

Efficiency of Computer Literacy Course in Communication Studies

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Abstract

Following the exponential increase in the global usage of the Internet as one of the main tools for communication, the Internet established itself as the fourth most powerful media. In a similar vein, computer literacy education and related courses established themselves as the essential components of the Faculty of Communication and Media Studies' curriculum. The present paper sets out to evaluate the efficiency of the computer literacy courses offered by the Faculty of Communication and Media Studies at the Eastern Mediterranean University.

Key Words: Computer Literacy, Traditional Literacy, Technical Literacy, Efficiency of Computer Courses.

Introduction

The twentieth century observed the emergence and developments in the computer technology which turned the world into a global village through the use of the INTERNET. In the 1993's, the Internet was mentioned as 'The Information Superhighway' and in the 1995's as the 'World Wide Web'. Today, at the beginning of the new millennium, computers and the Internet are becoming a sine qua non for our lives. Indeed, the Internet promises dramatic changes in the way we learn, teach, and the way we interact as a society (Ryder 1996:1). The present paper sets out to explore the impact of the developments in computer technology in Communication and Media Studies education. Then, we attempt to define the terms *traditional literacy*, *technological literacy* and *computer literacy*. This is followed by the context of the study, data collection techniques, analysis and findings and conclusion drawn from the study.

Developments in Computer Technology and Their Influence on communication Education

The developments in the information technologies after the 1980's have directly had an influence on the traditional communication tools. For example, before the invention and widespread use of the digital technologies, television and radio broadcastings were terrestrial. They were either local or national. However, recently with the use of digital satellite transmission, it is possible to transmit radio and television broadcasting all over the world. Moreover, these transmissions with the opportunities provided by the digital technologies can be in two or more different languages. Similarly, with the establishment of the global network or so-called Internet newspaper, television and radio broadcastings can be diffused globally with a negligible investment and running cost. Text, audio and video (multimedia) can be used synchronously through computers and thus, because of all these properties the idea of the Internet as the fourth most powerful media has been gaining ground.

Initially, computers were slow and expensive. After the 1980's, the availability of quicker and lower cost personal computers increased. In accordance with this, the use of technology in schools has gradually started to gain acceleration. At the beginning of the 21st century, more powerful technologies are beginning to make their way into the classrooms all over the world. Highly advanced computers which support multimedia educational software that use text, sound and video to teach students facts and concepts has become widely common. Access to the Internet increases and allows students and teachers to communicate with people all over the world via e-mail, group discussions or chat programs. Internet also provides a gateway to the students and teachers to search and find information. Based on the developments in technology, education process has been going through a paradigm shift. Parallel to the information and communication revolution, education has been increasingly relying on computers. In addition to the above mentioned benefits of the information technologies in education, since they provide a virtual medium for communication, they also have vital importance in the field of Communication and Media Studies.

At the roots of the new information technologies, there is the digitization of the electronic signals. Since this technological development primarily affects the use of traditional communication technologies and make them change, they can be re-named as Information and Communication Technologies. From this perspective, within many new Communication and Media Studies programs, courses such as New Communication Technologies are now taking place. The concepts of information and communication technologies (ICT) are generally used in the field of Communication and Media Studies in order to include and understand all new digital technologies. Thus, ICT include all the related technologies with transmission, telecommunication, information, broadcasting, publishing and printing. Hence, from this perspective, computer literacy is gaining more significance. The aim of

this study is not to point out the use of new information technologies in education but the benefits of being a computer literate in the Communication and Media Studies field. Therefore, Computer Literacy (COM 117) course provided by the Faculty of Communication and Media Studies introduces the students to the topics such as how to use a word processor or a presentation program. This course in return, provides significant background information for the rest of their education and career.

Definition of the Terms

With the recent developments in technology, the relationship between education and technology is becoming more and more integrated and complex. Indeed Ryder (1996) suggests chicken-and-egg-relation between education and technology. Ryder suggests, looking back,

“The history of education cannot be told apart from its technology. From orality to literacy, from manuscripts to the printed page, from text to hypertext, the prevailing technologies supporting education have defined its very nature” (Ryder 1996:1).

In the literature, the term literacy is used in relation to the terms *traditional literacy*, *technical literacy*, and *computer literacy*. Mackay points out that;

“The notion of literacy is highly complex, and an area which involves a range of disciplines, perspectives, and factors - psychological, linguistic and social. Broadly, the term literacy is often used in a vague and imprecise way, to refer to the capacity or relative capacity of a person to read and write” (1992:131).

A distinction has been made between the *traditional literacy and computer literacy*. *Traditional literacy* refers to “minimum but adequate capability of reading, writing and arithmetic” (Gümüş and Akter 2002); on the other hand, *technical literacy* refers to the “capability of using the powerful technologies, increasing learning opportunities and students’ skills” (Gümüş and Akter 2002:1).

With the information age, computers have become important tools in our lives. *Computer and information literacy* are complementary tools overlapping with each other. In 1986, Levine (1986: 141) draws our attention to the fact that “computer literacy, however, is as ambiguous and complex as any other literacy”. Mackay (1992) differentiates between the *technological literacy* and *computer literacy* suggesting that the former is a broad subject area yet the latter is narrow and requires technical expertise. Indeed, Mackay (1992:126) states that,

“computer literacy attempts to spread the uses of computing beyond specialist areas, ... it is concerned with mass provision of some minimal introduction to computers, so that those leaving school, and entering the labor market do so feeling comfortable with technology”.

Tarlow (2001:1) points out the influence of literacies (traditional and informational) on us as: “Historically, literacy has made the greatest impact on the way people think. As the links between other times and places solidified on the printed page, people’s thinking moved to ‘linear’.”

Recently, with the modern technology we have moved from linear to multi-dimensional thinking. Tarlow (2001:4) explains that “If we are to maintain the reflective advantages of present, non-technological literacy, we must consider how to do so. Rather than floating on the excitement of new technologies, we should consider thoughtfully what is lost in gaining or what is necessary to developing a new literacy that incorporates circular, linear, and multidimensional modes of thinking.”

Mackay (1992: 125) points out that “Technology literacy is crucial to understanding contemporary society and our place in it”. According to Mackay (1992:126)

“computer literacy attempts to spread the uses of computing beyond specialist areas. Computer literacy is not concerned with training specifically for specialist information technology occupations (such as technician or programmer), nor with providing specialist Information Technological Competence is.....is rather, it is concerned with mass provision of some minimal introduction to computers, so that those leaving school and entering the labour market do so feeling comfortable with new technology”.

Another definition is provided by Bork (1985:33) who suggests; “Computer literacy can be considered to mean the minimum knowledge, know-how, familiarity, capabilities, abilities, and so forth, about computers essential for a person to function well in the contemporary world”.

In conclusion, in addition to being literate in the traditional sense, today's student need to be literate both in technology and as a part of it in computers. A computer literate student learns the basic operations and concepts, the nature and operation of technology systems and is proficient in the use of technology. Students practice the use of technology systems, information and software and develop positive attitudes toward technology, and makes use that support for enhancing lifelong learning.

The Context of the Study

At the Eastern Mediterranean University's Faculty of Communication and Media Studies in the Turkish Republic of Northern Cyprus, freshman students are offered 5 courses (17 hours) in the first semester of their studies. Computer Literacy course (COM 117) is one of the courses offered to the freshman students in the first semester. This course is given as four hours/week; two hours theory in the classroom and two hours practice in the computer laboratory. Some extra laboratory sessions are provided in the last three weeks of the semester. These extra periods are not compulsory. Online resources about the course and laboratory materials are also provided to the students.

The broad objective of the COM 117 course is to improve both computer literacy (basic knowledge and understanding of computers and the ability to use computers effectively) and information literacy (effectively judge the value of information and the ability to use information generated wisely) of the students. The aims of the course are:

1. To give information to the students about the role of the computers in the world.
2. to introduce students to the concepts of processing unit, input and input devices, output and output devices, storage and storage devices, databases, software and network.
3. To make students proficient in the use of the computers to perform common tasks such as word processing, making use of presentation programs.
4. To enhance students' ability to use the computers as a communication tool by improving their proficiency in word processing programs, computer assisted presentation programs such as Microsoft power point.
5. To enable students to use the Internet as a resource to communicate their message; also to use the Internet as a research tool.

Data Collection Techniques

At the beginning of the Fall semester of the 2002-2003 Academic Year, all 184 freshmen students studying at the Faculty of Communication and Media Studies at the Eastern Mediterranean University were given a questionnaire (see Appendix 1). The questionnaire consisted of seven questions. The students were given the tasks of using the Email, Word Processing, and Searching through the Internet, Making Web Pages, Preparing Power Point, and Making Power Point Presentations. Throughout the course the students were educated about the subjects related the questions. The same set of questions were given to the same students after a sixteen-week of education Computer Literacy course.

Analysis and Findings

As we mentioned above, 184 freshman students took the COM 117 course. All the students taking the course replied to the questionnaire given at the beginning and end of the semester. 101 of the 184 respondents were male and 83 of them were female. It is important to note that 8% of these 184 students took this course for the second time and the attendance of the students during the semester was above 85%.

The analysis suggests that almost 53% of the respondents feel very good about using the e-mail. 26% feel satisfactory and 16% feel not very good about using the computers. 5% said that they had no skills in that area. At the end of the semester, the percentage of using e-mail good or very good raises to 68% and the percentage of feeling satisfactory rises to 23%. On the other hand, the percentage of not feeling well reduces to 4 % and the percentage of having no skills in the area reduces to 2%.

At the beginning of the semester, 26% of the students' mentioned that they feel good or very good about word-processing. 39% said they felt satisfactory, 29% reported that they did not feel very good and 4% noted that they had no skills in the word processing. After 16 weeks, the students taking the course responded to the same question. 49% stated that they felt good or very good. At this point, the amount of increase, compared with the result at the beginning of the semester is almost 100%. 36% of the students felt satisfactory which is almost the

same as the results at the beginning of the semester. 8% felt not very good and 0.5% felt no skills at all. 6% of the students did not respond to this question.

At the beginning of the term, almost half of the respondents mentioned that they felt good or very good about searching through the Internet. 37% replied that they felt satisfactory about their use of the Internet. 15% felt they were not very good, 2% said that they had no skills at all. 3% did not answer this question. At the end of the semester, 59% of the students responded that they felt good or very good, 29% felt satisfactory, 4% felt not very good and only 1% felt no skills at all. 8% of the students did not respond to this question. At this point, it is important to notice that searching the Internet is not one of the main areas of the Computer Literacy course but rather given to the students in addition to the compulsory course subjects.

At the end of the semester, 53% of the students responded that they strongly agreed and 35% agreed in believing the materials they found from the Internet. During the educational period (within the semester) students were directed by the instructors, to the web sites where the materials were checked and approved. 7% of the students did not answer this question.

Initially, 12% of the freshman students mentioned that they were good or very good at making web pages. 18% felt satisfactory and 30% felt that they were not very good at, and almost 38% mentioned that they had no skills in preparing web pages. 3% did not answer this question. After four months education, 20% of the respondents replied that they felt good or very good, 28% felt satisfactory, 21% felt not very good and 26% no skills at all. Although some achievements were observed at making the web pages, almost half of the students responded that, they felt either not very good or had no skills at all. The reason for this is that; making web pages is not in the compulsory syllabus but students were asked to join extra laboratory hours voluntarily in the last three weeks of the semester.

In the first questionnaire, 23% of the respondents mentioned that they felt good or very good about preparing power point materials. 28% felt satisfactory 26% felt not very good, 22% had no skills and 2% did not answer. In the second questionnaire 56% of the students felt good or very good and 33% of the students felt satisfactory. This can be considered as a very good improvement compared with the results at the beginning of the semester.

20% of the students said that they were very good, 24% were satisfied, 26% not very good and 28% had no skills about making power point presentations. 3% did not attempt to answer this question. At the end of the semester 44% of the students felt good or very good about giving power Point Presentations. 35% felt satisfactory and 10% felt not very good. 6% of the students did not answer this question.

A two-tailed T-test was applied to the results obtained by the questionnaires.

t-test: Independent Sample Test

Table 1: T-test results of the questionnaire items. (N=184)

	Sig. (2-tailed)	
	Beginning of the semester Pre-test	End of the semester Post-test
using e-mail	,705	,993
word processing	,060	,207
searching via internet	,313	,479
believe in internet content	,573	,159
making web pages	,021	,046
making power point	,014	,328
giving a power point presentation	,000	,150

Pre-test

The Independent Sample Test results are presented in Table 1. T-test was executed for sex at the beginning of the semester. As indicated above, all values are higher than the standard value that is 0.05 except the values of making web pages (0.021), making power point (0.14), and giving a power point presentation (0.000) which represent meaningful difference between sex variations. On the other hand other, values indicate no meaningful difference between genders based on their responses.

Post-test

According to Independent Sample Test results shown in Table 1, all values are than the standard value that is 0.05 except the values of making the web pages (0.046), which represent meaningful difference between gender variations. However, based on the responses of the participants, other values indicate no meaningful difference between the sexes.

During the semester, the students took four exams; two theoretical and two practical (held in the computer laboratories). The success rate of the students in Computer Literacy Course was 80% which is consistent with the students responses to the questionnaire at the end of the semester.

Conclusion

Computer literacy course is present in all three departments (Public Relations and Advertising, Radio Television and Film Studies and Journalism) of the Faculty of Communication and Media Studies. Actually in the literature, teachers are advised to use technology in order to improve their classroom efficiency. For example, using a multimedia presentation affects students' engagement and achievement and increase motivation and attitude. Instructors can also provide online resources which expand the concept of learning beyond the classroom. Students living in the 21st century must be information literate. This means that, they must have the ability to access, evaluate and use information. Furthermore, they need to keep up with the rapid developments in technology. With this respect, information literacy (learn how to learn) stands as the key concept for lifelong learning. Once again, in order to follow the courses (not just only the technology related ones but all of them), and being an information literate, students should first be computer literate.

Beynon & Mackay (1989:135) state that "It is interesting that with computer literacy we have the first occasion on which a mass educational movement has followed so closely on the heels of a technological innovation." This shows the close relationship between education and technology in our world. The aim of the computer literacy course is to introduce students to basic preliminary knowledge about the computers and familiarize them with the computer technology. Besides gaining skills which are necessary for students in the rest of their education, the main aim is to familiarize them with recent information and communication technologies. In this course, all the students are accepted as having no skills at all about the course content and the course was carried out accordingly. The results of the first survey (delivered at the beginning of the semester) indicate that some students have some knowledge about the course content but the rest has no information at all. Having said this, it is important to point out that, computer literacy can be classified at two levels as being a lower-level computer literacy and upper-level computer literacy. For example, it does not take too long for a student to develop minimal lower-level skills in using a word processor as an electronic typewriter. At this point, we would like to present a list of some of the higher-level areas of knowledge and skills that beginner lack. A modern word processor contains hundreds of aids to writing and editing. For example, it may contain aids to help create headers, footers, page numbering, tables, styles, index, and table of contents. It may contain an outliner, provisions for arranging a list in alphabetical or numerical order, and provisions for inclusion of graphics. In addition, it certainly contains a spell checker and may contain a grammar checker. Finally, it interfaces with graphics software and perhaps with other major software tools such as spreadsheets and database. Also, it does not take so long for a student to learn the basics in using email. Some higher-order skills include: responding appropriately to a whole list or to an individual sender when receiving a message from a distribution list; organizing and saving messages in file folders; printing messages; sending and receiving attachments; building and maintaining an address book; and building and maintaining a distribution list. What is more, a beginner can learn to make basic use of the Web. The World Wide Web can be used to find information, to carry out business transactions, and as an aid to distance learning. Increasing expertise requires the ability to efficiently locate, evaluate, use, and learn from multiple, high quality sources of information on a topic. It is required having research skills that are used to determine good information and reputable websites. It is required making effective use of the "advanced search" features found in search engines. It is required knowing the strengths and weaknesses of a variety of search engines. A new beginner can learn to make simple linear, multimedia slideshows. A multimedia (hypermedia) document can be nonlinear and include text, sound, graphics, animation, video, and color. Increasing expertise is evidenced by the ability of design and implementing more complex and more effective multimedia documents. Multimedia is a very complex communication environment.

The examples we have just given illustrate that, for each computer tool, there is a range of possible knowledge and skills, starting from a novice to a world class expert. Certainly, the same can be said for the ability to apply the tool to represent and solve problems and to address complex and challenging problems in diverse areas. Higher-level knowledge and skills refer both to knowledge and skills specifically oriented towards an Information Technology tool, and also oriented towards the effective use of the tool throughout the full range of one's knowledge and skills.

The outcome of the survey at the end of the semester shows that students achieved necessary improvements, in almost every area covered in the syllabus. Parallel to the results obtained from the course assessment, 80% of them either felt good or very good or at least satisfied.

Mackay (1992: 136) states that “a key underpinning of arguments for computer literacy is that we are living or moving towards a post industrial or informational society”. It is quite obvious that all students who are graduating will go to work in businesses that use global information systems. Lack of this knowledge will cause serious disadvantages. From this perspective, in Communication and Media Studies education, although being a computer literate is a must, for the sake of the rest of the education for students, being a technology literate is an absolute necessity. Technology or information technology course must be included in the curriculum or at least these should be blended with the first year computer literacy course.

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Appendix 1

Questionnaire

Course code:
 Sex: (Male) / (Female)
 Age:

Make an objective assessment of your own skills and tick the relevant box according to your knowledge.

	Good /Very good	Satisfactory/ OK	Not very good	No skills in this area
Using email				
Word processing				
Searching via Internet				
Believe in internet content				
Making web pages				
Making Power Point slides				
Giving a Power Point Presentation				