

## Assessment on Proficiency of Using Information and Communication Technology among Students of University of Lahore (Sargodha Campus), Pakistan

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### Abstract

The main purpose of the study was to assess the proficiency of using information and communication technology among students of University of Lahore (Sargodha Campus). The researcher conveniently selected the sample of 200 M.Phil. Students and sample included male and female students. A questionnaire was constructed that comprised of three parts. It was concluded that students had high proficiency in using spreadsheets, presentation software, internet, E-mail, E-learning whereas they had not enough knowledge of using blogs and were also facing obstacles in the use of ICTs in their work environment.

**Keywords:** Assessment, Proficiency, Communication, Information, Technology, Students

### Introduction

Information and communication technology (ICT) has become one of the basic building blocks of Pakistani society within a very short time frame as organizations in Pakistan are adopting ICTs in their business and routine activities. Many of countries of the world like Pakistan now consider understanding ICT and mastering the basic skills and concepts of ICT as part of the core of education, alongside reading, writing and numeracy skills and literacy.

One of the challenges facing teacher educators is how to ensure that graduate teachers have the necessary combination of skills and pedagogical knowledge that will enable them to both effectively use today's technologies in the classroom for teaching their students as well as continue to develop and adapt to new technologies that emerge in the future. ICT has great potential for enhancing teaching and learning outcomes through developing mutual collaborations of learners and engaging them in various learning activities.

Society for Information Technology and Teacher Education (SITE) (2002) states that there is increasing pressure for teacher education programs to graduate teachers who are confident and competent in using ICTs for their personal and professional lives. To adequately prepare teachers for work in the classrooms of tomorrow, teacher preparation programs need to develop programs that infuse ICTs into the entire program using authentic and pedagogically appropriate approaches.

Aduwa-Ogiegbaen&Iyamu (2005) states that there is universal recognition of the need to use Information and Communication Technology (ICT) in education as we enter the era of globalization where the free flow of information via satellite and the internet hold sway in global information dissemination of knowledge. According to Rosen and Well (1995) and Thierer (2000), the role of tech-

nology in teaching and learning is rapidly becoming one of the most important and widely discussed issues in contemporary education policy.

Omona and Odongo (2006) describe that advances in electronic-based information and communication technologies (ICTs) are rapidly transforming social and economic conditions across the globe. As the cost of ICTs continues to fall and their capabilities increase, their applications are becoming even more vital to all sectors of the economy and society.

#### ***Statement of the Problem***

The study was aimed at to Assessment on Proficiency of Using Information and Communication Technology among Students of University of Lahore (Sargodha Campus).

#### ***Objectives of the Study***

The objectives of the study were as following.

To assess the proficiency of using ICTs among students.

To analyze the proficiency of students in internet and E-mail

To assess the proficiency of students in using E-learning and blogs

To describe the use of ICT in work environment by students

#### ***Research Questions***

What is the proficiency level of using ICTs among students?

How proficiently students can use internet and E-mail?

How efficiently students can operate E-learning and blogs?

What sort of ICT work environment is provided to students?

#### ***Significance of the Study***

The study would be significant from point of view that it would instigate the teachers and perspective teachers for the use of ICT in their work environment. Secondly, the study would help the teachers and perspective teachers to realize the need of ICT usage in educational institutions. Thirdly, it would provide a background status to teachers regarding use of ICT in their teaching and its impact on overall scenario of Teacher Education in Pakistan. Fourthly, for coping the challenges of 21<sup>st</sup> century and national standard for evaluating teacher education in Pakistan 2010, the study would provide a frame work for future plans in Pakistan. Additionally, planners, managers, and other stakeholders of education Sector would have a road map from findings of the study in their respective fields attaining quality education through quality education of teachers.

### **Materials and Methods**

#### ***Population***

The study was descriptive in nature. All the students of University of Lahore (Sargodha Campus) were taken as the population of the study.

#### ***Sample of the Study***

Sample was comprised of 200 students of University Of Lahore (Sargodha Campus).

#### ***Instruments for Data Collection***

A questionnaire was developed on five Point Likert Scale. Data were collected through convenient sampling technique. Data collected through this instrument were tabulated and analyzed by using mean score. On the basis of findings conclusions and recommendations were made.

### **Results**

Data were presented and interpreted in the form of tables. It was analyzed by using mean score. On the basis of analysis of data, findings, conclusions and recommendations were made.

**Table 1. Gender Wise Classification of Respondents**

Gender		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	107	53.0	53.2	53.2
	Female	94	46.5	46.8	100.0
	Total	201	99.5	100.0	
Missing	System	1	.5		
Total		202	100.0		

Above table 1 shows that 53.62% students were male and 46.5% were female.

**Table 2. Classification of Respondents with respect to Age**

Age		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18 to22	1	.5	.5	.5
	23 to 25	35	17.3	17.4	17.9
	26 to 60	165	81.7	82.1	100.0
	Total	201	99.5	100.0	
Missing	System	1	.5		
Total		202	100.0		

Above table 2 shows that 0.5% students were in age group of 18 to 22years old, 17.4% students belong to age group of 23 to 25 years old and 82.1% students were in age group from 26 to 60 years old.

**Table 3. CGPA Wise Classification of Respondents**

CGPA		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.5 to 2.9	11	5.4	5.5	5.5
	3.0 to 3.4	136	67.3	67.7	73.1
	3.5 to 4.0	54	26.7	26.9	100.0
	Total	201	99.5	100.0	
Missing	System	1	.5		
Total		202	100.0		

Above table 3 shows that 5.4% students scored up to 2.9 CGPA, 67.3% students scored from 3.0 to 3.4 CGPA and 26.7% students scored from 3.5 to 3.9 CGPA.

**Table 4. Department Wise Classification of Respondents**

Department		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Education	72	35.6	35.8	35.8
	Special Education	22	10.9	10.9	46.8
	Islamic studies	21	10.4	10.4	57.2
	Sports sciences	18	8.9	9.0	66.2
	Urdu	33	16.3	16.4	82.6
	Economics	35	17.3	17.4	100.0
	Total	201	99.5	100.0	

Department		Frequency	Percent	Valid Percent	Cumulative Percent
Missing	System	1	.5		
Total		202	100.0		

Above table 4 shows that 35.6% students were in Education Department, 10.9% students were in Special Education Department, 10.4% students were in Islamic Studies Department, 8.9% students were in Sports Sciences Department, 16.4% students were in Urdu Department, and 17.4% students were in Economics Department.

**Table 5. Semester Wise Classification of Respondents**

Semester		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1st semester	18	8.9	9.0	9.0
	2nd semester	83	41.1	41.3	50.2
	3rd semester	60	29.7	29.9	80.1
	4th semester	40	19.8	19.9	100.0
	Total	201	99.5	100.0	
Missing	System	1	.5		
Total		202	100.0		

Above table 5 indicates that in Semester 1<sup>st</sup> 8.9% students were studying, in Semester 2<sup>nd</sup> 41.1%, in Semester 3<sup>rd</sup> 29.7% students, and in Semester 4<sup>th</sup> 19.8% students were studying in M.Phil. In UOL.

**Table 6. Session Wise Classification of Respondents**

Session		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2014 to 2016	66	32.7	32.8	32.8
	2015 to 2017	79	39.1	39.3	72.1
	2016 to 2018	56	27.7	27.9	100.0
	Total	201	99.5	100.0	
Missing	System	1	.5		
Total		202	100.0		

Above table 6 indicates that in Session 2014-2016 32.7% students were studying, in 2015-2017 39.1% students, and in session 2016-2018, 27.7% students were studying in M.Phil. In UOL.

**Table 7. Analysis of Responses**

Statement	N	Mean	SD
I can run a computer programmed	201	3.63	.977
I can use CD-ROM-based software (software that needs installation)	201	3.52	1.109
I can organize data files into folder and sub folders	201	3.77	1.108
I can search for files stored on hard disk of computer	201	3.71	1.042
I can move/Copy files between drives and folders.	201	3.79	1.084
I can connect peripheral (input and output) devices of	201	3.45	1.127

Statement	N	Mean	SD
computer			
I can use scanner for copying images	201	3.35	1.244
I can attach/remove web cam	201	3.54	1.162
I can attach/remove hard disk, CD-ROM	201	3.69	1.133
I can plug in/out USB device	201	4.03	1.100
I can use simple editing i.e. cut, copy, and paste	201	3.88	1.208
I can use simple formatting i.e. italic, bold, underline, change color	201	4.01	1.109
I can use spell checker to identify grammatical or spelling mistakes	201	3.01	1.109
I can insert images, shapes, tables in M.S word document	201	3.96	1.108
I can insert/delete rows and columns in table	201	2.96	1.228
I can enter data into rows and columns	201	2.89	1.186
I can use auto filling series	201	2.97	1.207
I can sort data in descending or ascending order	201	2.87	1.192
I can use different functions e.g. sum, average	201	2.78	1.198
I can perform basic arithmetic calculations.	201	2.98	1.093
I can create slides in Microsoft PowerPoint	201	3.86	1.158
I can insert new slides in Microsoft PowerPoint	201	3.85	1.022
I can insert pictures, clip arts, audio/video clips in slides	201	3.94	1.094
I can introduce different animations on slides	201	3.32	.999
I can use transition between slides	201	3.45	1.119
I can browse a website by using internet browser	201	3.91	1.042
I can use search engine e.g. <a href="http://www.google.com">www.google.com</a>	201	3.90	1.034
I can use bookmarks/favorites for marking websites	201	3.61	1.161
I can differentiate among various web domains e.g. .com, .info, etc.	201	3.62	1.057
I can download text, audio and video files from websites	201	3.89	1.199
I can create an e-mail account/ID	201	3.89	1.132
I can send and receive e-mail messages	201	3.97	1.063
I can attach files to outgoing e-mails	201	3.39	1.015
I can download attachments from e-mail	201	3.94	1.144
I can forward emails to select contacts	201	3.84	1.067
I can use CD/VCD/DVD related to different topics of learning	201	3.67	1.124
I can surf internet for learning different topics by using online dictionaries, encyclopedias, electronic books	201	3.68	1.033
I can take part in online distance education programs	201	3.50	1.110

Statement	N	Mean	SD
I can listen different educational programs broadcasted from online radios	201	3.35	1.135
I can watch recorded lectures of different teachers on internet	201	3.46	1.237
I can visit blog of my friends, colleagues, seniors, teachers	201	1.86	1.142
I can use blogging website e.g. <a href="http://www.blogger.com">www.blogger.com</a>	201	1.65	1.184
I can create different posts on my blog	201	1.35	1.144
I can edit different posts on my blog	201	1.19	1.194
I can share my blog with my friends, colleagues and relatives	201	1.47	1.388
I face problems while searching on net/browsing.	201	3.27	1.169
I face problems while connected to internet.	201	3.47	1.188
I do not use ICTs due to shortage of time during my working	201	3.40	1.221
I do not use ICTs because of limited knowledge how to make full use of ICTs	201	3.37	1.231
I do not use ICTs because of lack of access to software and website	201	3.42	1.194
I do not use ICTs because of poor infrastructure in my organization/institute	201	3.39	1.265
I do not use ICTs because access to ICTs is expensive in Pakistan	201	3.42	1.218
I do not use ICTs because people in my organization are not in favor of using ICTs	201	3.54	1.311
I do not use ICTs because administration provides no facility of ICTs	201	3.47	1.404

**Above table 7** shows that a good number of participants know how to run computer program. As mean score 3.63 showed moderate expertise in using or running computer program.

The mean score 3.52 showed that participants can use CD-ROM (software that needs installation) based software up to moderate level. This means that participants can install medium level difficult software they needed for their day to day use or requirement.

Result shows that a good number of participants know how to organize data files into a folder and sub folders. As mean score 3.77 showed moderate expertise in using or running computer program.

Result shows that a good number of participants know how to search for files stored on hard disk of computer. As mean score 3.71 showed moderate expertise in using or running computer program.

The mean score 3.79 which showed that participants can move/Copy files between drives and folders. Based software up to moderate level. This means that participant can install medium level difficult software they needed for their day to day use or requirement.

Result shows that a good number of participants know how to connect peripheral (input and output) devices of computer. As mean score 3.45 showed moderate expertise in using or running computer program.

The mean score 3.35 showed that participants can use scanner for copying images. Based software up to moderate level. This means that participant can install medium level difficult software they needed for their day to day use or requirement

Result shows that a good number of participants know how to attach/remove web cam. As mean score 3.54 showed moderate expertise in using or running computer program.

The mean score 3.69 showed that participants can attach/remove hard disk, CD-ROM based software up to moderate level. This means that participant can install medium level difficult software they needed for their day to day use or requirement.

Result shows that a good number of participants know how can plug in/out USB device. As mean score 4.03 showed moderate expertise in using or running computer.

Result shows that a good number of participants know how can use simple editing i.e. cut, copy, and paste. As mean score 3.88 showed moderate expertise in using or running computer program.

The mean score 4.01 showed that participants can use simple formatting i.e. italic, bold, underline, change color. This means that participants can install medium level difficult software they needed for their day to day use or requirement.

Result shows that a good number of participants know how to use spell checker to identify grammatical or spelling mistakes. As mean score 3.01 showed moderate expertise in using or running computer program.

The mean score 3.96 showed that participants can insert images, shapes, tables in M.S word document. This means that participant can install medium level difficult software they needed for their day to day use or requirement.

The mean score 2.96 showed that participants can insert/delete rows and columns in table with moderate level of expertise. This means that participant can easily use different tools (like tables) of MS word.

The mean score 2.89 showed that participants can enter data into rows and columns with moderate level of expertise. This means that participant can easily use different tools (like tables) of MS word.

The mean score 2.97 showed that participants can use auto filling series with moderate level of expertise. This means that participant can easily use different tools (like tables) of MS word.

The mean score 2.87 showed that participants can sort data in descending or ascending order with moderate level of expertise. This means that participant can easily use different tools (like tables) of MS word.

The mean score 2.78 showed that participants can use different functions e.g. sum, average with moderate level of expertise. This means that participant can easily use different tools (like tables) of MS word.

The mean score 2.98 showed that participants can perform basic arithmetic calculations with moderate level of expertise. This means that participant can easily use different tools (like tables) of MS word.

The mean score 3.86 showed that participants can insert images, shapes, tables in M.S word document. This means that participant can install medium level difficult software they needed for their day to day use or requirement.

The mean score 3.85 showed that participants can insert new slides in Microsoft PowerPoint. Based software up to moderate level. This means that participant can install medium level difficult software they needed for their day to day use or requirement.

The mean score 3.94 showed that participants can insert pictures, clip arts; audio/video clips in slides. This means that participant can install medium level difficult software they needed for their day to day use or requirement.

Result shows that a good number of participants know how to introduce different animations on slides. As mean score 3.32 showed moderate expertise in using or running computer program.

Result shows that a good number of participants know how can use transition between slides. As mean score 3.45 showed moderate expertise's in using or running computer program.

Result shows that a good number of participants know how to browse a website by using internet browser. As mean score 3.91 showed moderate expertise in using or running computer program.

Result shows that a good number of participants know how to use search engine e.g. www.google.com. As mean score 3.90 showed moderate expertise in using or running computer program.

Result shows that a good number of participants know how to use bookmarks/favorites for marking websites. As mean score 3.61 showed moderate expertise in using or running computer program.

Result shows that a good number of participants know how to differentiate among various web domains e.g. .com, .info, etc. As mean score 3.62 showed moderate expertise in using or running computer program.

Result shows that a good number of participants know how to download text, audio and video files from websites. As mean score 3.89 showed moderate expertise in using or running computer program.

Result shows that a good number of participants know how to create an e-mail account/ID. As mean score 3.89 showed moderate expertise in using or running computer program.

Result shows that a good number of participants know how to send and receive e-mail messages. As mean score 3.97 showed moderate expertise in using or running computer program.

Result shows that a good number of participants know how to attach files to outgoing e-mails. As mean score 3.39 showed moderate expertise in using or running computer program.

The mean score 3.94 which showed that participants can download attachments from e-mail .Based software up to moderate level. This means that participants can install medium level difficult software they needed for their day to day use or requirement.

The mean score 3.84 showed that participants can forward emails to select contacts. This means that the participants can install medium level difficult software they needed for their day to day use or requirement.<sup>2</sup>

The mean score 3.67 showed that participants can use CD/VCD/DVD related to different topics of learning. This means that participant can install medium level difficult software they needed for their day to day use or requirement.

The mean score 3.68 which showed that participants can surf internet for learning different topics by using online dictionaries, encyclopedias, electronic books. This means that participant can install medium level difficult software they needed for their day to day use or requirement.

Result shows that a good number of participants know how to take part in online distance education programs. As mean score 3.50 showed moderate expertise in using or running computer program.



Result shows that a good number of participants know how to listen different educational programs broadcasted from online radios. As mean score 3.35 showed moderate expertise in using or running computer program.

Result shows that a good number of participants know how can watch recorded lectures of different teachers on internet. As mean score 3.46 showed moderate expertise in using or running computer program.

Result shows that a good number of participants know how can visit blog of my friends, colleagues, seniors, and teachers. As mean score 3.42 showed moderate expertise in using or running computer program.

The mean score 1.65 showed that participants haven't enough expertise in using blogging website etc. The results of the above table show that M.Phil. Students do not have enough knowledge and exposure of blogging. Only very few students know and use blogging.

The mean score 1.35 showed that participants haven't enough expertise in uploading different posts on blogs and website etc. The results of the table show that M.Phil. students do not have enough knowledge and exposure of blogging. Very few students know and use blogging.

The mean score 1.19 showed that participants haven't enough expertise in editing different posts on blogs and website etc. The results of the table show that M.Phil. Students do not have enough knowledge and exposure of blogging. Very few students know and use blogging.

The mean score 1.47 showed that participants haven't enough expertise in sharing different posts on blogs and website etc. the results of the table show that M.Phil. Students do not have enough knowledge and exposure of blogging. Very few students know and use blogging.

The result shows that a large number of the respondents (mean= 3.27) are facing problems while using search engines or net browsing.

The result shows that a large number of the respondents (mean= 3.47) are facing problems while connected to internet.

The result shows that a large number of the respondents (mean= 3.40) don't have access to digital library.

The result shows that a large number of the respondents (mean= 3.40) don't use ICTs due to shortage of time during my working.

### **Conclusion**

1. On the basis of the findings it is concluded that there are 53.62% M.Phil. students are male where as 46.5% are female. There is 0.5% M.Phil. Students are in age group of 18 to 22 years old, 17.4% students belong to age group of 23 to 25 years old and 82.1% students are in age group from 26 to 60 years old. There are 5.4% M.Phil. Students scored up to 2.9 CGPA, 67.3% M.Phil. Students scored from 3.0 to 3.4 CGPA and 26.7% M.Phil. students scored from 3.5 to 3.9 CGPA. There are 35.6% M.Phil. students are in Education Department, 10.9% students are in Special Education Department, 10.4% students are in Islamic Studies Department, 8.9% students are in Sports Sciences Department, 16.4% students are in Urdu Department, and 17.4% students are in Economics Department. There are 8.9% M.Phil. students studying in Semester 1st where as in Semester 2nd there are 41.1%, in 3rd semester and 29.7% students in 4th semester are studying in University of Lahore Sargodha Campus. There are in Session 2014-2016 32.7% students are studying where as in session 2015-2017 are 39.1% students and in session 2016-2018 are 27.7% students are studying in University of Lahore Sargodha Campus.

2. According to the first objective it is concluded that a good number of participants have proficiency in using ICTs in university of Lahore Sargodha Campus. They know how to run

computer program. Majority of the participants can use CD-ROM (software that needs installation) based software up to moderate level. The participant can install medium level difficult software they needed for their day to day use. A good number of participants know how to organize data files into folder and sub folders. A good number of participants know how to search for files stored on hard disk of computer. They have moderate expertise in using computer program. The participants can use different functions e.g. sum, average with moderate level of expertise. This means that participant can easily use different tools (like tables) of MS word. The participants can insert new slides in Microsoft PowerPoint, insert pictures, clip arts, audio/video clips in slides up to moderate level.

3. According to second objective it is concluded that a good number of participants know how they can browse a website by using internet browser. They can use search engine e.g. www.google.com, bookmarks/favorites for marking websites. They can differentiate among various web domains e.g. .com, .info, etc. It means they have moderate expertise in computer program. They can download text, audio and video files e-mail account/ID and receive e-mail messages, attach files to outgoing e-mails from websites.

4. According to the 3rd objective majority of the participants can surf internet for learning different topics by using online dictionaries, encyclopedias, electronic books. They can take part in online distance education programs. They can listen different educational programs broadcasted from online radios and they can watch recorded lectures of different teachers on internet.

5. Majority of the participants they can visit blog of my friends, colleagues, seniors, and teachers. It means they have moderate expertise in using computer program while they have no expertise in using blogging website etc. It is concluded that Students of University of Lahore Sargodha Campus do not have enough knowledge and exposure of blogging. They haven't enough expertise in uploading different posts on blogs and website etc. Only very few students know the use of blogging.

6. According to the 4th objective it is concluded that a large number of the respondents have no access to digital library due to shortage of time, lack of access to software and website poor infrastructure in my organization/institute.

### **Recommendations**

M.Phil. students in university of Lahore Sargodha Campus may provide training of using blogging because they have not enough expertise in using blogging website etc. Only very few students have knowledge and exposure of blogging.

The maximum use of ICTs may introduce in organizations and institutes where they are working because they don't have access to digital library in their working environment.

Ample time may be provided to working students in their organizations and institutes because a large number of the respondents are not able to use ICTs due to shortage of time during their working.

Access to ICTs may be provided in their organizations and institutes because a large number of the respondents have no access to software and website in their organizations and institutes.

Proper infrastructure of ICTs may be provided because a large number of the respondents are not able to use ICTs because of poor infrastructure in their organization/institutes.

New technologies may be introduced and training of using ICTs may be provided because people in some organizations are not in favor of using ICTs.

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**APPENDIX****Note: Please mark (√) in the right place****Demographics****Name (optional):** \_\_\_\_\_ **Roll No.** \_\_\_\_\_**Gender:** \_\_\_\_\_ **GPA/CGPA obtained in last semester:** \_\_\_\_\_**Age:** a. 22 or Less than 22      b. 23-25      c. 26 & Above**Semester:** \_\_\_\_\_ **Session:** \_\_\_\_\_**Questionnaire:****Part A Proficiency of ICT Skills among students**

Sr. No.	Statements	No Capability	Low Capability	Fair Capability	Good Capability	Excellent Capability
	<b>Please indicate the level of your proficiency of usage by encircling the appropriate number representing your response with the help of the following scale</b>					
	<b>Proficiency of using Computer management</b>					
1	I can run a computer programme	1	2	3	4	5
2	I can use CD-ROM-based software (software that needs installation)	1	2	3	4	5
3	I can organize data files into folder and sub folders	1	2	3	4	5
4	I can search for files stored on hard disk of computer	1	2	3	4	5
5	I can move/Copy files between drives and folders.	1	2	3	4	5
	<b>Proficiency of using computer Hardware</b>					
6	I can connect peripheral (input and output) devices of computer	1	2	3	4	5
7	I can use scanner for copying images	1	2	3	4	5
8	I can attach/remove web cam	1	2	3	4	5
9	I can attach/remove hard disk, CD-ROM	1	2	3	4	5
10	I can plug in/out USB device	1	2	3	4	5
	<b>Proficiency of using Word Processing (Microsoft Word)</b>					
11	I can use simple editing i.e. cut, copy, paste	1	2	3	4	5
12	I can use simple formatting i.e. italic, bold, underline, change color	1	2	3	4	5
13	I can use spell checker to identify grammatical or spelling mistakes	1	2	3	4	5
14	I can insert images, shapes, tables in M.S word document	1	2	3	4	5
15	I can insert/delete rows and columns in table	1	2	3	4	5
	<b>Proficiency of using Spreadsheets (Microsoft Excel)</b>					
16	I can enter data into rows and columns	1	2	3	4	5
17	I can use auto filling series	1	2	3	4	5
18	I can sort data in descending or ascending order	1	2	3	4	5
19	I can use different functions e.g. sum, average	1	2	3	4	5
20	I can perform basic arithmetic calculations.	1	2	3	4	5

<b>Proficiency of using Presentation Software (Microsoft PowerPoint)</b>						
21	I can create slides in Microsoft PowerPoint	1	2	3	4	5
22	I can insert new slides in Microsoft PowerPoint	1	2	3	4	5
23	I can insert pictures, clip arts, audio/video clips in slides	1	2	3	4	5
24	I can introduce different animations on slides	1	2	3	4	5
25	I can use transition between slides	1	2	3	4	5
<b>Proficiency of using internet</b>						
26	I can browse a website by using internet browser	1	2	3	4	5
27	I can use search engine e.g. <a href="http://www.google.com">www.google.com</a>	1	2	3	4	5
28	I can use bookmarks/favorites for marking websites	1	2	3	4	5
29	I can differentiate among various web domains e.g. .com, .info, etc.	1	2	3	4	5
30	I can download text, audio and video files from websites	1	2	3	4	5
<b>Proficiency of using Electronic-mail</b>						
31	I can create an e-mail account/ID	1	2	3	4	5
32	I can send and receive e-mail messages	1	2	3	4	5
33	I can attach files to outgoing e-mails	1	2	3	4	5
34	I can download attachments from e-mail	1	2	3	4	5
35	I can forward emails to selected contacts	1	2	3	4	5
<b>Proficiency of Using E-Learning</b>						
36	I can use CD/VCD/DVD related to different topics of learning	1	2	3	4	5
37	I can surf internet for learning different topics by using online dictionaries, encyclopedias, electronic books	1	2	3	4	5
38	I can take part in online distance education programs	1	2	3	4	5
39	I can listen different educational programs broadcasted from online radios	1	2	3	4	5
40	I can watch recorded lectures of different teachers on internet	1	2	3	4	5
<b>Proficiency of using Blogs (Personal web diaries)</b>						
41	I can visit blog of my friends, colleagues, seniors, teachers	1	2	3	4	5
42	I can use blogging website e.g. <a href="http://www.blogger.com">www.blogger.com</a>	1	2	3	4	5
43	I can create different posts on my blog	1	2	3	4	5
44	I can edit different posts on my blog	1	2	3	4	5
45	I can share my blog with my friends, colleagues and relatives	1	2	3	4	5

#### **Part (B) Obstacles in the use of ICTs (Computers, Networks, Internet, Blogs etc)**

46	I face problems while searching on net/browsing.	1	2	3	4	5
47	I face problems while connected to internet.	1	2	3	4	5
48	I don't have access to digital library.	1	2	3	4	5
49	I Do not use ICTs because of lack of time during my working	1	2	3	4	5
50	I Do not use ICTs because of limited knowledge how to make full use of ICTs	1	2	3	4	5

51	I Do not use ICTs because of lack of access to software and website	1	2	3	4	5
52	I Do not use ICTs because of poor infrastructure in my organization/institute	1	2	3	4	5
53	I Do not use ICTs because access to ICTs is expensive in Pakistan	1	2	3	4	5
54	I Do not use ICTs because people in my organization are not in favor of using ICTs	1	2	3	4	5
55	I Do not use ICTs because administration provides no facility of ICTs	1	2	3	4	5