovation training and learning creative ability little use of network technology the internet and information technology lack of learning oriented education lack of suitable unified systematic planning in education and research. Therefore the implementation of E-education programs in Payam-e-Noor University according to its part of distance education and half attendance educational system body.

Information technology was propounded as E-education formation underlying rule. Consequently investigating information technology indications in two different sections such as Computer skills and Network skills become of special importance and necessity. The present study was prepared by the aim to scrutinize the e-education promotion process using optimization model in two basic indications in Network and Computer skills among Isfahan Payam-e-Noor university students as a case study in Distance-Educational system.

Not pay attention and lack of scientific and accurate planning in optimizing Payam-e-Noor students' Network and Computer skills resulted in losing expenses time human resources technological and network structures and lack of learner taught material confirmation undoubtedly ultimately Payam-e-Noor university as an important part of distance education system body in Iran will be weak and powerless previous researches investigation on information technology skills training and education in Iran reveals that there has not been any research or survey examining effects and results of the two crucial indications such as computer and network skills to promote E-education indications and finally entire development of e-education process in distance education system. The present paper is confronted with this vital problem in the field of computer and network skills learning in order to obtain desirable and appropriate educational purpose via technological approach in Payam-e-Noor university, which of these two fundamental skills (Network or Computer) should be taught to learners and a more crucial one is that promotion of which skill will lead to the promotion of other skill and ultimately how optimization process of E-education can be responded considering enhancing process of basic technological indications on the two dimensions of computer and network among Payam-e-Noor students.

II. RESEARCH LITERATURE

Information literacy development model was designed by Montazer et al. [8] in Iran through educational system approach based on information technology.

They propose a native model for all the units in the country considering quality and its high adaption and coordination with international models.

The results of the mentioned study demonstrated that two certificates ICCS (with 5 compulsory skills and ICDL) in pre-elementary level is devoted to educate and train basic concepts of information technology and necessary skills to

acquire information literacy and IDCS certificate (with 4 compulsory skills) and IAD (with 6 compulsory skill) are dedicated to teach necessary skills in elementary and intermediate levels on information technology arena respectively.

The researchers nominated 12 skills in their information literacy native modeling in Iran, they are as the following respectively: Information technology basic concepts computer application concepts, Basic mathematics in computer application, Vocabulary processing by computer, basic English in computer application, spread sheet, Computer representation familiarity the internet familiarity and its applications. Computer programming familiarity computer tools and environment familiarity Decision-making and information familiarity Multi-media tools and environment familiarity [8].

The stages of FAVA educational system in Payam-e-Noor university distance education system in can be expressed in three steps: Educational infrastructure designing based on information technology (Basic-FAVA) in order to provide required hardware and software's, providing FAVA application background in Learning-teaching process and producing Basic-web educational material, making out a regulation and evaluation system emphasizing quality control management rapid pursue research and feedback.

In Latin America and Caribbean sea domain taken into consideration by UNESCO [9] it is recommended that by propagating FAVA in education process in these countries provide appropriate conditions for pupils and students access to equal educational opportunities and train its creativity and effectiveness through using this novel technology in addition to reduce training and educating expenses [10].

The other effect of using these new educational technologies on Learning-teaching process is a change in teaching methodologies and making them more effective.

Verduin and Clark [10] suggested in a same tentative report that although various approaches are predicted and implemented in E-education it should be admitted that the problems related to technology Computer and Network facilities are tied or entangled with educated and trained human resources shortage with required supporting power in executing these type of programs.

"IGS" is one of the progressive plans whose main activity is based on information (Wireless) and information services and the internet resources usage.

"Netines" is among other plans working with aim of creating conditions and necessary backgrounds for all people usage of Information Literacy Skills. The main goal of this is intranet network has been encouraging citizens to use the Computer and the Internet.

FIBI is executed in Sweden and Denmark information services offered in the form of the internet conversation training and education for individual access to data resources and their evaluation will be proposed.

Table 1 shows the obtained result of Pearson correlation

coefficient test between network skills and computer skills among Isfahan Payam-e-Noor students.

TABLE 1

PEARSON CORRELATION COEFFICIENT TEST BETWEEN NETWORK SKILLS AND COMPUTER SKILLS AMONG ISFAHAN PAYAM-E-NOOR STUDENTS

Quantity	Conversion from Gaussian and CGS EMU to SI ^a
0.581	r calculated Pearson
306	The total under study population
304	df=N-2
0.13	The amount of r Pearson significance comparing 0.05 level of significance

III. RESEARCH QUESTIONS

How are the internet skill, situation E-mail skill, Latin On-line database skills, Persian On-line database skills, simple search skill, advanced search skill, search engine and database skills students E-magazine search skills for Isfahan Payam-e-Noor students? Table 2 shows Likert mean combination for network skill items and other related aspects among Payam-e-Noor.

TABLE 2

LIKERT MEAN COMBINATION FOR NETWORK SKILL ITEMS AND OTHER RELATED ASPECTS AMONG PAYAM-E-NOOR UNIVERSITY

Network skill items and their related aspects	Mean	Standard deviation
Digital libraries	1.70	0.79
E-books	2.05	0.91
Latin full-text on line database	1.27	0.50
Persian full-text on line database	1.90	0.73
Electronic journal	1.97	0.84
Bollean Logical Operators	1.52	0.62
Advanced search	1.85	0.86
Simple search	2.52	0.92
On-line search engines and database	2.58	1.09
Free-on line full text database	1.77	0.77
Electronic mail	1.99	0.87
The internet usage skill	2.46	0.89
Mean	1.96	0.55

In order to respond to 8 main research question, table was prepared based on likert options test mean. Based on the mentioned findings in table, the highest amount of mean for the responses refers to on-line search engines and data bases with the mean score of 2.58, and the lowest mean is related to Latin-online full-text databases with 1.27 mean score.

IV. CONCLUSION AND SUGGESTIONS

According to the obtained results of the present research, holding valid ICDL test courses and similar test to promote students computer and the internet skills in Payam-e-Noor university, Isfahan branch, as effective factors of Information Literacy, are recommended at first level skills such as; familiarity with basic concept of communications and information technology, the Internet and Computer application [11], and second level skills like; Vocabulary processing spread sheet computer representation and databases [12] and [13].

The statistical analysis of obtained findings revealed this fact that in a plenty of items, expressed as Network skill indications or indexes in the mentioned research Network skill means and the related aspects results was less than the middle point.

The Internet is considered as one of the effective factors for students Network skill in E-educational and (Internet) system; however by investigating students skills in Isfahan Payam-e-Noor university on the internet usage skill, it was recognized that the results can be included in Likert-low-spectrum. The previous researchers investigations in Iran made it obvious that E-education implementations and executions in the country Payam-e-Noor university centers and branches did not demonstrate a desirable condition due to the internet and computer access and usage situation: In a study performed by Ghafariyan [14] referred to this point that in 1385 census only 22% of Iranian house holds had computers and among them only 12.5% had access to the internet.

The findings of the present research prepared to examine more exact and accurate Network skill condition in Isfahan Payam-e-Noor university students, revealed a high statically distribution for students having low network skills of 49.7% Just 0.7% of these students have medium or higher network skills. Through investigating Network skill condition of Isfahan Payam-e-Noor university students, as a case study of distance and half attendance educational system, it is necessary to establish regular and purposeful educational and training courses of ICDL skills and the Internet and network skills training before students' registration.

It can provide an appropriate foundation for execution and implementation of E-education in Payam-e-Noor University as a proper educational and research approach.

ACKNOWLEDGMENT

The authors are grateful to Payame-Noor-University for its support through this paper.

REFERENCES

- [1] M. Atashak, "e-education applied and theoretical basic principles, planning and research", *Quarterly in high education*, Vol. 1(13), pp. 156-135, 2007.
- [2] P. J. Stoke, How e-learning will transform education. Education week, 2000, Retrieved May 6 2006, from <http://www.edweek.org/ew/ewstory.cfm>.
- [3] C. M. Chen, H. M. Lee; Y. H. Chen, Y. H., "Personalized e-learning system using item response theory", *Computer & Education*, Vol. 44(4), pp. 237-255, 2005.
- [4] Australian national training authority, Australian learning framework supporting flexible learning opportunities: definition of key terms used in e-learning, 2003, Retrieved august 7 2006, from <http://www.flexiblelearning.net.au/guides/key terms.pdf>.
- [5] E. Safaran, "The role of virtual training and tele-education in new educational systems development and globalization", Payam-e-Noor university central organization, in Proc. A collection of essays in 20th anniversary of Payam-e-Noor university establishment seminar, Tehran, pp. 151-161, 2008
- [6] A. A. Safavi, "A short report on the e-learning program in the I.R. at iran (UNESCO) international inference on distance learning: problems and perspectives of development", *Almty:Kazakhstan*, Vol. 18,19 (1), pp. 216-228, 2005.
- [7] Keegan D. (1993). Distance education: new perspectives. 29(2): 207-217, Retrieved June, 2005, from <http://www.emeraldinsight.com>
- [8] G. Montazer, N. S., Farzin. M. Fathiyan, "Designing a developmental model of information literacy in Iran: Planning and research in FAVA high education, *Designing underlying structures of education based on communication and information technology*, Vol. 213 (44), pp. 109.131, 2007.
- [9] Unesco, virtual universities in latin America Carabian, 2003.
- [10] J. R. Verduin , T. A. Clark, Distance education: The foundations of effective practice, San Francisco, Jossey – Bass publishers, 1991.
- [11] Quimm, "Developing and ICT program", UNESCO-UNEVOC Bullen, 2003, [on line] Available at: <http://www.unevoc.de/programmes/visiomission.html>
- [12] Steeve, "Information Literacy Bibliography and Internet Sites", 2003, [on line] Available at: <http://www.lib.newplaz.edu/aasistancy/tutorials/infolit.html>
- [13] Ahrmish, "FITS-ECDL Courses and Services", 2003, [on line] Available at: http://www.Fits.ie/ecdli_training.html
- [14] S. Ghafariyan, Electronic learning and encountered challenges, *Tadbir* Vol. 18(1), 2007, retrieved in 24/5/2007.