Full Length Research Paper

Effects of computer course on computer self-efficacy, computer attitudes and achievements of young individuals’ in Siirt, Turkey

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The purpose of this study is to investigate the effects of computer courses on young individuals’ computer self-efficacy, attitudes and achievement. The study group of this research included 60 unemployed young individuals (18-25 ages) in total; 30 in the experimental group and 30 in the control group. An experimental research model with pretest posttest control group was used in the research. The data collection tools were applied as pretest and posttest on both experimental and control groups. During the analysis of the obtained data, paired samples t-test and independent samples t- test were used. After the computer course it has been seen that the course developed computer self-efficacy, computer attitudes and computer achievement levels of participants.

Key words: Computer self-efficacy, computer attitude, computers and learning, computer achievement levels.

INTRODUCTION

Technology enables people to be creative while also developing new skills and grasping an understanding of how things work. Technology education can provide students with a wealth of information and knowledge, which they can then use in the future to pursue a related career or simply as a subject of interest and intrigue. It is an increasingly significant part of the society children are growing up in today, so it is only natural that they should learn about the appliances and systems they rely on a daily basis. Technology, like science, also inspires students to think and form questions based on what they see and learn; this leads them to want to gain further knowledge and understanding which they are then able to pass onto others.

Using technology in education does not only improve the quality of education but also supply new generations to know and use technology. Then these generations tend to use technology after their educational periods. Technology should be learned and known by people in Turkey to reach developed countries (Köseoğlu et al. 2007). Technology and education is developing together. With the usage of computer technology in educational settings as an instructional tool, both teachers and learner greatly benefit from using it (Akkoynulu, 2002). These benefits are listed in some studies as technology increases learners’ motivation, minimizes pressure and
fear, and enhances social developments (Şahin and Yıldırım, 1999; Demirel, 2002; Yalın, 2004; Koç, 2005). Therefore, educational settings are always regenerating their systems according to the needs of information age. In addition to this situation, educational organizations should teach individuals how to use new technologies and at the same time organizations should use new technologies (Varank, 2009).

Major developments of the 21st century have taken place in the computer technologies and we expect that the developments in this area are likely to continue. All of the countries are aware of the power of technology and make plans to adapt to the technological developments because in today’s world, the prosperity levels of countries are measured by their information technologies. Considering the use of internet globally, the importance of computers in people’s lives cannot be ignored. That is, computer has penetrated into every aspect of our daily lives, particularly into educational concepts such as teaching, learning, pursuing a career and planning processes. Venkatesh and Davis (1996) stated that for a better information technology management, we need to understand why individuals readily accept and use computer applications, persist at improving their computer skills, select challenging projects, search for innovative and new ways for using computer systems, and eventually have high rates of success.

As for the individuals, if they want to pursue a promising career, they have to be proficient in computer use. Also, proficiency in computer usage gives individuals a chance to have an opportunity to learn how to use computers for practical as well as learning for the sake of learning. Being competent in an important skill is one of the most important requirements for finding a good job. Recently, widespread computer use in public and private workplaces in Turkey leads to a greater demand for well-educated people on computers and computer programming (Akçağ, 2008; OSYM, 2014). In order to enable young people to have the skills mentioned above, there are two major components: their computer self-efficacy levels and their attitude towards computers.

Computers have made a dramatic impact on our society, particularly in the field of education. Technology is challenging the boundaries of the educational structures that have traditionally facilitated learning. Recent advances in computer technology and the diffusion of personal computers, productivity software, multimedia, and network resources over the last decade heralded the development. A generation unable to catch up with technology will surely face difficulties in adapting to a fast developing world. Individuals will surely use their competence in computer use even after their education period has ended. As Kinzie et al. (1994: p.745) have stated, “Computer technologies are important tools for learning, communication, and retrieving information. Individuals have to be self-efficacious to effectively employ these tools. For this reason it is important to examine attitudes and perceptions of competence that are encouraged by undergraduate educational programs”. Individuals should be trained in such a way that they can be competent enough to live in a world of technology. For that reason, competency of computer usage should be improved in educational system of Turkey (Akkoyunlu, 2002). That is, that kind of competence will be a significant advantage both for the graduates and for the unemployed individuals throughout their life. In this context, this study attempts to determine computer self-efficacy perceptions and attitudes which are thought as effective on youths’ knowledge and competency about technology.

In the next sections, self-efficacy, computer self-efficacy and attitudes towards computers will be described. Then limitations and purposes of the study will be explained. In Methodology part, participants, the course, research instruments, implementation and the analysis of the study will be given. Finally results, conclusion and recommendations will be presented.

Self-efficacy

Self-efficacy is people’s beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives. Self-efficacy beliefs determine how people feel, think, motivate themselves and behave (Bandura, 1994). The degree of self-efficacy which a person assigns to himself constitutes a valid predictor of the expected behavior that he will be demonstrating in carrying out a task (Koliadis, 1997; cited in Paraskeva et al., 2008). The concept of self-efficacy is a subcomponent of the Social Cognitive Theory. It is a conviction in which one can successfully execute a given task or behavior. It is also the self-perception of the ability to accomplish an activity (Downey, 2006). Moreover, Khorrami-Arani (2001) suggests that self-efficacy is not the same as the actual knowledge of a task, and it is not self-esteem, which refers more to feelings of self-worth. Accordingly, self-efficacy is situational and influences people’s decisions, goals, their amount of effort in conducting a task greatly, and the length of time persevered against obstacles and difficulties (Brown, 2008). Individuals develop a sense of self-efficacy throughout direct experiences, observing other people’s experiences, and listening to people’s comments about what they think he or she is capable of doing (Lee, 2005).

Self-efficacy is a dynamic construct that changes when new information and experiences are acquired. It is generally described as having three components: (1) magnitude - the levels of task difficulty that people believe they can reach; (2) strength-their conviction about its magnitude; and (3) generality - the degree to which
the expectation is generalized across situations. The purpose in evaluating these components is to discover the type of questions suitable in explaining and predicting a person’s dispositions, intentions, and actions (Torkzadeh et al., 2006).

An individual with high self-efficacy has a positive attitude in regards to his or her capabilities so as to organize and perform actions vital for carrying out a planned process for the specific tasks. On the other hand, individuals with Low Self-Efficacy has a negative attitude in terms of his or her capabilities to organize and perform actions necessary to achieve a designated performance skill for the specific tasks (Compeau et al., 1999).

Self-efficacy enhances individual’s success and well-being in many ways. People with high self-efficacy overcome difficult tasks with a strong commitment. They sustain their efforts or recover their self-efficacy even when facing failure. They approach threatening situations with assurance that they can exercise control over them. Such an efficacious outlook produces personal accomplishments, reduces stress and lowers vulnerability to depression. In contrast, people with low self-efficacy avoid difficult tasks. They have low aspirations and weak commitment to attain the goals they choose to pursue. It is hard to overcome their personal deficiencies and all kinds of adverse outcomes. They slacken their efforts and give up quickly in the face of difficulties. They are slow to recover their sense of efficacy following failure or setbacks. This kind of outlook produces failure, stress and depression (Bandura, 1994).

Computer self-efficacy

Computer self-efficacy is borrowed from Bandura’s self-efficacy theory to satisfy specific needs in computer learning experience. This concept reflects an individual’s beliefs about his or her capabilities in computer use. It does not deal with what one has done in the past, but rather with his judgment on what can be done in the future. Moreover, it does not refer to simple component sub-skills, like formatting diskettes or entering formulas in a spreadsheet. Rather, it incorporates judgments on the ability to apply those skills to broader tasks (Compeau and Higgins, 1995). Additionally, computer self-efficacy refers to one’s individual confidence in his capability to use a computer and may help determine the ease of skill acquisition; however, self-efficacy on one’s ability to complete computer related tasks may increase or decrease his performance (Robinson, 2008).

The strongest determinant of computer self-efficacy is past experience (Bandura, 1986). The most common determinants of computer self-efficacy include training method, prior computer experience, organizational support, encouragement by others, and other’s use-factors that can be manipulated in a training context. The dependent variables typically used in self-efficacy studies include training performance, computer anxiety, ease of use, outcome expectations or affect. While these dependent variables are appropriate for the training context, they are hardly adequate for assessing the ongoing use and impact of operational applications. For the most part, studies of computer self-efficacy have limited their exploration of independent and dependent variables to factors that make sense in the training context (Deng et al., 2004). As computer usage is an important factor that influences computer self-efficacy, the most effective way to improve computer self-efficacy perception of individuals is increasing their computer usage (Hsu and Huang, 2006). In general, researchers confirm that computer self-efficacy not only determines the decisions of individuals in accepting and using the computer system, but is also a good predictor of achievements in computer-related tasks (Torkzadeh et al., 2003).

Attitude towards computers

Another important construct related to computer use is the attitude towards computers. According to Fishbein and Ajzen (1975), attitudes are “learned predispositions to respond in a consistently favorable or unfavorable manner with respect to a given object”. Attitude is the state or tendency of an emotional readiness observed in a way of in the visual’s accepting or rejecting a certain person, group, institution or an opinion (Özgüven, 2007). Attitude is an important factor to determine behaviors. This theory can be applied to computer use. Attitude provides the basis of explaining our reactions, thoughts and ideas about other people, situations and ideas (Bordens and Horowitz, 2002). Attitude towards computers can be defined as a tendency that includes individual’s thoughts, feelings and behaviors about computer, computer usage, computer users and social and personal effects of computer (Deniz, 1994).

Attitude towards computer is an important variable in the field of education technology and it has a major impact on students’ success about learning computer-related items, learning/teaching a variety of courses through computer. The improvement of computer self-efficacy is highly related to computer attitudes (Zhang and Espinoza, 1998). According to Kay (2006), sometimes self-efficacy is regarded as a subscale of computer attitudes. Additionally, self-efficacy and attitude are major factors on success and performance (Köseoğlu et al., 2007). Furthermore, it turned out that self-efficacy had a small effect on computer attitudes in general (Meelissen, 2008).

Recently, computer self-efficacy and attitude towards computer have been topics in many different disciplines
of education from primary school students to university students and teachers. Most of the researches in this field include levels of computer self-efficacy, attitude towards computer and relationship between them. Also the relationship with other variables such as gender, socio-economic status, computer ownership, computer literacy, computer use and experience were examined. Computer self-efficacy and attitude towards computer are known as important concepts related to computer use. Khorrami-Arani (2001) reported that there is a positive relationship between computer self-efficacy and attitude towards computers, while one study found no relation between these two concepts (Sam et al., 2005).

Computer experience is a strong predictor of attitudes and self-efficacy (Kinzie and Delcourt, 1991). In most studies, it is reported that computer experience and training have been identified as the most important factors affecting computer self-efficacy. Several research studies suggest that computer experience (Aşkar and Davenport, 2009; Fagan et al., 2003; Hasan, 2003; Igbaria and Livari, 1995; Karsten and Roth, 1998; Ortiz de Guinea, 2004; Potosky, 2002; Topkaya, 2010; Torkzadeh and Koufteros, 1994) is positively related to computer self-efficacy. Also, computer training is highly related to computer self-efficacy (Torkzadeh et al., 2006). On the other hand, it was found that there was no significant correlation between computer training and computer self-efficacy (Yılmaz et al., 2006). Additionally, computer training does not have a fundamental effect on self-efficacy, but interacts with computer attitude (Beas and Salanova, 2006). In some studies, researchers have examined the relationship between computer experience and computer attitudes (Bovée et al., 2007; Roussos, 2007; Vekiri and Chronaki, 2008).

Limitations of the study

The project involved 60 unemployed young individuals; 30 have taken the course run by Siirt University under the SSP Project of “Information and Youths are Integrating” financed by the Under secretariat of the State Planning Organization in Turkey, 30 have not taken any computer course. The course within the scope of the research was limited to a total of 140 credits as 14 h per week.

Implementation period of the study was limited by the dates of the first group’s course period (6th January 2010–11th April 2010) which took a computer course, and the start date of the second group (17th April 2010) which did not take any computer course. So the research was carried out between 6th February, 2010 and 17th April, 2010.

The purpose of the study

Computer technologies are important for learning, communication, and retrieving information. For individuals to effectively employ this tool, individuals must feel self-efficacious in using them. Therefore, it is important to examine the attitudes and perceptions of competence that are encouraged by educational programs (Kinzie et al., 1994). The main purpose of this study was to find out the effect of computer course on young people’s computer self-efficacy, computer attitude and computer achievement. In view of this main purpose, responses to the following sub-purposes are sought.

1. Is there any significant difference between computer self-efficacy, computer attitude and computer achievement scores of the experimental and control groups before the experiment?
2. Is there any significant difference between computer self-efficacy, computer attitude and computer achievement scores of the experimental and control groups after the experiment?
3. Is there any significant difference between computer self-efficacy, computer attitude and computer achievement scores of the control group before and after the experiment?
4. Is there any significant difference between computer self-efficacy, computer attitude and computer achievement scores of the experimental group before and after the experiment?

RESEARCH METHODOLOGY

An experimental research model with pretest-posttest control group was used in the research. There are two groups which are created by random assignment through the pretest-posttest control group design. One is used as experimental group, the other is as control group. In both groups, measurements are done before and after the experiment (Karasar, 2007). In this research, there are two groups which are created by random assignment; one is created as experimental group (which has computer course), the other is created as control group (which does not have a computer course). In both groups, measurements were done before and after the experiment. The experimental design of the research is given in Table 1.

Participants

The working group of this research includes 60 unemployed high school graduate young individuals (18-25 ages) in total; 30 as the experimental group and 30 as the control group. The computer course was given to the experimental group, but not to the control group. All individuals participated in the study voluntarily.

The content of this computer course is determined within the education curriculum of Secondary Education Computer Course Program of the Ministry of Education.
The course contains introduction of computer and operating systems in general, the important DOS operating system commands, Windows operating system, Excel software package as a spreadsheet, Word software package as a word processor, the Internet and Power Point.

Variable measurement

The research instruments for the data collection in a questionnaire consist of four major components: (a) Demographic Information, (b) Computer Self-Efficacy Scale (CSES), (c) Computer Attitudes Scale (CAS), and (d) Computer Achievement Test (CAT). Related data collection tools were applied to all participants as pretest and posttest.

(a) Demographic information: This includes participants’ gender, age and attendance to a computer course.

(b) CSES: In order to assess the participants’ computer self-efficacy level, the CSES developed by Aşkar and Umay (2001) was used. This scale consists of 18 items and is scored in five-point Likert format (ranging from 1=strongly disagree to 5=strongly agree). Cronbach alpha reliability coefficient of the scale was α=0.71. It was determined in such a way that most of the items in the scale had high discrimination degrees (Aşkar and Umay, 2001). In this study, reliability coefficient of the scale was found to be α=0.88. CSES was conducted to the participants as pretest and posttest. The mean score of the scale changes between 1.00 and 5.00. There is a direct proportion between scores and degree of confidence in one’s ability to use computers. Total score of the scale is not used for evaluation and results.

(c) CAS: In order to assess the participants’ attitudes toward computers, the CAS developed by Şerefhanoğlu (2007) was used. This scale consists of 21 items and is scored in five-point Likert format (ranging from 1=strongly disagree to 5=strongly agree). Reliability coefficient of the scale is α=0.87. The scale consists of four sub-scales and the variance explained by four subscales is 42.6%. In this study, reliability coefficient of the scale was determined as α=0.83. CAS was applied to the participants as pretest and posttest. The mean score of the scale changes between 1.00 and 5.00. There is a direct proportion between scores and degree of attitudes towards computers. Total score of the scale is not used for evaluation and results.

(d) CAT: To measure the changes of computer course over the participants, this test was prepared by the researcher. It is a multiple-choice test consisting of 40 questions. The content validity of this test was provided by the experts’ review. In the test, each correct answer was scored with 2.5 points. In this case, the highest score of the test was 100 points and the lowest score was 0 point. The data about CAT were encoded by giving 1 point for each correct answer and 0 point for the each wrong answer of the participants. Reliability coefficient of the test was calculated as α=0.78. This test was applied to the participants as pretest and posttest.

The reliability of a scale depending on alpha coefficient is interpreted as follows. If 0.00≤α<0.40, the scale is not reliable; if 0.40≤α<0.60, reliability of the scale is low; if 0.60≤α<0.80, the scale is very reliable; if 0.80≤α<1.00, the scale is highly reliable (Kalaycı, 2005; George and Mallery, 2003). According to these results, we can say that the data collection tools used in this study are highly reliable.

Implementation

"Information and Youth are Integrating" is a social inclusion project, run by Siirt University and financed by the Under-secretariat of the State Planning Organization in Turkey. Within the scope of this project, a computer technologies laboratory was established at Siirt University for 30 people. A 140-credit hour basic computer course was offered to a total of 60 unemployed high school graduate volunteers formed as two groups, including 30...
people in each, on the weekends for 7 h a day and for a period of almost 4.5 months from February 6th 2010-June 20th 2010. In recent years, public institutions and organizations mandated a 140-credit hour Computer Operating Certificate given by the Ministry of Education in order to get employed and thus the project offers 140-credit hour courses. The related course is offered by computer technology teachers working in schools under the Ministry of National Education. In this respect, the study aims to educate unemployed young individuals on computers and related technologies and to improve their employability by enabling them qualified.

Social Support Program (SSP) is a program that focuses on human development and aims at responding the needs caused by the problems like migration, poverty, unemployment and changing social structure in the fields of employment, social integration, culture, arts and sports. Prepared and implemented at the local level under the coordination of governorships, SSP projects aim improving employability, providing the participation of disadvantaged sections of society in economic and social life, giving contribution to local children, youths and women to better express themselves.

The predicted computer course in "Information and Youth are Integrating" project of SSP, the application form that was prepared by the researcher to choose 60 young individuals out of 90 individuals. The criteria were; (a) being 18-25 years old, (b) being a high school graduate (c) have not taken a computer course before, and (d) family’s monthly income being below 700 Turkish Liras.

To determine the study group of the research, 60 young individuals who were picked to take the computer course in the scope of the project were divided into two groups of 30 young individuals. The first group has taken the course between 6th February 2010 and 11th April 2010, the second group has taken the course between 17th April 2010 and 20th June 2010.

The research was carried out through the period of start dates of the groups’ courses. The groups were in the computer laboratory at the beginning of the research period. During that time, the research instruments for data collection were applied to these two groups before the course as pretest. Then, by random assignment two groups were created from these groups; one as an experimental group of 30 individuals, who took computer course, and the other one as the control group of 30 individuals and no applications were applied to the control group. At the end of the course, the research instruments for data collection were applied to these two groups after the course as posttest. This way, the determined research period completed and then course of the control group began.

**Data analyses**

The research was analyzed by using Statistical Package for the Social Science (SPSS 15.0). The independent samples t-test was used in the comparison of independent groups and paired samples t-test was used with dependent groups in the analysis of the data. The significant level was 0.05.

**Demographic profile of respondents**

Table 2 provides detailed information about some demographic profile of respondents such as gender, age, attendance to a computer course, and computer ownership of the experimental and control groups.

Table 2 illustrates that 12 (40.0%) of the participants were females, 18 (60.0%) of the participants were males in the experimental group; and 8 (26.7%) of the participants were females, 22 (73.3%) of the participants were males in the control group. The participants’ ages in the experimental group ranged from 18 to 25 years old. The mean age of the participants was 21.3 (standard deviation=2.033) years, and the participants’ ages in the control group ranged from 18 to 24 years old. The mean age of the participants was 20.16 (standard deviation=2.085) years. 29 participants (96.7%) in the experimental group and 26 participants (86.7%) in the control group did not attend any computer course before.

**Pretest mean scores**

To determine any significant difference between pretest scores of the experimental and control groups, independent samples t-test is used. The findings are given in Table 3.

The results presented in Table 3 indicate that, there is no significant difference between the CSES and CAT pretest mean scores of experimental and control groups; however, there is a significant difference between CAS pretest mean scores (p<0.05).

**Posttest mean scores**

To determine any significant difference between posttest scores of the experimental and control groups, independent samples t-test is used. The findings are given in Table 4.

The results presented in Table 4 indicate that, there is not a significant difference between the CSES mean scores of the experimental and control groups but there is a significant difference between CAS and CAT posttest mean scores (p<0.05).

**Pretest-posttest mean scores of the experimental group**

To determine any significant difference between pretest-
**Table 2.** Demographic profile of respondents.

<table>
<thead>
<tr>
<th></th>
<th>Experimental group</th>
<th>Control group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percentage(%)</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>18</td>
<td>60.0</td>
</tr>
<tr>
<td>Female</td>
<td>12</td>
<td>40.0</td>
</tr>
<tr>
<td>Attendance of a computer course</td>
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<td></td>
</tr>
<tr>
<td>Yes</td>
<td>1</td>
<td>3.3</td>
</tr>
<tr>
<td>No</td>
<td>29</td>
<td>96.7</td>
</tr>
</tbody>
</table>

**Table 3.** Pretest mean scores.

<table>
<thead>
<tr>
<th>Scale</th>
<th>Pretest</th>
<th>N</th>
<th>Mean</th>
<th>Std.Deviation</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSES</td>
<td>Control group</td>
<td>30</td>
<td>3.52</td>
<td>0.63</td>
<td>0.274</td>
<td>0.785</td>
</tr>
<tr>
<td></td>
<td>Experimental group</td>
<td>30</td>
<td>3.56</td>
<td>0.63</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAS</td>
<td>Control group</td>
<td>30</td>
<td>4.06</td>
<td>0.51</td>
<td>-3.930</td>
<td>0.000*</td>
</tr>
<tr>
<td></td>
<td>Experimental group</td>
<td>30</td>
<td>3.43</td>
<td>0.71</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAT</td>
<td>Control group</td>
<td>30</td>
<td>47.0</td>
<td>18.1</td>
<td>0.045</td>
<td>0.964</td>
</tr>
<tr>
<td></td>
<td>Experimental group</td>
<td>30</td>
<td>47.2</td>
<td>13.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<0.05.

**Table 4.** Posttest mean scores.

<table>
<thead>
<tr>
<th>Scale</th>
<th>Posttest</th>
<th>N</th>
<th>Mean</th>
<th>Std.Deviation</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSES</td>
<td>Control group</td>
<td>30</td>
<td>3.57</td>
<td>0.59</td>
<td>1.330</td>
<td>0.189</td>
</tr>
<tr>
<td></td>
<td>Experimental group</td>
<td>30</td>
<td>3.76</td>
<td>0.49</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAS</td>
<td>Control group</td>
<td>30</td>
<td>3.84</td>
<td>0.61</td>
<td>2.959</td>
<td>0.004*</td>
</tr>
<tr>
<td></td>
<td>Experimental group</td>
<td>30</td>
<td>4.24</td>
<td>0.42</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAT</td>
<td>Control group</td>
<td>30</td>
<td>53.9</td>
<td>23.3</td>
<td>2.940</td>
<td>0.005*</td>
</tr>
<tr>
<td></td>
<td>Experimental group</td>
<td>30</td>
<td>67.2</td>
<td>8.59</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<0.05.

The posttest scores of the experimental group, paired sample t-test is used. The findings are given in Table 5.

Table 5 indicated that, when the pretest-posttest mean scores of the experimental group were compared, CSES, CAS and CAT posttest mean scores were higher than pretest mean scores and the difference between the groups was statistically significant (p<0.05).

**Pretest-posttest mean scores of the control group**

To determine whether significant differences exist between pretest-posttest scores of the control group, paired sample t-test is used. The findings are given in Table 6.

Table 6 indicated that there was no significant difference between CSES and CAT pretest-posttest mean of scores but there was a significant difference between CAS pretest-posttest mean of scores (p<0.05).

**DISCUSSION AND CONCLUSION**

A generation unable to catch up with technology will surely face difficulties in adapting to a rapid developing world. Young individuals will surely use their competence in computer usage even after their education period has
ended. We have to train them in such a way that will enable them to be competent enough to live in a world of technological knowledge and improvement. For that reason, computer usage is one of the most fundamental issues in educational system of our country.

Positive attitudes toward computers and high computer self-efficacy levels could be important factors in helping individuals learn computer skills and use computers. Computer self-efficacy plays a significant role in computer training and is a strong predictor of individuals’ attitudes towards computers. In this context, it is important to determine computer self-efficacy and computer attitudes which are thought to be effective on youth’s knowledge and competency about computers. In this study, we aimed to investigate the effects of the computer course over young participants’ computer self-efficacy, computer attitudes and computer achievement. The study had been conducted with 60 volunteers.

Computer experience is a factor that improves computer self-efficacy and computer attitude. In the literature, Pamuk and Peker (2009), Çetin, (2008), and Fagan et al. (2003) have stated that computer experience is positively correlated (Berkant, 2013; Bush, 1995; Roussos, 2007; Zhang and Espinoza, 1998). Another important construct determined for using computer is attitude towards computers. It is an important variable for researches in the field of education and it has a major impact on students’ success in learning computer-related items, learning/teaching a variety of courses through computer. It has been claimed that successful completion of a computer course is advantageous for the ongoing computer approach and practice (Colley et al., 1994; Comber et al., 1997; cited in Mcilroy et al., 2007; Köseoğlu et al., 2007). However, involvement in a computer course does not necessarily produce beneficial effects because not all enrolled in such a course (Collis, 1985; cited in Mcilroy et al., 2007). After successfully completion of a computer course to develop computer self-efficacy and positive attitudes, it is expected an increase in computer achievement level.

In the computer course that has been organized within the scope of this study, we hoped to teach the youths the basic concepts of computers to have them acquire computer skills and thus improve their level of success. At the end of ten-week computer course a significant difference between the pretest-posttest mean scores the experimental group has obtained from the computer

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### Table 5. Pretest-posttest mean score results of the experimental group.

<table>
<thead>
<tr>
<th>Scale</th>
<th>Pretest-posttest</th>
<th>N</th>
<th>Mean</th>
<th>Std.Deviation</th>
<th>Correlation</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSES</td>
<td>Pretest</td>
<td>30</td>
<td>3.56</td>
<td>0.64</td>
<td>0.763</td>
<td>-2.525</td>
<td>0.017*</td>
</tr>
<tr>
<td></td>
<td>Posttest</td>
<td>30</td>
<td>3.76</td>
<td>0.49</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAS</td>
<td>Pretest</td>
<td>30</td>
<td>3.44</td>
<td>0.71</td>
<td>0.330</td>
<td>-6.292</td>
<td>0.000*</td>
</tr>
<tr>
<td></td>
<td>Posttest</td>
<td>30</td>
<td>4.24</td>
<td>0.42</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAT</td>
<td>Pretest</td>
<td>30</td>
<td>47.2</td>
<td>13.0</td>
<td>0.353</td>
<td>-8.566</td>
<td>0.000*</td>
</tr>
<tr>
<td></td>
<td>Posttest</td>
<td>30</td>
<td>67.3</td>
<td>8.59</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<0.05.

### Table 6. Pretest-posttest mean score results of the control group.

<table>
<thead>
<tr>
<th>Scale</th>
<th>Pretest-posttest</th>
<th>N</th>
<th>Mean</th>
<th>Std.Deviation</th>
<th>Correlation</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSES</td>
<td>Pretest</td>
<td>30</td>
<td>3.52</td>
<td>0.63</td>
<td>0.843</td>
<td>-0.765</td>
<td>0.451</td>
</tr>
<tr>
<td></td>
<td>Posttest</td>
<td>30</td>
<td>3.57</td>
<td>0.59</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAS</td>
<td>Pretest</td>
<td>30</td>
<td>4.07</td>
<td>0.51</td>
<td>0.694</td>
<td>2.782</td>
<td>0.009*</td>
</tr>
<tr>
<td></td>
<td>Posttest</td>
<td>30</td>
<td>3.84</td>
<td>0.61</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAT</td>
<td>Pretest</td>
<td>30</td>
<td>47.5</td>
<td>17.1</td>
<td>0.675</td>
<td>-2.038</td>
<td>0.051</td>
</tr>
<tr>
<td></td>
<td>Posttest</td>
<td>30</td>
<td>53.9</td>
<td>23.3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<0.05.
achievement test shows that computer course has been productive. In this research, a statistically significant difference between CSES and CAS pretest-posttest mean scores of the young individuals in the experimental group showed that the computer course affects young individuals’ computer self-efficacy and computer attitudes positively. Therefore, especially educational and health institutions and non-governmental organizations should use all the means to create, develop and provide continuity on the educational systems for computer use for young individuals, which is one of the indispensable basic elements of modernization. This is parallel to the findings of the research about this subject (Hasan, 2003; Köseoğlu et al., 2007; Shue, 2003; Torkzadeh and Koufteros, 1994; Torkzadeh et al., 1999; Zhang and Espinoza, 1998). In this research, there was not a significant difference between the CSES and CAT pretest mean scores of the experimental and control groups, but there was a significant difference between CAS pretest-posttest mean scores.

Before the experimental process, the closeness of young individuals’ computer achievement scores is desirable. Thus, similar groups were created in terms of computer achievement. After the application while comparing the posttest mean scores of the experimental and control groups, it has been seen that there is not a significant difference between CSES CAT posttest mean scores, but there is a significant difference between CAS and CAT posttest mean scores. This result shows that rather than young individuals who have not taken any computer course, young individuals who have taken computer courses increase their computer achievement scores and their computer attitudes have positive changes.

In this research, while comparing pretest-posttest mean scores of the experimental group, it has been found that CSES, CAS and CAT posttest mean scores are higher than pretest mean scores and the difference between the groups are significant. This data show that after the computer course, experimental group’s computer achievement scores has increased, computer self-efficacy and computer attitudes have changed positively. While comparing the pretest-posttest mean scores of the control group, it has been found that there is not a significant difference between CSES and CAT pretest-posttest; there is a significant difference between CAS pretest-posttest mean scores.

Conflict of Interests
The author has not declared any conflict of interests.

REFERENCES


Mahwah, N.J., USA, Lawrence Erlbaum Associates Incorporated.


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