The Analysis of Ict Skill Levels of Foreign Language Instructors Working At Universities

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ABSTRACT

This study was carried out in order to determine the ICT skill levels of the lecturers working at the foreign languages schools of the universities. The data collection tool of study was the ICT4LT (Information and Communications Technology for Language Teachers) developed by Davis (2008). The tool was restructured by the researchers upon receiving comments from the experts, candidate teachers for English and Computer and Instructional Technology. 40 lecturers among the ones employed at 4 different universities in İstanbul participated in the study. The data was examined by age, gender, lecturers' seniority and whether or not they took an ICT course. Moreover, the general average and the average of every sub-factor were calculated. Some suggestions were made according to the results of the study.

Keywords: *ICT, language teaching, computer skills of instructors*

INTRODUCTION

Today, ICT integration is a must for a more permanent and effective instruction. ICT plays an important role in students' gaining skills such as strategy use, problem solution, critical thinking, creativity and life-long learning.

It is regarded that the teachers play the most important part in ensuring students gaining such skills. Thus, teachers have to be informed about ICT and have the skill to use this information during teaching.

DEFINITION OF ICT

ICT, the abbreviation for Information and Communications Technology, is defined as "the science and activity of storing and sending out information by using computer"(Maheshwari, 2002:282). Oxford dictionary defines this term"the study of the use of computers, the Internet, video, and other technology as a subject at school".

A much broader definition of ICT describes it as "equipment such as computers, the Internet, CD-ROMs and other software, radio, television, video and digital cameras". According to the same definition "ICT refers to learning about new technologies and how to make the most effective use of them for personal, pedagogical and administrative purposes" (Kelly and the others, 2004:119).

ICT has become one of the basic elements of the society for almost threee decades because of the rapid developments in this area. It is widely emphasized in the literature that the use of information and communication technologies in education makes both teaching and learning processes effective (e.g. Kumar, 2008:556). Especially, new ICTs differ comparing to older technologies by integrating multiple media into single educational applications, contributing to the information enviroment, offering from rigid scheduling and so on.

As Blurton (1999: 46- 47) emphasizes that four dimensions of new ICTs; integration of multiple media, interactivity, flexibility of use, and connectivity-make it different from previous technologies.

These characteristics of ICT explain why educators try to find powerful new ways to integrate digital ICTs into the curriculum. According to the research conducted by Egbert et al. (2002:118) e-mail, developing lessons, and creating instructional Web pages are among the most frequently used CALL activities of the teachers.

It is clear that the education sector increasingly recognizes the importance of ICT in supporting educational improvement. For example, a study conducted by OFSTED (2002) indicates that ICT has become more than just a teaching tool but has the potential to improve the quality of language learning (OFSTED, 2002). The results of the ICT research conducted by British Educational Communications and Technology Agency (BECTA) are almost consistent with the results of OFSTED. It was stated in the research that even though research looking at ICT usage in relation to modern foreign language is not extensive comparing to the other subjects, the research shows that when ICT is used in foreign language teaching and learning, there are a wide range of positive benefits. Some of the identified key benefits of the use of ICT in modern foreign languages based on the analysis of the research are as follow; a) increase in motivation, enthusiasm and confidence, b) positive association with attainment, c) potential for differentation according to the needs of the learners and so on (BECTA, 2004).

THE ROLE OF ICT IN EDUCATION

It can be easily said that integrating ICT into education provides many opportunities for the learners like increased availability of the materials and improved teaching/learning process and so on. However, there are some key challenges which restrict the possible opportunities provided by the use of ICT. The lack of teachers' ICT skills is seen one of these key challenges to be taken into consideration. Furthermore, a lack of technical and theoretical knowledge creates a barrier especially for language teachers to integrate language learning technology into curriculum (Lee, 2000).

As Kumar (2008:558- 559) states in order to provide an ICT enhanced education, the teachers must be well trained about ICT tools. There are also many studies showing that teachers' ICT capability is an important issue in order to integrate it into curriculum (Pope & Golub, 2000; Albirini, 2006).

Therefore, teacher training programmes or courses which attempt to integrate ICT into preservice teacher education are strongly suggested. Goktas et al. (2009:200- 2002) emphasize the role of effective ICT integration in their study and they present several recommendations for practitioners. According to research results, ICT in-service training for teacher educators should be improved in both quantity and quality, course content should be redesigned to acquire more benefit from ICTs, more ICT-related courses for prospective teachers should be offered and ICT-related courses should be integrated in teaching practice courses in order to encourage ICT integration

As it is stated by Altun (2007: 57) there are three major problems need to be solved in teacher education related to ICT. These are insufficient staff in the area of use of ICT in education, insufficient access to resources and lack of research in this field. Altun also emphasizes the change process in Turkey and suggests that Turkey needs to determine the present situation and Initial Teacher Education has to be developed to integrate ICT by doing empirical research in this field. The research especially identifying the readiness levels of the teachers, lecturers and student teachers has to be conducted.

The rise of technology usage in language teaching has lead a change in the roles of the teachers. Teachers are now not regarded as the source of information but as the facilitators of information. So, language teachers and teacher candidates are expected to have high level of ICT knowledge and ability to use them in their classes. For example, The European Language Profile supported by the European Commission presents items which could be included in a teacher education programme. The items on ICT are given with the explanations in the report as below (Kelly & Grenfell, 2005: 21 -22):

a)Training in information and communication technology for pedagogical use in the classroom: Trainee teachers are taught how to use information and communication technology (ICT) effectively and how to integrate its use into their teaching.

b)Training in information and communication technology for personal planning, organisation and resource discovery: Trainee teachers recognise the value of ICT for organising their own workload and schedules, retrieving and developing resources and archiving documentation.

Similar to the project suggested by the European Commission, the guide published by the National Clearinghouse for English Language Acquisition and Language Instruction Educational Programs (NCELA) provided an overview of the key concepts in terms of teacher education and professional development. According to the guide, as the technology tends to increase engagement, provides a visual or audio component and develops computer literacy for learners, the classes should be designed to make learners gain access to technology. Therefore, teacher

performance criterion for technology is explained as "teachers will be able to identify appropriate technology to support learning" (Ballantyne and the others, 2008: 38).

As ICT is seen as a vital part of professional development of teachers, UNESCO has also determined general teacher competencies in infusing ICT in education. Examples of general teacher competencies are "Understanding why, when, where, and how ICT tools will contribute to learning objectives", "choosing from among a wide range of ICT tools those that are most appropriate to stimulate students' learning", "choosing ICT tools and teaching methods that integrate ICT into the whole curriculum" and "planning a whole learning programme that allows a range of ICT tools and teaching methods to be used, as and when required (UNESCO, 2002: 53- 54).

Even though, it was accepted that the role of technology in education and language learning, the studies conducted to learn how instructors working at university enviroment integrate ICT and what they know about ICT are very limited. A brand new study which focused on technology integration levels of instructors teaching at the different faculties of education revealed that technology implementation levels of the participants are not very high and they do not have enough skills to implement the current technology into their educational settings (Çelik, 2011, 141:163).

Velazquez-Torres (2006:9) conducted interviews with language teachers in order to learn the use of modern technologies in the classroom. It was found in the research that most of the in-service teachers do not use the technology in the classroom as they lacked the skills. Therefore, they felt more comfortable using television or cassette players than multimedia technologies.

AIM OF THE STUDY

The topics discussed above shows the importance of training in teacher education in order to provide ICT enhanced teaching and learning. Because of this reason, besides learning the perceptions and attitudes of the teachers about ICT, their abilities in ICT have to be gathered. In other words, what language teachers are able to do by using the technology and what they are not able to do have to be analyzed. Learning the abilities of teachers in ICT will not only help to design training programs for the teachers but also will give an idea of their classroom practices.

Moreover, identifying teachers' weaknesses and strenghts in ICT by the help of the study will enable teachers to assess the development of their own ICT skills. With this aim, the study focused on the ICT abilities of foreign language teachers teaching English at the university level. The main aim of this study was to identify language instructors' strengths and weaknesses in ICT.

METHOD

The study is a descriptive study aiming to determine the status of the lecturers regarding the integration of ICT to learning-teaching process.

A questionnaire was conducted in order to collect data about the demographical features and ICT skills of the participants. The scale 'ICT4LT (Information and Communications Technology for Language Teachers)' developed by Davis (2008) was used to measure the ICT skills. A personal details collection form was also used in order to collect information on the demographical features of the participants. SPSS 17.0 package software was used for analyzing the data statistically.

MODEL OF THE RESEARCH

The study was planned and carried out in accordance with the single screening model which is one of the screening models. The single screening model tries to describe the variables regarding the unit and situation such as the relevant event and group separately. This description may be limited to present simple or present continuous tense and also be progressive as a function of the time (Karasar, 2004). The single screening model was selected for this study as it is desired to show whether the ICT skill levels of the objectively selected groups differ as per the variables under this group.

WORKING GROUP

The working group of the study includes the lecturers employed at the schools of foreign languages of four different universities in İstanbul during the school year of 2010 to 2011. All lecturers participating in the study teach English as a second language. All lecturers employed at the universities were chosen for the determination of the

working group; however, those from whom no data was collected, who fell to the complete the scale in full and who were below the average are not included in the study. 42 lecturers in total gave feedback and data analysis was made over 40 applicable scales.

DATA COLLECTION TOOL

ICT4LT (Information and Communications Technology for Language Teachers) project funded by the European Commission which aims to provide Web-based training materials in ICT for teachers of Modern Foreign Languages, including English as a Foreign Language lead the data collection process. In order to get data, the questionnaire designed as a part of the project and compiled by Graham Davies titled "ICT Can Do Lists for Teachers of Foreign Languages for the ICT4LT Website" was used after modification process (Davies, 2008). While the original questionnaire includes 23 applications, the questionnaire used for this study includes 13 applications.

Applications and essential tasks under the heading of each application presented with "can do" list were chosen according to the comments of 10 experts in foreign language teaching, teacher training and ICT fields. Besides, a group of candidate language teachers studying at English language teaching department and a group of candidate teachers studying at ICT department participated in the modification process of the study. Their comments were taken into consideration before designing the latest version of the data collection tool. The statements in the questionnaire which created confusion and had no direct relation with the headings were eliminated.

THE ANALYSIS OF DATA

'x' in the scale means that the participant does not have the skill under the relevant item and is considered as 0. '' sign means that the participant has the skill under the relevant item. It is also used to state relevant skill level.

"0" used for scoring the data means that the skill under the relevant item is not present at all. 1, 2 and 3 mean that the relevant skill is present and shows its level. For instance, "1" means that the skill is at the minimum level and "3" shows that the skill is at a good level.

The comparisons were made by calculating the average of the scores received under the relevant section. t test was used for comparing the averages of ICT skill levels as per gender and receiving or lacking IT education. Moreover, ANOVA test was used for determining whether there is a significant difference between the ages and seniorities and the ICT skills of the lecturers or not.

FINDINGS AND COMMENTS

Demographical details of the participants such as gender, age, title, lecturers' seniority and whether or not they took an ICT course are given with figures and percentage in Table 1 below.

Table 1: Demographic Information

	Gender		Age			Seniority				IT Education	
	Female	Male	Between 20-30	Between 31-40 a	Between 41-50	1-5	6-10	11-15	16-20	Yes	No
Percentage	%65	%35	%37,5	%60	%2,5	%30	%40	%17,5	%12,5	%50	%50
Number	26	14	15	24	1	12	16	7	5	20	20
Total	40			40							

According to Table 1, the participants can be considered as an average group. 65% of the participants (n=26) are women and 35% (n=14) are men. The age distribution suggests that most of the participants (60%) are 31 to 40. Considering in terms of seniority, 40% of the participants (n=16) have been working for 6 to 10 years, 30% (n=12) for 1 to 5 years, 17.5% (n=7) for 11 to 15 years and 12.5% (n=5) for 16 to 20 years. As the table suggests, half of the working group has taken an ICT course and the other half has not.

Table 2: Averages and Overall Average

1	Windows	2.53
2	**Browser**	**2.48**
3	**e-mail software**	**2.45**
4	**Word**	**2.44**
5	**Powerpoint**	**2.12**
6	**Excel**	**1.94**
7	**Anti-virus ve security software**	**1.53**
8	**CD-Roms ve DVDs**	**2.4**
9	**Audio Cds ve DVDs**	**2.21**
10	**İmage editing software**	**1.77**
11	**Audio recording ve editing software**	**1.15**
12	**Video recording ve editing software**	**1.37**
13	**Reference tools: Electronic dictionaries and encyclopedias**	**2.32**
	Overall Average	**2.05**

Table 2 shows the averages of the participants regarding each sub-factor of the ICT skills scale and the general average of the test.

According to Table 2, the highest average of the lecturers in terms of ICT skills is 2.53 for using Windows and the lowest average is 1.15 for using Audio recording and editing software. The use of a Browser, e-mail software, Word, CD-Roms and DVDs, Reference tools: Electronic dictionaries and encyclopedias, Audio Cds and DVDs and Powerpoint follow respectively the use of Windows having the highest average.

The sub-factors below the general average are the use of Excel, Image editing software, Anti-virus and security software, Video recording and editing software and Audio recording and editing software respectively.

The general average is 2.05. It may be suggested from the figure that the ICT skills are generally slightly above the average.

Table 3: Skill Levels Score Regarding Each Sub-Factor

Skill Level	Windows	Browser	e-mail software	Word	Powerpoint	Excel	Anti-virus ve security software	CD-Roms ve DVDs	Audio Cds ve DVDs	İmage editing software	Audio recording ve editing software	Video recording ve editing software	Reference tools
0					**3**	**3**	**9**		**1**	**6**	**12**	**7**	**2**
1	**7**	**7**	**7**	**7**	**8**	**9**	**11**	**9**	**9**	**11**	**13**	**12**	**7**
2	**5**	**6**	**5**	**3**	**7**	**12**	**9**	**4**	**5**	**7**	**5**	**13**	**6**
3	**28**	**27**	**28**	**30**	**22**	**16**	**11**	**26**	**24**	**15**	**8**	**7**	**24**

The skill level as suggested by Table 3 has the following meaning: “0” means that the skill under the relevant sub-factor is not present at all. 1, 2 and 3 mean that the relevant skill is present and shows its level. For instance, “1” means that the skill is at the minimum level and “3” shows that the skill is at a good level.

Table 3 shows that the lecturers have the skills of using Windows, Browser, e-mail software, Word and CD-Rom, DVD-rom at different levels.

Most of the participants (n=12) told that they do not have the skills of using audio recording and editing

software at all. Most of the participants (n=13) stated that they have the skill in terms of the sub-factor of audio recording and editing software at the lowest level. What most of the participants (n=13) told that they have the skill in terms of the sub-factor of video recording and editing software at a medium level. It was found that most of them (n=30) have the ICT skills at the highest level in terms of Word.

Table 4: ICT Skill Level According to Gender

Gender	N	General Average	Standart Deviation	p
Female	26	2,26	,77757	,793
Male	14	2,50	,75955	

According to Table 4, the general average of the female lecturers in terms of ICT skills is X=2.26 and of male lecturers is X=2.5. The P value (p<,05) suggests that statistically there is not any significant difference regarding the ICT skill levels of female and male lecturers.

Table 5: ICT Skill Level According to IT Education

Situation of IT Education	N	General Average	Standart Deviation	p
Yes	20	2,70	,57124	,274
No	20	2,00	,79472	

As the table suggests, half of the working group has taken an ICT course and the other half has not. According to Table 5, the general point average of the lecturers who have taken an ICT course in terms of ICT skills is X=2.7 and of the lecturers who have not taken an ICT course is X=2.0.

Although there is a difference of 0.7 between these two averages, the P value (p<,05) suggests that statistically there is not any significant difference regarding the ICT skill levels of the lecturers who have or have not taken an ICT course in terms of ICT skills.

Table 6: ICT Skill Level According to Age

Age	N	General Average	Standart Deviation	p
20-30 arası	15	2,26	,88372	,645
31-40 arası	24	2,37	,71094	
41-50 arası	1	3,00		

According to Table 6, the general point average of the lecturers aged 20 to 30 in terms of ICT skills is X=2.26, of the lecturers aged 31 to 40 is X=2.37 and of the lecturers aged 41 to 50 is X=3.00.

The P value (p<,05) suggests that statistically there is not any significant difference between the ICT skill levels and ages of the lecturers.

Table 7: ICT Skill Level According to Seniority

Experience Year	N	General Average	Standart Deviation	p
1-5	12	2,66	,65134	,435
6-10	15	2,26	,70373	
11-15	7	2,14	,89974	
16-20	5	2,40	,89443	

According to Table 7, the general point average of the lecturers with a seniority of 1 to 5 years in terms of ICT skills is X=2.66, of the lecturers with a seniority of 6 to 10 years is X=2.26, of the lecturers with a seniority of 11 to 15

years is X=2.14 and of the lecturers with a seniority of 16 to 20 years is X=2.40.

The P value (p<,05) suggests that statistically there is not any significant difference between the ICT skill levels and seniority of the lecturers.

CONCLUSIONS

The ICT skills examined under 13 sub-factors in this study provide detailed information related to the computer literacy of teachers.

First of all, it was found out from the collected data that the teachers employed at the schools of foreign languages of the universities taking part in the research have high ICT skills regarding Windows. The ICT skills of the lecturers are at the lowest level in terms of audio recording and editing software.

Secondly, the general average of ICT skill levels of the participants is 2.05. Examining the average of every sub-factor suggests that the sub-factors above the general average are those such as e-mail and power point which are used more commonly in daily life. It is assumed that the participants are already familiar with the use of this software.

The skills such as audio recording and editing software and image editing software which are not used frequently attract attention when examining the sub-factors below the general average. These applications have become top items in the agenda in the recent years with the further development of the technology.

Although the lecturers find themselves more competent in terms of ICT skills which are used more commonly, the fact that their skill levels are low in terms of up-to-date matters. This finding shows that they need an ICT course which includes more detailed and up-to-date applications in this regard. Such applications which will be needed by the lecturers especially in teaching languages and ensuring more effective teaching should be used both in pre-service and in service teacher training.

Finally, examination of the frequency distribution of every sub-factor reveals that the sub-factor for which most of the participants told that they do not have any skills at all and again that they have skills at the lowest level is audio recording and editing software as mentioned above. Video recording and editing software is the sub-factor that the participants stated that they have skills at the medium level and word is the sub-factor that they told that they have skills at the highest level.

According to these results, the subjects that will be included in the training program can be selected by taking into consideration the skill levels of the lecturers. It is thought that focusing more on the items in which the lecturers' skills are low will be more useful.

This study which also acts as a needs analysis reveals that an ICT course providing the lecturers with the opportunity to develop themselves in matters regarding which they do not have any skills should be prepared.

In the analysis, no significant difference was observed statistically between the lecturers' ICT skill levels and the age, gender, seniority and whether or not an ICT course was received. It was found out that it is not necessary to prepare different contents that take into consideration such variables for an ICT course planned to be prepared.

It can be suggested that an ICT course to be prepared and implemented according to the foregoing principles will increase the quality of all elements in the teaching process from intra-course applications to the material development.

This study is limited to the data obtained from 40 lecturers. Lecturers employed in different cities and having different demographical features may be included in other studies to be carried out.

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