

Computer Literacy in a Distance Education system

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In a Distance Education (DE) system, students must be equipped with seven skills of computer (ICDL) usage. This paper aims at investigating the effect of a DE system on the computer literacy of Master of Arts students at Tehran University. The design of this study is quasi-experimental. Pre-test and post-test were used in both control and experimental groups to undertake the study. The populations of this study were students, those who participated in traditional and online education at the University of Tehran. In order to gather required data, the researchers made questionnaires consisting of 59 items. To sum up, it can be stated that DE has a more significant impact on Concepts of IT, Internet and Presentation regarding computer literacy than traditional education. It can be stated that traditional education has a more significant impact on Concepts of File Management and Databases (Access).

Keywords: Distance Education, Computer literacy, Students, Higher education

Introduction

Distance Education (DE) can be defined as “all forms of education in which all or most of the teaching is conducted in a different space than the learning, with the effect that all or most of the communication between teachers and learners is through communication technology” (Moore, 2003:19), Distance Education refers to the provision of opportunities to and eliminating unnecessary barriers for a diverse range of students in order to assist them to succeed in their education or training according to their specific needs and diverse learning settings (Butcher & Wilson-Strydom, 2008). With DE, the culture of learning has shifted from the tradition of students passively listening in a classroom where attendance matters, to the culture of proactive reading, encoding and decoding at anytime, anywhere, indicating DE efficacy (Kurtz, Amichai-Hamburger, & Kantor, 2009; Pena-Bandalaria, 2007). Distance Education has changed in its function and orientation and that now it extends to include technology. One of the most important technologies is computer. Today, most distance education is provided through computer and having computer literacy is required for students in distance education system.

Today, throughout the world, computer literacy is the first step for any individual who wants to do anything with computer. From all works of life, there is hardly any area where computer literacy is not important. Today, Computer literacy has really drawn the attentions of millions of student especially in the system of distance education also distance education includes Computer Literacy.

Computer Literacy

For some researchers, learning can be developed and students effectively prepared to business areas by integration of technologies and learning processes (Butzin, 2000; Hopson, Simms & Knezek, 2002; Reiser, 2001). Information has been increased by using technology, and effective use of technology is correspondingly related to information and information technology. Reaching information and increasing information literacy are directly connected to information and communication technology (ICT) use and computer literacy (CL). The importance of computer literacy and competency in online environments has been discussed in a number of studies (e.g., Atkins & Vasu, 2000; Cunningham, 2000; Johnson, 2002; Lam, 2000; Oh & French, 2007; Park & Son, 2009; Rakes & Casey, 2000; Shin & Son, 2007).

For Rochester and Rochester (1991), a person can be considered as computer literate if s/he has information about computer, s/he knows how it works and if s/he is able to operate a computer. There are other various definitions of CL going from the simplest to more complicated. For Walsh (2007), CL consists to turn on computer, to know logic of computer work, its components and how to effectively use computer programs to reach information; although CL is viewed as a unique domain but divided into sub-domains such as basic computer literacy, programming literacy. Some studies have been done in the country and abroad germane to the topic of this paper which presented below. Hiss, in a study entitled "the effective factors on the computer literacy of Taiwanese students", concluded that male students have more computer literacy than female. Moreover, students in private universities have the same advantage over the students in state universities (Hiss & Yeong, 2000) Wallace and Clariana, in their study entitled: "understandings versus facts: determining students' computer literacy skills and their need to teaching concepts and technology, investigated the computer skills regarding spreadsheets (Excel) and computer knowledge of newcomers by means of web-based tests. The findings revealed that the mean score of students is significantly lower than $\alpha=0.05$ (Wallace and Clariana, 2005). Heysung, in a study entitled: "the effective factors on accepting IT by teachers", concluded that teachers' attitudes towards IT have a significant relationship with using IT (Heysun, 2004). The findings of Zareezavaraki revealed that there is a significant relationship between using computer and Internet by university lecturers and the period of students' learning. Students who are in contact with professors using web-based connections have more information about word processor, power point, Excel, Internet and also apply them than other students who are in contact the professors who cannot take advantage of computer skills (Zareezavaraki, 2003). Conducting a research by Lotfinejad et al, entitled: "computer and informational literacy of students of Orumiyeh medical university", they concluded that most of the students having access to computer at home but they hadn't passed any educational course germane to computer yet. They also have the ability of sending, receiving and

attaching the file but they do not have the ability to use modern facilities for searching and search functions (Lotfinejad et al, 2006). Sharifi, in his study, concluded that there is a significant relationship among features such as individual, educational, teaching experience and the amount of using information technology but no significant relationship between university degrees with amount of using information technology in university fields was observed (Sharifi, 2004). Alishan, et al, in a study entitled: "the study of information literacy of Bandar Abbas medical students" concluded that the mean score of knowledge of Internet use and amount of using this element is higher than the mean score but generally students' computer literacy is lower than the mean (Alishan, et al, 2007).

Distance Education and Trend of generations

The concept of distance education evolving through generations provides a helpful structure when considering history and heritage. Taylor classifies distance education into four distinctive generations and adds a fifth to his models of distance education: a conceptual framework (Taylor, 2001). Computer literacy on the part of students is not essential for the first generation where learning is offered through the paper-based correspondence model. Most of the delivery technologies prevalent in the second generation (the multimedia model) do not require computer literacy either, except computer-based learning. In the third generation (the tele-learning model), none of the delivery technologies requires computer literacy. All of the delivery technologies in the fourth generation (the flexible learning model) require computer literacy: interactive multimedia online, internet-based access to the World Wide Web resources as well as computer-mediated communication. Taylor's fifth generation, the intelligent flexible learning model, includes all the delivery technologies of the fourth generation, but adds automated response systems to computer-mediated communication and campus portal access to institutional processes and resources. Computer literacy is essential for participating in fourth and fifth generation distance education delivery technologies. This implies that at higher education level, students have to be CL literate, or alternatively the institutions have to offer programs to develop their CL proficiency. Computer literacy is the individual abilities for using computers and information technologies. These seven skills, known as ICDL which is an abbreviation for International Computer Driving License, include Windows, Computer Essentials (Concepts of IT and File Management Combined), Online Essentials (previously known as Information and Communication), Databases Access, Word Processing, Power Point, and Excel (ECDL, 2001). Regarding the importance of computer literacy to its real meaning, it can provide the necessary platform for empowering the researchers to better planning in research process, access to the proper information for any stage of the project and eventually the production of new knowledge. In order to act successfully in this revolutionized world, students need to know how to find and apply the information effectively. Universities not only must prepare students for working in a certain field, but also they have to teach students for permanent learning. This matter is significant because the next century is the era of information and computer society, such knowledge can decrease the economic poverty in the development of information hence it will play an effective and efficient role in the society. Regarding the issues discussed above, this study seeks to investigate the impact of DE system on computer literacy of MA students in Tehran University.

Research Goal:

Investigating the Effect of Distance Education system on the Computer Literacy of MA Students in Tehran University

Research questions:

1. Does Distance Education system has an effect on the IT skill of higher education students in Tehran University?
2. Does Distance Education system has an effect on the File Management skill of higher education students in Tehran University?
3. Does Distance Education system has an effect on the Essentials Online skill (Internet skill) of higher education students in Tehran University?
4. Does Distance Education system has an effect on the Databases Access skill of higher education students in Tehran University?
5. Does Distance Education system has an effect on the power point skill of higher education students in Tehran University?
6. Does Distance Education system has an effect on the word processing skill of higher education students in Tehran University?
7. Does Distance Education system has an effect on the spreadsheets skill (Excel) of higher education students in Tehran University?

Instruments and Methods:

This study seeks to investigate the effect of Distance Education and Traditional education on the development of the computer literacy and measure which type has more impact on it. The design of this study is quasi-experimental. In order to undertake the study, pre-test and post-test were used in experimental and control group and were used of ICDL test for this research. Fifty students comprised the control group and fifty students were assigned in experimental group.

Considering the design of this study, which is a quasi-experimental, stratified random sampling was used for this purpose. The syllabus of courses in entrepreneurship faculty, education and extension field and in Management faculty, government management field were compared together both in traditional and distant education (DE) types in winter semester of 2014-2015.

The government management is the field of study in Management faculty and in entrepreneurship faculty, education and extension field from which students that study in attendant and virtual classes was selected as the samples of this study.

Twenty-six students from traditional students and twenty-three from DE students (Management faculty) and Twenty-four students from traditional students and twenty-seven from DE students (entrepreneurship faculty) in the winter semester comprised the participants. To gather data, a 59-item researcher made questionnaire was used based on ICDL Standard (Appendix 1).

The independent variable of this study is the instructional mode of course. There were two categories of the instructional mode: Traditional education and online education.

The dependent variable of this study is the computer Literacy as measured by the Computer literacy Scale.

In the first semester, computer literacy questionnaire was given to both groups (traditional and online education). Both groups took their courses within the educational system itself. After the end of the semester, computer literacy questionnaire was distributed for both groups.

The content validity index for the whole test of 59 items of computer literacy was 0.77 which is an acceptable index compared to similar works. The 59 items were adapted based on ICDL seven standards and distance education experts have examined its validity. In order to calculate the reliability of computer literacy variable, Cronbach's alpha was used. The reliability index for the total test was 0.61, which showed that most of the referees considered that the items of the questionnaire were necessary for measuring the computer literacy, which is in acceptable level in comparison to similar studies. SPSS version 16 was used in all steps of the data analysis. In order to analyze data the following features were measured: frequency, percentage, standard deviation, T, covariance analysis, Kolmogorov-Smirnov test. Regarding the aforementioned sections, the main purpose of this study is to investigate the effect of DE system on the computer literacy of higher education students in Tehran University.

Participants

Regarding the type of university, 49 out of 100 (49%) of the population were MA students of management faculty and 51 out of 100 (51%) were MA students of entrepreneurship of Tehran University. As seen in table and graph 1, the distribution of the samples is shown based on the gender of the participants in this study. Twenty-three out of 100 participants are female (23%) and 77 are male (77%).

Findings

Table 1: Descriptive Statistics (Dispersion and Central Index) of Computer Literacy Variable in Control and Experimental Group

	Group	Mean	Standard deviation	No.	Standard error of the mean
Pre-Test	Control	207/92	23/03	50	3/61
	Experimental	204/74	27/69	50	3/61
Post-Test	Control	211/30	24/10	50	4/12
	Experimental	210/82	33/41	50	4/12

In order to use covariance analysis there is presuppositions that must be met: one of presuppositions is homogeneity of variance. Table 1 displays the basic information and distribution of computer literacy variable, which shows that the mean score of pretest in both experimental and control groups do not vary drastically, and the mean score of posttest of these groups do not have a significant difference either. Standard error of measurement of computer literacy variable in two groups is almost in the same level. In such a design, the scores obtained from pretest are used to control the possible differences at the beginning of the experiment. There is no statistically

significant difference between the pretest of these groups before commencing the experiment.

Keeping the distribution normal; Kolmogorov-Smirnov test was used. The analysis of the data is shown in Table 2.

Table 2: Kolmogorov-Smirnov test

variable	Significance level
computer literacy	0.316

P=0.05

Data analysis of Kolmogorov-Smirnov test with $\alpha=0.05$ revealed that there is no significant difference for computer literacy variable P=0.316, so the null hypothesis (normal distribution) is not rejected, but the directional hypothesis (abnormal distribution) is rejected. Based on the information presented above, it can be claimed that the distribution of variables is normal.

Table 3: The Results of Analysis for T-Test

Variable	Mean difference	Standard deviation	T	Significance level	Degree of Freedom
Pre-Test	3/18	5/19	0.624	0.221	98
Post-Test	0.480	5/83	0.082	0.068	98

Table 3 shows that P=0.221 and 0.68>0.05 regarding the computer literacy variable, so the directional hypothesis is rejected, but the null hypothesis is not refuted. Therefore, it can be concluded that there is no significant difference between the pre-test of control and experimental groups. The other results reveal that there is not a statistically significant difference (P=0.68<0.05) in the post-test of computer literacy between control and experimental groups, so and this change has been similar in both groups.

Table 4: The Analysis of Factors of Computer Literacy Variable

variables	Group	Test	Mean	Standard deviation	Standard Error	T	Significance level
Concept of (IT)	Experimental	Pre- Test	3/37	0.77	0.25	2/64	0/01
		Post- Test	4/03	0.52			
	Control	Pre- Test	3/45	0.66			
		Post- Test	3/78	0.43			
File Management	Experimental	Pre- Test	3/49	0.62	0.17	5/99	0/01
		Post- Test	523/	0.37			
	Control	Pre- Test	563/	0.37			
		Post- Test	593/	0.56			
Microsoft Word	Experimental	Pre- Test	3/57	0.64	0.19	1/61	0.11
		Post- Test	3/71	0.67			
	Control	Pre- Test	3/41	0.61			
		Post- Test	3/90	0.47			
Essential	Experimental	Pre- Test	3/39	0.58	0.03	2/02	0.03

Internet		Post-Test	3/95	0.62			
	Control	Pre-Test	3/52	0.63			
		Post-Test	3/78	0.49			
Excel	Experimental	Pre-Test	3/27	0.55	0.03	0/32	0.75
		Post-Test	3/89	0.63			
	Control	Pre-Test	3/23	0.64			
		Post-Test	3/92	0.39			
Access	Experimental	Pre-Test	3/34	0.78	0.29	2/20	0.03
		Post-Test	3/85	0.61			
	Control	Pre-Test	3/05	0.51			
		Post-Test	3/89	0.53			
Power Point	Experimental	Pre-Test	3/32	0.49	0.03	5/90	0.01
		Post-Test	4/05	0.39			
	Control	Pre-Test	3/35	0.71			
		Post-Test	3/59	0.43			

The results of data analysis of Table 4 for computer literacy variable reveal that P value for Concepts of IT =0.010, File Management=0.001, Internet=0.03, Databases (Access) =0.03, and Presentation (power point) =0.001(online & traditional education), all are fewer than $\alpha=0.05$. Therefore, the null hypothesis is rejected, but not the directional hypothesis. It can be concluded that, regarding computer skills, Concepts of IT, File Management, Internet, Databases (Access), and Presentation (power point). The mean scores of Concepts of IT, Internet and Presentation (power point) are increased after the experiment in DE and traditional education has a low impact on their computer literacy (Concepts of IT, Internet and power point). The mean scores of Concepts of File Management and Databases (Access) are increased after the experiment in traditional education and DE has a low impact on their computer literacy (File Management and Databases Access). Regarding word processor and spreadsheets (Excel), P value is 0.11 and 0.75 respectively which are higher than 0.05, so the null hypothesis is rejected, but not the directional one and difference between these groups is not significant. To sum up, it can be stated that DE has a more significant impact on Concepts of IT, Internet and Presentation regarding computer literacy than traditional education. It can be stated that traditional education has a more significant impact on Concepts of File Management and Databases (Access) regarding computer literacy than DE.

Conclusion and Discussion

Nowadays, it is essential for students to have comprehensive computer literacy and skills, specifically in DE system, which is considered as one of the factors influencing development. Having ICT knowledge and skills resulted in the enhancement of students' confidence in digital societies.

In the contemporary era, doing university tasks requires computer literacy, so developing such abilities ends in students' better performance in and consequently the more efficiency of universities will be reported. Furthermore, it can increase the value of individuals in his office since it results in more independency and increases the motivation and the feeling of job success and decreases the costs germane to

providing services from technical sections of universities. One of the reasons why students need to have the knowledge of IT, Word, and Internet is that these skills are applicable in their everyday life. The findings of his research revealed that, in most of the variables, students who receive DE in experimental group outperformed the students who receive traditional education in control group. The findings of this study also showed that DE had a more significant impact on students' computer literacy than traditional education. The enhancement of students' computer literacy plays a basic role in developing independent learning skills and permanent learning. As it is necessary for an individual to monitor his/her own learning in order to be successful in E-learning and be self-guide in this active process, s/he must have a high level of computer literacy. At the end, regarding the importance of the computer literacy, it is suggested that the educational managers, designers, and planners pay attention to the enhancement of computer literacy in selecting the goals and contents and teachers consider this type of literacy in choosing teaching methods. Finally, it is suggested to the researchers to conduct more research germane to computer literacy in the application of these skills in DE settings. Generally, considering the research findings and policies of Distance University based on high education for all, everywhere, every time, it is essential for the university policy makers and planners to have a special look at Open University and DE to the development and improvement of students' computer literacy. To this end, the following are suggested:

- Holding practical sessions to improve and increase students' computer literacy in universities.
- Students' access to the magazines and brochures relevant to the computer literacy.
- Conducting research projects germane to students' computer literacy.
- Taking IT courses which are the bases for computer literacy for university newcomers.

References

- Alyshan, A., Carmy, N., BakhtiariZadeh, A., Khajeh, E., & Safa, O. (2007). Information Literacy of Medical Students Studying in Year in Medical School Bandar Abbas. *Journal of Electronic Iranian Research Institute for Scientific Information and Documentation*, 7(1),26-36. [In Persian]
- Atkins, N. E., & Vasu, E. S. (2000). Measuring knowledge of technology usage and stages of concern about computing: A study of middle school teachers. *Journal of Technology and Teacher Education*, 8(4), 279-302.
- Butzin, S. M. (2000). Using instructional technology in transformed learning environments: An evaluation of project child. *Journal of Research in Educational Computing Education*, 33(4), 367-384.
- Butcher, N., & Wilson-Strydom, M. (2008). Technology and open learning: the potential of open education resources for K - 12 education. In J. Voogt & G. Knezek (Eds.), *International Handbook of Information Technology in Primary and Secondary Education* (pp. 725- 745). New York: Springer.

- Cunningham, K. (2000). Integrating CALL into the writing curriculum. *The Internet TESL Journal*, 6(5). Retrieved from <http://iteslj.org/Articles/Cunningham-CALLWriting/>
- ECDL. (2001). *Computer Skills for Life*. Retrieved from www.ecdl.com.
- European Commission. (1995). *Socrates: Vademecum*. Brussels, Belgium: European Commission.
- Heysung, P. (2004). Factors That Affect Information Technology Adoption by Teachers. Retrieved from <http://Digitalcommons.Unl.Edu/Dissertations/AAI312696>.
- His, H., & Yeong, C. (2004). Factors Affecting Computer Literacy of College Students in Taiwan. Retrieved from <http://www.http://www.Conference.nie.Edu.sg/paper/Converted%20Pdf/ab00369.pdf>
- Hopson, M. H., Simms, R. L., & Knezek, G. A. (2002). Using a technology-enriched environment to improve higher-order thinking skills. *Journal of Research on Technology in Education*, 34(2), 109-119.
- Johnson, E. M. (2002). The role of computer-supported discussion for language teacher education: What do the students say? *CALICO Journal*, 20(1), 59-79.
- Kurtz, G., Amichai-Hamburger, Y., & Kantor, J. (2009). Psychosocial well-being of Israeli students and attitudes toward open and distance learning. *International Review of Research in Open and Distance Learning*, 10(2). Retrieved from <http://www.irrodl.org/index.php/irrodl/article/view/593/1229>
- Lam, Y. (2000). Technophilia vs. technophobia: A preliminary look at why second-language teachers do or do not use technology in their classrooms. *Canadian Modern Language Review*, 56(3), 389-420.
- Lotfinejad, A., Habibi, S., & Ghaderipakdel, F. (2006). Medical Students are Computer Literate. *Journal of Health Information Management*, 4(1), 33-41. [In Persian]
- Luu, K., & Freeman, J. G. (2011). An analysis of the relationship between information and communication technology (ICT) and scientific literacy in Canada and Australia. *Computers & Education*, 56(4), 1072-1082.
- Mayes, A. S., & Burgess, H. (2010). Open and distance learning for initial teacher education. In A. Umar & P. Danaher (Eds.), *Perspectives on teacher education through Open and Distance Learning* (pp. 35 - 46). Vancouver: Commonwealth of Learning.
- Moore, M. G., & Kearsley, G. (2005). *Distance education: A systems view* (2nd ed.). Belmont, CA: Thomson/Wadsworth.

- Moore, M. G. (2003). Preface. In M. G. Moore & W. Anderson (Eds.), *Handbook of distance education* (pp. ix– xii). Mahwah, NJ: Erlbaum
- Nipper, S. (1989). *Third generation distance learning and computer conferencing*. In R. Mason & A. Kaye (Eds.), *Mindweave: Communication, computers and distance education* (pp. 63–73). Oxford: Pergamon Press.
- Oh, E., & French, R. (2007) Preservice teachers' perceptions of an introductory instructional technology course. *CALICO Journal, 24(2), 253-267*.
- Ololube, N. P. (2006). Teachers instructional material utilization competencies in secondary schools in Sub-Saharan Africa: Professional and non-professional teacher perspective. In Conference Proceedings of the 6th International Educational Technology Conference. EMU.
- Oliveira, J. B. & Orivel, F. (2003). The Cost of Distance Education for Training Teachers. In B. Robinson, and C. Latchem, (Eds.), *Teacher Education through Open and Distance Learning*. London, United Kingdom: Routledge Falmer/The Commonwealth of Learning.
- Park, C. N., & Son, J.-B. (2009). Implementing computer-assisted language learning in the EFL classroom: Teachers' perceptions and perspectives. *International Journal of Pedagogies and Learning, 5(2), 80-101*.
- Perraton, H. (2010). *Teacher Education: The Role of Open and Distance Learning*. Vancouver, Canada: Commonwealth of Learning.
- Pena- Bandalaria, M. D. (2007). Impact of ICTs on open and distance learning in a developing country setting: the Philippine experience. *International Review of Research in Open and Distance Learning, 8(1)*.
- Rakes, G. C., & Casey, H. B. (2000). An analysis of teacher concerns toward instructional technology. *International Journal of Educational Technology, 3(1)*.
- Reiser, R. A. (2001). A history of instructional design and technology: Part 1: A history of instructional media. *Educational Technology Research and Development, 49(1), 53-64*.
- Rochester, J. & Rochester, J. (1991). *Computer for People: Concepts and Applications*. Homewood, IL: Irwin
- Sharifi, S.(2004). Examine the Relationship Between Demographic Characteristics, Education, Employment, The Faculty Use Information Technology At The Allameh Tabatabaei University [Master Thesis]. Tehran: Allameh Tabatabaei University. [In Persian]
- Shin, H., & Son, J. (2007). EFL teachers' perceptions and perspectives on Internet-assisted language teaching. *CALL-EJ Online, 8(2)*.

Shohel, M. M. C. & Power, T. (2010). Introducing Mobile Technology for Enhancing Teaching and Learning in Bangladesh: Teacher Perspectives, *Open Learning*, 25(3), 201-215.

Thorpe, M. & Grugeon, D. (Eds) (1987). *Open Learning for Adults*. London, United Kingdom: Longman.

Taylor, J. C. (2001). Fifth generation distance education. Paper presented at the ICDE 20th World Conference. Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.113.3781&rep=rep1&type=pdf>

Walsh, C.S. (2007). Creativity as capital in the literacy classroom: Youth as multimodal designers. *Literacy*, 41(2), 79-85.

Wallace , P., & Clariana, R. (2005). Perception Versus reality-Determining Business Students' Computer Literacy Skills and Need for Instruction in Information Concepts and Technology. *Journal of Information Technology Education*. 8(4), 141-151.

Zareezavaraki, E. (2003). Association of Use of Network Communications with Background Characteristics of Faculty Teachers: Indian Experience. In: A. Rossett (Ed.), *Proceedings of World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education*, Arizona, USA (pp. 5336-5344). Chesapeake, VA: AACE.

Appendix 1

Computer Literacy Questionnaire

COMPUTER LITERACY QUESTIONNAIRE

We are grateful for your participation and assistance in answering this questionnaire. We would like to know something about your computer literacy. Please answer all questions as accurately as you can.

SECTION I

➤ For each question, please mark your response with a tick (✓), unless otherwise indicated. For 'Other' responses, provide a brief response.

Q1. Sex

Male Female

Q2. Age

25 years old between 25 to 30 years old More than 30 years old

Q3. Faculty

Management Entrepreneurship

SECTION IV

➤ The following questions cover general areas of computer literacy. You may not know the answers to all questions, but please attempt to answer them without asking others or referring to books.

Q18. Please choose the best answer for each question and put a tick (✓) in the box at the appropriate spot: '1', '2', '3', '4' or '5'

1= A Great Deal

2= Much

3=Somewhat

4= Little

5= Never

row	Concepts of Information Technology	1	2	3	4	5
1	Can you recognize the major components of CPU?					
2	Can you recognize the difference between Bit and MB?					
3	Can you install the Windows operating system?					
4	Can you recognize the difference between LAN and WAN CPU?					
5	Do you know the terms of ADSL, ISDN, and PSTN?					
File Management						
1	Can you lock the Windows operating system?					
2	Can you change the format of the screen?					
3	Are you familiar with the terms of DOC, MDB, and XLS?					
4	Can you retrieve the deleted data?					
5	Are you familiar with The file compression program (WinZip)?					
6	Can you perform the file management including creating, coping, cutting, deleting and renaming files, etc.?					
7	Can you search the various folders and files on a computer drive?					

Microsoft Word						
1	Do you know the Application of all the commands in the Word menu?					
2	Can you work with icons of Bold, Italic, under line?					
3	Can you apply the effect of superscript and subscript in a text?					
4	Can you convert the Lowercase to uppercase in a text?					
5	Can you apply the symbols and special characters in a text?					
6	Can you change the Color, font and size of a text?					
7	Can you set the line spacing and paragraph?					
8	Can you create a table in the text and add its Rows and columns?					
9	Can you work with other formats except word such as RTF?					
Essential Internet						
1	Can you use a search engine (such as Yahoo, Google, etc.)?					
2	Do you know the deference between the terms of forward and reply?					
3	Are you familiar with terms of URL, WWW, and ISP?					
4	Can you recognize the internet sites from the blogs?					
5	Can you work with Microsoft Outlook for emailing?					
6	Can you send an email for others?					
7	Can you use of text and voice chat?					
8	Can you open a file attached to an e-mail?					
9	Can you use of video conference on the internet?					
10	Can you participate in online virtual classes?					
Excel						
1	Are you familiar with concepts of worksheet, workbook, cell, row, column in Excel?					
2	Can you create a worksheet in excel?					
3	Can you delete the information in the cells of a worksheet?					
4	Can you change the name of a worksheet?					
5	Can you work with the computational functions in Excel?					
6	Can you change the Width and height of a cell?					
7	Can you draw different types of bar charts, column chart, line charts, and pie charts in Excel?					
8	Can you add the titles and labels to a chart?					
Access						
1	Can you open the Access database?					
2	Can you work with the tabs report, forms, queries and tables In the Database window?					
3	Do you know the difference between operation and issues options?					
4	Do you know how to work with records and fields?					
5	Can you work with table wizard?					
6	Can you save & copy a record?					
7	Can you freeze and unfreeze a particular column in the Access?					
8	Can you create a table in design view?					
9	Do you know the application of difference type of data (Number, Currency, and Auto Number) in Access?					
10	Can you add a new field to table in access?					
Power Point						
1	Can you insert a text into a slide?					
2	Can you edit a slide text?					
3	Can you add a new slide to a show file?					

4	Can you insert graphics as a sign into slides?					
5	Can you show and hide the slides?					
6	Can you change the slides appear by using special effects to in the background?					
7	Can you change the slides design?					
8	Can you insert a picture into slide?					
9	Can you create an organizational chart in a slide?					
10	Do you know how to work with the icon of slide transition?					