

The Impacts of Attitude on ICT Usage in Kharazmi University: A Case Study in Iran

By

¹Zohreh Khoshneshin, ¹Pourandokht Fazelian & ²Mohammadreza Khoshneshin

¹Educational Technology Department, Faculty of Education, Kharazmi University, Iran,

²M.Sc in Marketing Management, Institute of Management and Planning,

Abstract

The purpose of this study is to investigate on the impacts of teacher's attitude on ICT usage in one of the Iranian Universities and provide of scrutinized view about it referred to the findings in Kharazmi University. Among 300 university's teachers about 100 of them were responded randomly to the questioner. A researcher-made Likert-type questionnaire developed using the modules of the ICT Foundation. For comparison and ranking of ICT usage, the Chi-Square Test was used. There was significant difference among the teacher's attitudes in 7 departments about the effects of ICT to use in teaching-learning process. So the main priority of Kharazmi University according to the teacher could be related to the teachers' attitude to empower ICT approaches through teaching and learning process.

Keywords: *ICT professional use, Teachers attitudes, ICT use*

1. Introduction

Universities must fulfill the expectations of new trends to use informational and communicational Technology (ICT), which is characterized by being more open, flexible, and competitive in their functions, and they must promote the use of this refer to the institutional missions. They must respond to students' needs, begin to think globally and to create new alliances, design new programs, restructure their conceptions on the characteristics of learning environments, rebuild their conceptions on the value of knowledge, and develop internal policies to encourage innovation, experimentation, and teachers' creativity. The setting in motion of this vision presupposes the considering of the potential of ICT to the benefit of education and the strengthening of its administration and financing. It is asserted by several researchers that the new functions and competences required of teachers lead us to consider their formative needs: "Teachers point out their need for being trained in the use of ICT in new teaching methods and in the assessment of learning".

To increase educational benefit and effectiveness of ICT depends on aim of usage and the way it is used. Furthermore, usage of ICT in education does not indicate same effects for all. The integration of ICT in education is multifaceted process that includes various important issues: educational policy and planning, curriculum and pedagogy, infrastructure, institutional readiness, teacher competencies, capacity building, financing, etc. These issues are needed to be considered by policymakers, educators, education administrators, etc. There is not one solution for defining best level of ICT integration in the educational system. ICT is the important point for all steps of education process especially in universities. Via ICT, teachers in universities started to use technology in their courses' by graphical presentation materials.

Attitude and the use of ICT in Universities

Technology makes the learning environment more attractive and applicable. Howard Gardner, (1997) says about education that: "Since human beings have different understanding about the world, we should provide the children with full of information about internship, project and technology in order to make themselves more compatible with teaching system (Van Brakel & Chisenga, 2003).

There are upcoming trends in Iran (as some other countries in Asia) to the use of ICT as a technology which has positive effects on educational systems quality promotion. Advantages of ICT in teaching – learning process referred to Toure (2009) include: revising and supplying of items-access to information, more variety and changes in benefiting from technology and fundamental change in learning process, cooperation in group and scientific activities of learners, providing new educational position and finally focusing on different types of learning intelligence. Learning intelligence means the acceptance of learners through different ways such as: Hearing intelligence, Visiting intelligence, Speech intelligence, mental intelligence, Imaginary intelligence, Reasonable / applicable intelligence. Since the instructor was the only person for solving the problems and final replying person to questions and absolute speaker, therefore it was possible to intrigue hearing intelligence of learner. But in computer technology method it is possible benefit from hearing intelligence through audio/video CDs and also visual/ imaginary intelligence, mental intelligence and applicable intelligence in the way of motivated education and finally providing an exact, permanent and reasonable learning as well.

With the rapid development of modern information technology, computer and networking applications have been widely used in various fields, gradually changing people's work, study and life, especially in education. Information and communication technology (ICT, Henceforth) is not only the backbone of the Information Society, but also an important catalyst and tool for inducing educational innovation that change the learning style of students (Lower, 1992; Pelgrum, 2001). One of the factors that determine educational innovation in general is teachers as they are the ones to use the ICT investments for educational development. Because technology does not have an educational value in itself, it becomes important when teachers use it in learning-teaching process (Tezci, 2009). Based on social cognitive theory, a person's belief in performing a behavior or a task can lead to the successful completion of the task (Bandura, 1986). Therefore, an important aspect in successfully implementing ICT in education is user acceptance, which is greatly influenced by users' attitudes toward computers (Osman, 2009).

For many decades, researchers have been interested to understand how users' beliefs and attitudes affect their technology usage behavior. They have found certain factors that affect ICT use and individual's attitudes toward. Some studies highlight how the teaching attitudes play an essential role when teaching curricular contents through ICT (Ertmer, 2005; Goos, Galbraith, Renshaw, Geiger, 2003). Shaft, Sharfman & Wu (2004) assert that they are the only way to predict behaviors related with the integration of ICT in the classrooms. Russell noted in this way, use and attitude would be closely related. he says: "if teachers' use of technology is to change, then their beliefs about the technology have to change"(Russell, et.al, 2003,p. 298).

Many research works have emphasized the study of teachers' attitudes towards the use of new technologies in the classroom. The results show very positive attitudes and the common acceptance that their use will be soon completely expanded among teachers (Cure, Ozdener, 2008; Foley, Ojeda, 2008; Karagiorgim & Charalambous, 2006). It seems to be that an early age is a highly relevant factor for the teachers who have a positive attitude towards the incorporation of ICT (Shaunnessy, 2007) because those who are young have more teaching experience with ICT and therefore, they feel more involved with their use than older teachers(Hammond et al., 2008a). Askar & Olkun (2005) come to the conclusion that both teachers' age and the period of use of ICT affect the quality of teaching. There are the findings of the study indicated a very strong positive correlation between teachers' attitudes toward ICT in education and their perceptions of computer attributes (Zhou et.al, 2010).

There is no doubt that, as researchers emphasize, using ICT in courses is a new approach for applications of interaction and it helps student not only in recognition but also in making knowledge permanent. Usage of ICT in more approachable methods needed scrutinize of teacher's abilities in using facilities in a good manner. For applicants of the ICT facilities it is essential to have professional approach to use it. It increases the quality of instruction and the effects of attitude on using ICT could not be neglected.

2. Research objects and method

To investigate about the ICT usage in different faculties of Kharazmi University a questionnaire distributed among all teachers regardless of their academic levels and 111 of them from 7 faculties participated in which is postulated in the table 1.

Surveying method was chosen for the present study: descriptive statistical analyses were done for the Likert type questions (i.e. frequency analysis, measures of central tendency and dispersion) and final data were scrutinized under and Chi Square.

Table 1: sample of teachers

Faculty	N
Biology and Chemistry	15
Education and Psychology	16
Persian and foreign languages	17
Sport sciences	17
Engineering	15
Math and Computer	15
Geography	16

Main Questions

1. How do teachers describe their attitude to use of ICT during teaching-learning processes?
2. What are the teachers' perceptions of ICT attributes?

3. Results

first question: teachers' attitude to the use of ICT

Table 2- : teachers' attitude to the use of ICT

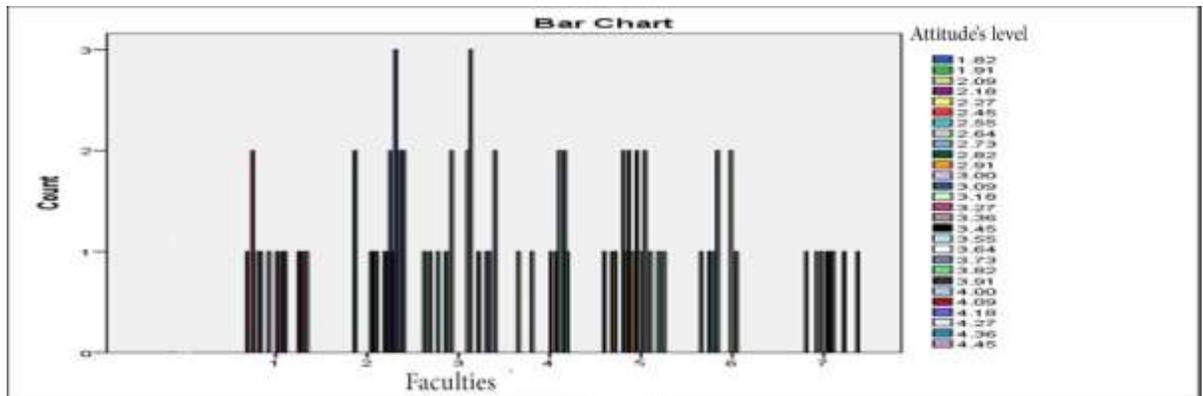
Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Faculty and * attitude	100	90.7%	15	9.3%	110	100.0%

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	224.194 ^a	189	.041
Likelihood Ratio	177.527	189	.715
N of Valid Cases	120		

Referring to the findings presented in Table 2, it is revealed that there is a significant difference among the teachers' attitude on the effectiveness of ICT usage in educational process. It is also visible in the figure 1, that the count of teachers attitude on ICT usage in most of faculties (refer to lykert-typed questionnaire) is less than 3 which means medium use.



Second question:teachers’ perceptions of ICT attributes

As Table 3 illustrates, respondents’ perceptions of ICT attributes seem no positive with an overall mean score of 2.65 (SD = 0.45), Respondents’ perceptions varied across the four ICT attributes examined in this study. Teachers’ responses are not positive about envisage of computers (mean = 2.04; SD = 0.64). Less positive were teachers’ perceptions of the advantage of computers (mean =2.55; SD = 0.63).The respondents believe that computer cannot improve educational process or make the classroom more attractive. But only thirty-seven point seven (37.7%) of respondents agree that computer education have more advantages than the traditional ways. Teachers’ perceptions of the simplicity of computers were midway between neutral and positive (mean = 3.51; SD = 0.59). Most of the responses were split between positive and neutral about whether it is easy to understand the basic functions of computers, operate them, use them in teaching and simplify teaching task. Teachers’ perceptions of the compatibility of computers were somewhat positive with an overall mean score of 3.54 (SD = 0.47).

Table 3: Distribution of mean scores on the ICT attributes scale

Percent scale	SA	A	N	D	SD	Mean	SD
Advantage	15.1	44.9	23.6	13.0	3.4	2.55	0.63
Compatibility	10.9	49.4	25.2	12.0	2.6	3.54	0.47
Complexity	12.7	49.0	20.5	12.7	5.2	3.51	0.59
Envisage	36.7	39.9	14.3	7.5	1.6	2.04	0.64
Overall attitude	18.2	46.0	21.3	11.4	3.2	2.65	0.45

SA, strongly agree (1); A, agree (2); N, neutral (3); D, disagree (4); SD, strongly disagree (5).

4. Discussion and Coclusion

The finding of research at the first question revealed the teachers' attitude to the use of ICT is meaningfully less than medium. The finding of next question adds to these explored the teachers' attitude to the use of ICT regardless of the different range of scalesare about medium decleration to use ICT in teaching and learning process. Regarding of the effect of attitude on ICT usage the finding of research in this point confirmed the finding of Ertmer, 2005; Goos, Galbraith, Renshaw, Geiger, 2003 and Shaft, Sharfman &Wu (2004) whom asserted that attitude as the only way to predict behaviors related with the integration of ICT in the classrooms.

According to the last finding of research teachers' perceptions because of the complexity of ICT and its usage through their current teaching practices were not as positive. The majority of them didn't agree that ICT will simplify the teaching task in the classroom. The teachers' points of views through different ranges of scales devoted to the ICT and its attributes to use in class, illustrated that they need to promote their ability to use ICT and having the proper approach to use it during teaching and learning process.

Acknowledgment: the researcher would like to appreciate the financial support provided by the office of Vice Chancellor for Research in Kharazmi University and their assistance with the process related to the paper under grounded research.

References

- Askar, P., & Olkun, S. (2005). The use of ICT in schools based on PISA 2003 data. *Eurasian Journal of Educational Research*, 19 (5), 15 – 34
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice- Hall, Inc
- Cure F. Ozdener N.(2008)Teacher's success in using ICT and their attitude towards ICT.H. U. *Journal of Education*, 34(3), 41-53.
- Foley J., Ojeda, C. (2008). Teacher beliefs, best practice, technology usage in the classroom: A problematic relationship. INK .McFerrin et al. (Eds.), *Proceedings of society for information technology and teacher education international conference 2008* (p. 4110- 4117). Chesapeake, Virginia, USA: AACE
- Goos M., Galbraith P., Renshaw, P., & Geiger, V. (2003). Perspectives on technology mediated learning in secondary school mathematics classrooms. *Journal of Mathematical Behavior*, 22 (1), 73-89
- Hammond M., Crosson S., Fragkouli, E., Ingram, J., Johnston-Wilder, P., Johnston-Wilder, S., Kingston, Y., Pope, M., & Wray, D. (2008). Why do some student teachers make very good use of ICT? *An exploratory case study*. Coventry: University of Warwick.
- Karagiorgi, Y., Charalambous, K. (2006). ICT in-Service training and school practices: in search for the impact. *Journal of Education for Teaching*, 32 (4), 395 411
- Lower S.K., 12th Biennial Conference on Chemical Education, 2–6th August 1992, UC Davis, CA.
- özmen. (2008). The influence of computer-assisted instruction on students' conceptual understanding of chemical bonding and attitude toward chemistry: A case for Turkey. *Computers & Education*, 51, 423-438.
- Pelgrum. (2001). Obstacles to the integration of ICT in education: Results from a worldwide educational assessment. *Computers & Education*, 37, 163-178.
- Russell, M., Bebell, D., O'Dwyer, L., & O'Conner. (2003). Examining teacher technology Use: implication for pre-service and in-service teacher preparation. *Journal of Teacher Education*, 54(4), 297 310
- Shaft, T., Sharfman, M & Wu, W (2004). Reliability assessment of the attitude towards computers instrument (ATCI). *Computers in Human Behavior*, 20(65), 116-118

- Shaunessy, E. (2007). Attitudes toward information technology of teachers of the gifted implications for gifted education. *Gifted Child Quarterly*, 2 (51), 119-135
- Tezci.R (2009). Teachers' effect on ict use in education: The Turkey sample. *Procedia Social and Behavioral Sciences*, 1, 1285-1294.
- Toure, K. (2009). Appropriating technologies and making them work for you in teaching and learning: depth is essential. In T. Karsenti (Ed.), *Pedagogical use of ICT: teaching and reflecting Strategies* (pp. 94-110). Ottawa: IDRC.
- Van Brakel, P. A., & Chisenga, J. (2003). Impact of ICT-based distance learning: the African story. *The Electronic Library*, 21(5): 476-486