



## Computer Anxiety and Attitudes toward Using Internet in English Language Classes among Iranian Postgraduate Student Teachers

Saeideh Bolandifar\* and Nooreen Noordin.

*Department of Language Education and Humanities, Faculty of Educational Studies, Universiti Putra Malaysia, Malaysia*

### ABSTRACT

This study was designed to investigate the level of computer anxiety and the overall attitudes of Iranian postgraduate student teachers toward using the Internet in English language classes. Using a stratified random sampling, 160 participants (64 males and 96 females) were selected to take part in the study. These respondents were English language teachers who were pursuing their studies in Teaching English as a Second Language (TESL), English Literature, and Linguistics in public universities of Malaysia. A three-part questionnaire consisting of demographic information, Computer Anxiety Rating Scale (CARS) and Internet Attitude Scale (IAS) was administered in the data collection process. A pilot test was also conducted to achieve the reliability of the instruments. In order to strengthen the results, a semi-structured interview was conducted as well. The results indicated that the level of computer anxiety and the attitudes of the respondents toward using the Internet were of a moderate level. The findings of the independent-sample t-test showed significant mean differences between males and females and their level of computer anxiety and also their attitudes toward using the Internet. In addition, findings of the Pearson correlation coefficient revealed a significant negative relationship between computer anxiety and the participants' attitude toward using the Internet in their English language classes. Meanwhile, responses gauged through interview also supported the above findings. In conclusion, to eliminate the computer anxiety of teachers and encourage them to use the Internet

technology in their classes, they should be equipped with sufficient technology skills through training programmes which can convince them about the usefulness of technologies in their instruction and create positive attitudes when using technology in the teaching and learning process.

### ARTICLE INFO

#### *Article history:*

Received: 02 February 2014

Accepted: 02 September 2014

#### *E-mail addresses:*

[sabolandifar@yahoo.com](mailto:sabolandifar@yahoo.com) (Saeideh Bolandifar),

[nooyeen@yahoo.com](mailto:nooyeen@yahoo.com) (Nooreen Noordin)

\*Corresponding author

*Keywords:* Computer anxiety, attitudes toward internet use, gender differences, English Language Classes, Iranian postgraduate student teachers.

---

## INTRODUCTION

For many years, English language teachers have been using grammar-oriented methods with restricted information resources such as textbooks and chalkboards in their classes. Nowadays, the improvement of computer technology has been deemed as a pedagogically beneficial tool in education. Using computers and the Internet in teaching and learning process modifies the way in which instruction is delivered to students. Yang and Chen (2007) stated that using computers and the Internet in language classes helps learners to have access to English language resources. They can learn the four skills, listening, speaking, reading, and writing, through real-world situation.

Despite the progress of computers and internet technology in the field of language teaching and learning, many teachers are still afraid of using computers in their classes. Fear of the unfamiliarity with computers and apprehension of uselessness of them are among the factors that can influence the rejection of using computers by teachers (Gephart, 1982). In a study by Hismanoğlu (2010), teachers mentioned some reasons such as frustration because of the problems in telecommunication, inability to use computers, and inexperience in utilizing the Internet, which prevented them from using computer and internet technology effectively in language classes. Although

teachers' attitudes have a great influence on the successful usage of computers in the classrooms (Sabzian & Gilakjani, 2013), some researchers such as Hardy (1998) and Tsou, Wang, and Tzeng (2006) found that most of the teachers do not have positive attitudes toward computers because they fear using them in their classes. In the same vein, Wilfong (2006) mentioned that many teachers showed high levels of computer anxiety, which were decreased through obtaining experience with computer utilization. According to Ajzen (1988), teachers who choose to use computers and the Internet in their classes behave differently from those who reject them. They know that the information age is developing rapidly; hence, they should equip themselves with dependent skills and knowledge and adapt their teaching methods to new ways of teaching.

Using computers and the Internet in the educational system may be greatly dependent on teachers' attitudes toward information technology. According to Wong (2002), having skills and knowledge in the field of IT alone will not be enough for teachers; they should also possess positive attitudes toward IT. Educators who accept to integrate computers in learning situation believe that this technology will be beneficial for students so as to prepare them in their future workplace (Butzin, 2000; Hopson, Simms, & Knezek, 2002).

The differences between male and female participants in using computers have been demonstrated in many studies. For instance, Raub (1981) found that gender and

computer anxiety are significantly related to each other. Chen (1986) reported that men had more self-confidence, more positive attitudes of interest toward computers and less computer anxiety than women. Based on what Rosen and Weil (1995) stated, gender inequalities in ICT concern not only students, but also teachers. Female teachers are more reluctant to use this technology in their classes. They are more anxious, less confident and less experienced in using computers in their teaching and learning process than their male colleagues. In a study by Chou (2003) on 136 male and female teachers, female teachers showed significantly higher computer and internet anxieties than male teachers.

This study attempted to investigate the level of computer anxiety and the overall attitudes of Iranian postgraduate students toward utilizing internet technology in their English language classes. The participants in this study included postgraduate student teachers from different programmes such as TESL, English Literature, and Linguistics. They were teachers who were pursuing their postgraduate studies in public universities of Malaysia.

In Iran, English is taught as a foreign language (EFL). English language teachers have limited access to computer and internet technology in educational environments (Zamani, 2010). According to Iran's National Document of Development (2006), the government should increase the accessibility to information and communication technologies in schools and universities. As a result of little accessibility to computers

and internet technology, it is hypothesized that after entering an ESL context, most of these teachers face computer anxiety. Therefore, this study attempted to answer the following research questions:

1. What is the level of computer anxiety among Iranian postgraduate student teachers?
2. What is the overall attitude of these Iranian postgraduate student teachers toward the use of internet in English language classes?
3. Is there a significant difference between Iranian male and female postgraduate student teachers and their computer anxiety?
4. Is there a significant difference between Iranian male and female postgraduate student teachers and their attitudes toward using internet in English language classes?
5. Is there a significant relationship between Iranian postgraduate student teachers' level of computer anxiety and their attitudes toward using internet?

#### *Teachers Use of the Internet in Teaching the English Language*

Internet technology has obtained immense popularity in educational research in the late 1960s and early 1970s. According to Almekhlafi and Almegdadi (2010), utilizing technology in the teaching process has become as an integral part of successful teaching. Chu and Leung (2003) stated that there are some benefits in using internet technology in higher education institutions

such as low in cost, improving teaching quality, and expanding the accessibility of courses. The influence of internet technology can also be found in the field of language teaching and learning. Kern and Warschuer (2000) stated that today, the internet use has received a great attention among FL and SL educators. Some changes in teaching and learning process via using the Internet in classes can be mentioned as follows: more productivity of students' language performance, more positive attitude toward learning language, utilizing more teaching and learning strategies and more real-life materials (Kongrith & Maddux, 2005; Yeh & Lo, 2005).

Through utilizing the Internet in classes, teachers can help their students to improve their English language via a great source of information. The recent improvements in computer and internet technology have enabled teachers to have access to these beneficial resources. According to Passerini and Granger (2000), interactions among students will improve more through using online courses than in traditional classes. They can use e-mail for practicing the English language as well as through exchanging information with teachers or other students (Thornton, 1997).

### *Computer Anxiety*

Marcoulides (1989) stated that computer anxiety is a fear or apprehension when a person is utilizing a computer or when thinking about the impacts of its use. Researchers such as Desai (2001) and Gaudron and Vignoli (2002) defined

computer anxiety as a type of state anxiety; an emotional response including feelings of apprehension when confronted to a real threat. In the case of computers, it means the feelings of a person when he interacts with computers. Heinszen, Glass, and Knight (1987) described that computer anxiety is the negative feelings and cognitions aroused in real or imaginary interactions with computer-based technology which influence the use of computers and also the performance on tasks that include the utilization of computer technologies. Any form of frustration, unwillingness, or negative thoughts toward the physical existence of a computer can be referred to computer anxiety (Chang, 2005). Based on what Lavasani (2002) mentioned, computer anxiety is a type of emotional and cognitive reactions that individuals indicate when working with computers. This behaviour can be the results of the deficiency of familiarity and the attitudes of individuals toward computer technology as a menacing object (cited in Jahromi, Lavasani, Rastegar, & Mooghali, 2010).

The development of computer technology in the field of education is extended to language teaching and learning. These days, it is necessary for all students and teachers to understand and use computer technologies. Despite the great advances in technology for language teaching like (in particular) websites, blogs, or journals, some teachers still feel insecure or fear when they want to interact with computers. According to Tsou, Wang, and Tzeng (2006), although a lot of countries have spent large amounts

in technology and tried to modernize their equipment, many teachers still do not show interest in using computers in their classes. Having computer anxiety in classes can affect the quality of teaching and learning process. According to Roblyer (2003), the way teachers look at technologies, how they present it, and how they interact with it will influence their utilization of this technology.

Therefore, the level of computer anxiety of both students and teachers is very important in the teaching and learning process. According to some studies conducted by Weil and Rosen (1995) and Bozionelos (2001), computer anxiety is still an important problem in many societies because most of the people have negative feelings toward computer technologies. In a recent study which set out to determine the level of computer anxiety of Iranian EFL learners, Seyyedrezaie, Ghapanchi, and Seyyedrezaie (2013) found that among 120 participants, thirty-eight of them had low computer anxiety and 45 of them indicated moderate/high computer anxiety. In another study, Jalali (2012) found that Iranian EFL learners revealed moderate level of computer anxiety. Moreover, in a study by Cocorada (2014) on pre-service and in-service teachers, both groups of teachers were found to indicate their anxieties towards computer and internet usage, in which for most participants the levels of anxiety were moderate.

#### *Gender and Computer Anxiety*

Gender is as an important determinant in relation to computer anxiety. There are

a lot of studies showing contradictory results in the difference between gender and computer anxiety of individuals. Most studies investigating on computer anxiety and gender, especially those that focused on pre-service teachers, showed higher levels of computer anxiety for females than for males (Aust, Newberry, & O'Brien, 2005; Ayersman & Reed, 1996; Broos, 2005; Colley & Comber, 2003; Cooper, 2006; Cooper & Weaver, 2003; Todman, 2000; Todman & Day, 2006).

However, some studies demonstrated that there is no significant difference between gender and their computer anxiety. For example, Kotrlik and Smith (1988) found that no significant difference existed between male and female vocational teachers' computer anxiety. In their study, Rosen and Maguire (1990) reported that women displayed slightly more, but not significantly more, computer anxiety than men. In a study by Igarria and Parasuraman (1989), no significant relationship was found between participants' gender and computer anxiety. Inconsistent results in relation to gender and computer anxiety demonstrate that gender gap is a controversial variable which should be investigated in different contexts.

#### *Attitudes toward Using the Internet in English Language Classes*

Computer and internet technology are an essential part in the teaching and learning process. Attitudes of teachers and students greatly influence the use of technology in classes. Due to the rapid

advancement of internet technology, most of the researchers have shifted the focus of research from individuals' computer attitudes to individuals' internet attitudes. For example, in one study, Asan and Koca (2006) examined students' attitudes toward the Internet and deduced that most of the students had positive attitudes toward utilizing it. Atai and Dashtestani (2011) conducted a study on Iranian undergraduate students and EAP (English for academic purposes) instructors in order to investigate their attitudes toward using the Internet in EAP courses and concluded that all these participants showed positive attitudes toward internet use. They mentioned the Internet as a good source for developing students' reading comprehension skills. In a study by Ramírez, Cañedo, and Clemente (2012) on secondary teachers, over half of the teachers agreed or strongly agreed with internet use in classrooms. They believe that using the internet in classrooms has educational values for the students.

The significant reason in studying the attitudes of teachers toward computer and internet technology use is that it can be a major predictor of future technology use in classrooms (Myers & Halpin, 2002). According to Watson (1998), the development of positive attitudes of teachers toward ICT use has an important role in decreasing teachers' resistance toward using computers in their classes. Using technology in the field of second/foreign language education holds great potentials for learning language (Salaberry, 2001). In order to utilize computer and internet

technology in classes effectively, teachers' attitudes toward technology should be positive and they should be coached in using technologies in the field of education. Wong (2002) mentioned that merely having the knowledge and skills for using technologies is not enough for teachers, they should also have the right attitudes toward it. Teachers with negative attitudes toward technology usage in classes should know that it is better for them to adapt their teaching methods with alternative new ones (Ajzen, 1988).

Bullock (2004) mentioned that teachers' attitude toward technology can be one of the most important factors in accepting its use in education. Albirini (2006) conducted a study to observe high school EFL teachers' attitudes toward using technology in classes and found that these teachers showed positive attitudes toward utilizing technology in education settings. Similarly, in a study by Başöz and Çubukçu (2014) on 112 pre-service EFL teachers, pre-service teachers were found to indicate positive attitudes toward computer-assisted language learning. They believe in the flexibility of technology to language learning. Hence, promoting teachers' positive attitudes in using internet technology will promote accomplishment in teaching and learning process (Simonson, 1995).

#### *Gender and Attitudes toward Using the Internet*

Some researchers believe that there is a significant difference between gender and their attitudes toward using computer and internet technologies. Durndell and



Thomson (1997) stated that on average, females have higher negative attitudes toward computer and internet technology than males. As Cyberdialogue (1998) mentioned in his study, despite the fact that utilization of internet technology by females has grown in the last few years, males still use the internet technology more than females (cited in Schumacher & Morahan-Martin, 2001). This could be due to the fact that males have more positive attitudes toward utilization of technologies than females. According to Jackson, Ervin, Gardner, and Schmitt (2001), female teachers tend more to hold negative attitudes toward technology use than male teachers. They declared that this kind of behavior may be related to the ways they utilize the technology.

#### *Computer Anxiety and Attitudes toward Using the Internet*

There are some studies which had been conducted to show the existence of the relationship between computer anxiety and attitudes toward using the Internet. In a study by Jackson *et al.* (2001), computer anxiety is negatively correlated with individuals' use of internet. In another study, Barbiere and Weiss (2004) used online sample and found that students who have been using the Internet for many years exhibited lower computer anxiety scores than those who do not utilize much of the Internet.

Gardner, Reider, Ruth, and Ross (1993) stated that computer anxiety and attitudes are statistically detachable constructs which demonstrate reliability and validity. On the other hand, Rosen and Maguire (1990)

found a relationship between the level of computer anxiety and the attitudes toward using technology. They believe in the fact that increasing the level of computer anxiety leads to negative attitudes. In a study which was conducted on the East European sample, Durndell and Haag (2002) concluded that participants' attitudes toward the Internet were associated with their computer anxiety. In specific, the participants who had lower computer anxiety showed more positive attitudes toward using the Internet.

Akbaba and Kurubacak (1999) stated that teachers who use technologies have positive attitudes toward computer and internet technology, while teachers who have computer anxiety tend to reject them. In a study on Iranian EFL teachers, Rahimi and Yadollahi (2011) found that teachers who had lower level of computer anxiety showed higher level of ICT usage in their English language classes.

Taken altogether, the above studies have indicated a continuation of research on the computer anxiety and attitudes toward using internet technology in English language classrooms. The aim of this study is to investigate whether this trend is valid for Iranian postgraduate student teachers pursuing their studies in the context of Malaysia.

#### **METHOD**

In order to determine the level of computer anxiety and the overall attitudes of using the Internet in English language classes among Iranian postgraduate student teachers, a quantitative approach was used in this

study. It employed a survey model which included a questionnaire and a semi-structured interview. In addition, to evaluate the significant relationship between these postgraduate student teachers' level of computer anxiety and their attitudes toward using internet, a correlational technique was used.

### *Sample*

This study was carried out at public universities of Malaysia. Since the Iranian postgraduate student teachers were studying at three different strata, TESL, English Literature, and Linguistics, the stratified random sampling was applied in selecting the participants. One hundred and sixty participants (64 males and 96 females) completed the questionnaire.

### *Instrumentation*

In order to achieve the goals of this study, a three-part instrument was used in which the content validity of the modified instrument was evaluated by a panel of experts. After validating the modified instrument by the panel of experts, it was used in a pilot test for the purpose of item evaluation, validity, and measuring the reliability between the items of the instrument:

1. The first section of this instrument consisted of the general information of participants such as gender, age, qualification, field of study, working experience, the amount of hours using computer per week, and the amount of hours using the Internet per week.
2. The second section - Computer Anxiety Rating Scale (CARS) - was designed by Heinessen, Glass, and Knight (1987) to measure the level of computer anxiety in individuals. CARS consisted of 19 Likert-scale items. The researcher modified four items from the original version. For example, item 1 "I look forward to using a computer on my job" changed to "I look forward to using a computer in my classes". This modified rating scale was utilized to determine the level of computer anxiety of the participants of this study. The obtained reliability for the modified version of CARS was 0.90. Heinessen *et al.* (1987) used a five-point Likert scale (1=strongly disagree, 2=disagree, 3=undecided, 4=agree, and 5 =strongly agree) for this instrument. In this questionnaire, ten items are worded in the positive statements and nine items are worded in the negative statements. Negative items were reversed before data analysis. The total scores of CARS ranged from a minimum score of 19, which indicated a low level of computer anxiety, to a maximum score of 95, which showed a high level of computer anxiety.
3. The last section was on the Internet Attitudes Scale (IAS). The original version of this scale is called Computer Attitude Scale (CAS), which was developed by Nickell and Pinto (1986). In order to determine the overall attitude of the participants toward the internet use in English language classes, the



researcher modified CAS to IAS. The achieved reliability for the modified IAS was 0.82. IAS included 20 items where all the items were modified (the word “computer” to the word “internet”). In addition, some of the items had to be modified to make them more relevant to the context of English language classes. For instance, item number 1 “The computer will never replace human life” was changed to “The Internet will never replace English language textbooks”. A five-point Likert scale (1=strongly disagree, 2=disagree, 3=undecided, 4=agree, and 5 =strongly agree) was designed by Nickell and Pinto for this instrument. In this questionnaire, eight items are worded in the positive statements and twelve items are worded in the negative statements, which have been reversed before calculating the collected data. The total scores of IAS ranged from a minimum score of 20, which showed an extremely negative attitude toward the internet, to a maximum score of 100, which indicated an extremely positive attitude toward the Internet.

In addition, a semi-structured interview was carried out to strengthen the results of the study. Five postgraduate student teachers were selected randomly to take part in the interview. The questions of the interview are as follows:

1. Have you always been anxious/ comfortable about using computers? Please explain why do you feel so?
2. Do you think that computers and the Internet have often been a source of frustration for you?
3. Do you think using internet is helpful in English language classes? Why?
4. When you have a question about using the computer, do you usually ask a person who is a female or male? What is your reason?

### *Procedures*

The questionnaires were distributed to the participants. Before answering the questionnaire, all the participants had been informed about the goal of this research, and all the instructions in answering the questionnaires were given clearly. Five to ten minutes were required to answer the questionnaires. The paper-and-pencil format was used for giving out the questionnaires to the participants. First, the respondents answered some background information about themselves, and they also had to mention their opinions about their level of computer anxiety and their attitudes toward using the Internet in their classes by circling the numbers based on a scale from one to five. The Statistical Package for the Social Sciences (SPSS) version 18 was used to analyze the obtained data. After gathering and analyzing data obtained from the questionnaires, the researcher chose five respondents randomly to do an interview with them. Each interview lasted for about 15 minutes. Data gathered from the interviewes were coded and classified in order to categorize the participants’ responses based on the goals of the study.

## RESULTS

A descriptive analysis was utilized to answer the first two research questions. Using the descriptive analysis, the mean and standard deviation of the overall mean scores on the computer anxiety and internet attitude scales were computed. In order to answer the next three research questions of the study, inferential statistical analysis such as independent-sample t-test and Pearson correlation coefficient were conducted to show the existence of differences/relationships between variables.

### *Results Related to Demographic Information*

Based on the demographic data, the percentage of the female participants (60%) was greater than male participants (40%). Among the respondents, 54.9% were between 20-30 years old, 35.1% were between 31-40 years old, and 10% were above 40 years old. The majority of the participants were pursuing their Doctoral degree (65%), while 35% were pursuing their Master degree. Out of 160 participants, 44% were studying TESL, 39.9% were studying English Literature, and the others (16.1%) were studying Linguistics. Most of them (49%) had 1-3 years of working experience, while 22.2% of them had 4-6 years of working experience, 14% had 7-9 years of working experience, and 14.8% had 10 and above 10 years of working experience. The largest number of the participants (35%) used the computer between 11-20 hours, while 23% of them

used 1-10 hours, 26.4% used 21-30 hours, and 15.6% used 31 hours and above.

### *Results Related to Research Question 1*

Computer Anxiety Rating Scale (CARS) encompassed 19 items with five-level options which ranged from 1 as strongly disagree to 5 as strongly agree. Option 1 showed a very low level of computer anxiety and option 5 showed a very high level of computer anxiety. Before entering data into Statistical Package for Social Sciences (SPSS) version 18, nine negative items were reversed in order to have the same level of value with the other items of the scale.

The overall mean and standard deviation of the Computer Anxiety Rating Scale (CARS) were 51.84 and 11.38, respectively (Table 1). As shown in Table 2, which presents the level of computer anxiety in relation to the five options of the scale and the mean range for each level, both the mean and median scores showed that most of the scores in this scale were in the moderate category. Therefore, the participants indicated moderate computer anxiety in this study.

TABLE 1  
Overall Mean, Standard Deviation, Range of the Scale

Scale	Mean	Std. Deviation	Range (Min/Max)
Computer Anxiety (CARS)	51.84	11.38	31/75
Median=52.00			

TABLE 2  
The Mean Range for Each Level of Computer Anxiety Rating Scale

Scale	Mean Range	Level
1 Strongly disagree	19-34.1	Very low
2 Disagree	34.2-49.3	Low
3 Undecided	49.4-64.5	Moderate
4 Agree	64.6-79.7	High
5 Strongly agree	79.8-95	Very high

*Results Related to Research Question 2*

The Internet Attitude Scale (IAS) included 20 items with a five-point rating scale for each item. The level of the options of this Likert-scale was from 1 (strongly disagree) to 5 (strongly agree). Among these 20 statements, twelve items were negative toward the internet attitude. To make these 12 items positive so as to keep the same level of value with the other items of the scale, all of them were reversed.

Table 3 indicates that the overall mean score and standard deviation of the Internet Attitude Scale (IAS) were 64.84 and 8.42, respectively. As illustrated in Table 4, which displays the level of internet attitude in relation to the five options of the scale and the mean range for each level, the mean and median scores were in the moderate category.

TABLE 3  
Mean, Standard Deviation, Range of the Scale

Scale	Mean	Std. Deviation	Range (Min/Max)
Internet Attitude (IAS)	64.84	8.42	44/81

Median=65.0

TABLE 4  
The Mean Range for Each Level of the Internet Attitude Scale

Scale	Mean Range	Level
1 Strongly disagree	20-36	Very low (Very negative attitude)
2 Disagree	36.1-52.1	Low (Negative attitude)
3 Undecided	52.2-68.2	Moderate
4 Agree	68.3-84.3	High (Positive attitude)
5 Strongly agree	84.4-100	Very high (Very positive attitude)

*Results Related to Research Question 3*

In order to examine any significant differences between the male and female participants of the study and their computer anxiety, an independent-sample t-test at the 0.05 significance level was used. The following Table 5 shows the results of the t-test from the analysis of data.

TABLE 5  
Independent-Sample T-Test Results for Differences in Computer Anxiety Level Based on Gender

Gender	N	Mean	SD	df	t	p
Male	64	44.92	8.38	158	-8.19	.000
Female	96	56.45	8.95			

As shown in Table 5, the level of significance obtained from the data analysis ( $p=.000$ ) was less than  $\alpha=0.05$ . Thus, it could be concluded that there was a significant difference between Iranian male and female postgraduate student teachers and their level of computer anxiety ( $t_{(158)}=-8.19, p<0.05$ ). The mean values of the male and female participants were 44.92

and 56.45, respectively. This meant that the male participants had less computer anxiety than the female participants.

#### *Results Related to Research Question 4*

The independent-sample t-test was conducted to measure the significant difference between male and female participants and their attitudes toward using the Internet in their classes. The results of the test are demonstrated in Table 6.

TABLE 6  
Independent-Sample T-Test Results for the Differences in Attitudes toward Using the Internet Based on Gender

Gender	N	Mean	SD	df	T	p
Male	64	69.17	6.45	158	6.82	.000
Female	96	61.95	6.61			

Based on the results given in Table 6, it could be interpreted that there was a significant difference between Iranian male and female postgraduate student teachers and their attitudes toward using the Internet in English language classes ( $t_{(158)}=6.82$ ,  $p<0.05$ ). The scores for the average attitudes toward using the Internet for the male and female respondents were 69.17 and 61.95, respectively. It revealed that the male respondents had more positive attitudes toward using the Internet than female respondents.

#### *Results Related to Research Question 5*

Pearson Correlation Coefficient was conducted to determine whether there is a significant relationship between computer anxiety and attitudes of the participants

toward the use of the Internet in English language classes. Table 7 displays the test results from the analysis of the data.

TABLE 7  
Pearson Correlation Coefficient- Computer Anxiety and Attitudes toward Using Internet

		Attitudes toward Using Internet
Computer Anxiety	Pearson Correlation	-.829**
	Sig. (2-tailed)	.000
	N	160

\*\* Correlation is significant at 0.01 level (2-tailed)

Based on the findings given in Table 7, the results of the test presented a significant level of  $p<0.01$  for the correlation between computer anxiety and the attitudes toward using the Internet. A significant strong negative relationship was found between computer anxiety and the attitudes toward using the Internet ( $r=-.829$ ,  $p<0.01$ ). This means that the increase of one variable is correlated with the decrease of another. Therefore, it can be concluded that the participants who had more computer anxiety displayed more negative attitudes toward using the Internet in their classes.

#### *Results Related to the Interview*

In order to strengthen the results of the study and to better understand the respondents' computer anxiety and their attitudes toward using the Internet, a semi-structured interview was conducted. Five interview participants (two males and three females), from those who had completed the questionnaire, were chosen randomly to take part in the interview. The four

questions of the interview were asked from the interviewees and each of them mentioned their opinions freely about their feelings toward computers and internet use. All the five interviewees showed moderate computer anxiety and they had both positive and negative attitudes toward the use of the Internet in English language classes. For example, in relation to using computers, one of the female interviewees stated that she felt somewhat apprehensive when utilizing computers after she came to an ESL context. She said that her unfamiliarity with computers might be one of the reasons of her computer anxiety. In addition, she believed that the internet could be both useful and useless in English language classes. She stated that although utilizing the Internet could improve students' learning of the English language learning in classes, it could also cause some problems such as paying less attention to the teacher in classrooms.

*“In my opinion, it [internet] is a good and useful tool in order to be used in our English language classes because internet will improve our students' English language skills. Umm, for example, they can do lots of online activities. On the other hand, I think that it [internet] will never replace the English language textbooks. They [internet and English language textbooks] are completely different from each other (pause) by using too much internet in English classes, the interaction between teachers and students will*

*be reduced, because they [students] will pay more attention to use computers and internet rather than listening to their teachers. Umm, in my view most of the technologies have their own advantages and disadvantages and in this case [using internet in English language classes], it [internet] can be helpful and somehow useless.”*

Besides, one of the male interviewees stated that he felt both anxious and comfortable when using the computer.

*“.... For me, I'm not quite confident working with computers. As sometime I'm scared of making mistake like losing some of my data or the outcomes would not be the same outcomes of being expected. Frankly speaking, the level of confidence in me is more than level of anxiety. Although I'm scared of making mistakes, I use computers a lot during a day.”*

Moreover, he agreed with the usefulness of the Internet in classes though he mentioned using the Internet created some problems for him.

## DISCUSSION

The first purpose of this study was to determine the level of computer anxiety among Iranian postgraduate student teachers. Overall, the respondents had the mean value of (M=51.84) on the total computer anxiety

rating scale. The mean value obtained for the computer anxiety rating scale placed in the category of moderate computer anxiety. This result indicates that these student teachers are able to use computers, but sometimes they face computer anxiety when using them. Similarly in a study by Sam, Othman, and Nordin (2005), a moderate computer anxiety was also found among the respondents.

The second goal of this study was to determine the overall attitude of these participants toward using the Internet in their English language classes. Al-Zaidiyeen, Mei, and Fook (2010) stated that attitudes are important aspects in determining whether teachers will agree to utilize technologies as the teaching tools in their teaching process or not. The total mean value of the Internet Attitude Scale was computed in order to analyse the attitudes of the respondents toward using the Internet. The overall mean value of the Internet Attitude Scale for these participants was moderate ( $M=64.84$ ). The moderate mean value of this scale showed that the respondents did not have negative nor positive attitude toward the use of internet in their English classes. Perhaps their moderate computer anxiety had an effect on their attitudes toward using the Internet.

The objective of the third research question was to determine the significant difference between Iranian male and female postgraduate student teachers and their computer anxiety. The findings of the independent-sample t-test revealed statistically significant differences between

the male and female participants of the study and their computer anxiety ( $t_{(158)}=-8.19$ ,  $p<0.05$ ). Despite the fact that these participants showed moderate computer anxiety, the males presented lower mean values ( $M=44.92$ ,  $SD=8.38$ ) than the females ( $M=56.45$ ,  $SD=8.95$ ), indicating that the level of computer anxiety among the male participants was less than the level of computer anxiety among the female respondents. The findings of this study were consistent with the findings of the previous ones. For example, in a study by Czaja, Charness, Fisk, Hertzog, Nair, and Rogers (2006), women were found to display more computer anxiety than men. In addition, a lot of studies mentioned that female preservice teachers showed more computer anxiety than male preservice teachers (Whitley, 1997; Colley & Comber, 2003; Todman & Day, 2006).

The fourth research question was aimed to investigate the significant differences between Iranian male and female postgraduate student teachers and their attitudes toward using the Internet in their English language classes. Independent-sample t-test was utilized to measure the differences between these two variables. Based on the findings of the study, a significant difference was attained between the male and female respondents and their attitudes toward the use of the Internet ( $t_{(158)}=6.82$ ,  $p<0.05$ ). The overall attitude toward using the Internet was moderate among the participants, but the males had higher mean value ( $M=69.17$ ,  $SD=6.45$ ) than the females ( $M=61.95$ ,  $SD=6.61$ ).



This means that the male respondents displayed more positive attitudes toward utilizing the Internet in their classes than the female respondents. The results of the present study supported the findings of some previous research. For example, in a study conducted on 191 teachers in Turkey, a significant difference was found between the male and female teachers and their attitudes towards internet use (Birisci, Metin, & Karakas, 2009). These researchers mentioned that male teachers revealed more positive attitudes toward using the Internet than female teachers.

A significant negative relationship was found between computer anxiety and attitudes toward utilizing the Internet ( $r = -.829$ ,  $p < 0.01$ ). This finding indicated that respondents with more computer anxiety had more negative attitudes toward using the Internet and the respondents with less computer anxiety had less negative attitudes (more positive attitudes) toward utilizing internet technology. The finding of this research question is consistent with the results of some previous research. In their study, Durndell and Haag (2002) illustrated that there is a significant correlation between computer anxiety and attitudes toward the use of the Internet. In their research, less computer anxiety by the participants led to more positive attitudes toward using the Internet. In a study by Rosen and Maguire (1990), a relationship was found between computer anxiety and attitudes toward using technology. They stated that increasing the level of computer anxiety led to negative attitudes among the respondents

of their study. In the same vein, Rahimi and Yadollahi (2011) found an inverse correlation between computer anxiety and technology usage of EFL teachers.

In addition, a semi-structured interview was conducted for further justification of the findings of the study. All the five participants revealed they were somewhat anxious about using the computer. For example, one of the female interviewees stated that she was afraid of pushing a wrong key when using a computer which might destroy her information on the computer. Besides, these interviewees showed both positive and negative attitudes toward the use of the Internet in English language classes. They saw some benefits in utilizing internet technology in English language classes for their students, but they were also worried about some consequences of internet use in educational environments. For instance, one of the interviewees mentioned that using the internet is helpful in language classes, but overusing it might be harmful to students. Another one reported that by utilizing the Internet in classes, students' attention to teachers might be decreased. Generally, the female participants indicated being more anxious when using the computer and showed more negative attitudes toward internet use when talking to the researcher during the interview. It can be concluded from the interview that the responses justified the findings of the research questionnaire and supported those results.

## CONCLUSION

Using computers and the Internet in educational environments has shifted the way teachers use instruction in their classes. Computer anxiety is one of the problems that many teachers face when using computers. Some reasons such as unfamiliarity with computer skills or being afraid about its ineffectiveness in their teaching and learning process may lead teachers to reject using the computers in their classes. Many studies have demonstrated that female teachers faced more computer anxiety than male teachers. For instance, Colley and Comber (2003) revealed that female teachers indicated higher computer anxiety than male teachers.

The way the teachers view the computer and internet technology will influence the implementation of these tools in classes. Since utilizing computer and internet technology in learning environments can help students to learn a second/foreign language more effectively, teachers' positive attitudes toward the Internet will encourage them to use it more frequently in their language classes.

The findings of the study demonstrated that the participants had moderate computer anxiety and their attitudes toward internet use were also moderate. It meant that they were ambivalent about the usefulness and effectiveness of the Internet in English language classes. Significant gender differences were found in their computer anxiety and attitudes toward internet. Male respondents reported less computer anxiety and more positive attitudes toward the use

of the Internet than female respondents. Moreover, a significant negative relationship was found between computer anxiety and the attitudes of these participants toward using the Internet.

It should be mentioned that the results from this study may not be generalizable to a great population of Iranian postgraduate student teachers because the sample of this study were following their studies in the context of Malaysia, which is different from the student teachers who are studying in the context of Iran.

As technology is improving rapidly in the field of education, especially in English language learning, teachers should be equipped with sufficient technology skills and it is also essential to persuade English language teachers of the efficiency of the technology in advancing the teaching and learning process.

## RECOMMENDATIONS

In order to eliminate the computer anxiety of teachers, especially female teachers, policy makers should equip teachers psychologically and technically with sufficient computer skills so as to help them overcome their apprehension when using computers. The Ministry of Education should provide technology-related workshops and seminars for teachers to make them more familiar with computers and internet technology.

Since the student teachers in the current study indicated moderate attitudes toward using the Internet, i.e. they had neither positive nor negative attitude,

the government, policy planners and administrators should provide relevant training programmes for English language teachers in order to encourage them to utilize computers and internet technology in their classroom curriculum. As female teachers revealed more negative attitudes toward using the Internet than male teachers, the training programmes should apply more for female teachers than their male counterparts.

## REFERENCES

- Ajzen, I. (1988). *Attitudes, Personality and Behaviour*. Milton Keynes, UK: Open University Press.
- Akbaba, S., & Kurubacak, G. (1999). Teachers' attitudes towards technology. *Computers in the Social Studies*, 7(2), 833-836.
- Almekhlafi, A. G., & Almeqdadi, F. A. (2010). Teachers' Perceptions of Technology Integration in the United Arab Emirates School Classrooms. *Educational Technology and Society*, 13(1), 165-175.
- Al-Zaidiyeen, N. J., Mei, L. L., & Fook, F. S. (2010). Teachers' Attitudes and Level of Technology Use in Classrooms: The Case of Jordan Schools. *International Education Studies*, 2(3), 211-218.
- Albirini, A. (2006). Teachers' attitudes toward information and communication technologies: The case of Syrian EFL teachers. *Computers and Education*, 47(4), 373-398.
- Asan, A., & Koca, N. (2006). An analysis of students' attitudes towards internet. In *Fourth International Conference on Multimedia and Communication and Information Technologies in Education, Seville, Spain* (pp. 2120-2124).
- Atai, M. R., & Dashtestani, R. (2011). Iranian English for academic purposes (EAP) stakeholders' attitudes toward using the Internet in EAP courses for civil engineering students: promises and challenges. *Computer Assisted Language Learning*, 1-18.
- Aust, R., Newberry, B., & O'Brien, J. (2005). Learning generation: Fostering innovation with tomorrow's teachers and technology. *Journal of Technology and Teacher Education*, 13(2), 167- 195.
- Ayersman, D. J., & Reed, W. M. (1996). Effects of learning styles, programming, and gender on computer anxiety. *Journal of Research on Computing in Education*, 28(2), 148.
- Barbiete, F. G., & Weiss, E. M. (2004). Computer self efficacy and anxiety scales for an Internet sample: testing measurement equivalence of existing measures and development of new scales. *Computers in Human Behaviour*, 20, 1-15.
- Başöz, T., & Çubukçu, F. (2014). Pre-service EFL Teacher's Attitudes towards Computer Assisted Language Learning (CALL). *Procedia-Social and Behavioral Sciences*, 116, 531-535.
- Birisci, S., Metin, M., & Karakas, M. (2009). Prospective Elementary Teachers' Attitudes toward Computer and Internet Use: A Sample from Turkey. *World Applied Sciences Journal*, 6(10), 1433-1440.
- Bozionelos, N. (2001). Computer anxiety: Relationship with computer experience and prevalence. *Computers in Human Behavior*, 17(2), 213-224.
- Broos, A. (2005). Gender and information and communication technologies (ICT) anxiety: Male self-assurance and female hesitation. *CyberPsychology and Behavior*, 8(1), 21-31.

- Bullock, D. (2004). Moving from theory to practice: an examination of the factors that preservice teachers encounter as they attempt to gain experience teaching with technology during field placement experiences. *Journal of Technology and Teacher Education*, 12(2), 211–237.
- 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.
- Chang, S. E. (2005). Computer anxiety and perception of task complexity in learning programming-related skills. *Computers in Human Behaviour*, 21(5), 713-728.
- Chen, M. (1986). Gender and computers: The beneficial effects of experience on attitudes. *Journal of Educational Computing research*, 2, 265-282.
- Chou, C. (2003). Incidences and correlates of Internet anxiety among high school teachers in Taiwan. *Computers in Human Behavior*, 19(6), 731-749.
- Chu, K. C., & Leung, D. (2003). Flexible learning via Web-based virtual teaching and virtual laboratory systems. *Journal of Technology Studies*, 29(2), 31-43.
- Cocorada, E. (2014). Computer Anxiety And Motivation For Learning Of Future Teachers. *eLearning & Software for Education*, 2, 96-101.
- Colley, A., & Comber, C. (2003). Age and gender differences in computer use and attitudes among secondary school students: What has changed? *Educational Research*, 45(2), 155-165.
- Cooper, J. (2006). The digital divide: The special case of gender. *Journal of Computer Assisted Learning*, 22(5), 320-334.
- Cooper, J., & Weaver, K. D. (2003). Gender and computers: *Understanding the digital divide*. Mahwah, N.J.: Lawrence Erlbaum.
- Czaja, S. J., Charness, N., Fisk, A. D., Hertzog, C., Nair, S. N., & Rogers, W. A. (2006). Factors Predicting the Use of Technology: Findings from the Center for Research and Education on Aging and Technology Enhancement. *Psychology and Aging*, 21(2), 333-352.
- Desai, M. S. (2001). Computer anxiety and performance: An application of a change model in a pedagogical setting. *Journal of Instructional Psychology*, 28(2), 70.
- Durndell, A., & Haag, Z. (2002). Computer self efficacy, computer anxiety, attitudes towards the Internet and reported experience with the Internet, by gender, in an East European sample. *Computer in Human Behavior*, 18, 521-535.
- Durndell, A., & Thomson, K. (1997). Gender and computing: a decade of change? *Computers and Education*, 28(1), 1–9.
- Gardner, E., Reider, B., Ruth, S., & Ross, J. (1993). Human-orientated implementation cures cyberphobia. *Data Management*, 30–32.
- Gephart, W. J. (1982). Microcomputers in education. *Practical applications of Research (Phi Delta Kappa's Center on Evaluation, Development, and Research)*, 4(4), 1-4.
- Gaudron, J. P., & Vignoli, E. (2002). Assessing computer anxiety with the interaction model of anxiety: Development and validation of the computer anxiety trait subscale. *Computers in Human Behavior*, 18(3), 315-325.
- Hardy, J. V. (1998). Teacher Attitudes toward and knowledge of computer technology. *Computers in the Schools*, 14, 119-136.
- Heinssen, R. K., Glass, C. R., & Knight, L. A. (1987). Assessing computer anxiety: Development and validation of the computer anxiety rating scale. *Computers in Human Behavior*, 3, 49-59.
- Hismanoğlu, S. (2010). Attitudes of L2 teachers towards Internet-based foreign language teaching. *Procedia-Social and Behavioral Sciences*, 3, 106-111.

- Hopson, M. H., Simms, R. L., & Knezek, G. A. (2002). Using a technologically enriched environment to improve higher-order thinking skills. *Journal of Research on Technology in Education, 34*(2), 109-119.
- Igbaria, M., & Parasuraman, S. (1989). A path analytic study of individual characteristics, computer anxiety, and attitudes towards microcomputers. *Journal of Manage, 373-388*.
- Iran's National Document of Development (2006). *The Fourth Five-Year Development Plans*. Office of the Presidency, I.R. Iran.
- Jackson, L. A., Ervin, K. S., Gardner, P. D., & Schmitt, N. (2001). Gender and the Internet: women communicating and men searching. *Sex Roles, 44*(5/6), 363-379.
- Jahromi, R. G., Lavasani, M. G., Rastegar, A., & Mooghali, A. (2010). Presenting a model of predicting computer anxiety in terms of epistemological beliefs and achievement goals. *Computers in Human Behavior, 26*(4), 602-608.
- Jalali, S. (2012). The Effects of the Types of TOEFL (P&P vs. CBT) and Computer Anxiety Level on Iranian EFL Learners' Performance on TOEFL. *Sheikhbahaee EFL Journal, 1*(2), 35-58.
- Kern, R., & Warschauer, M. (2000). Theory and practice of network-based language learning. In M. Warschauer & R. Kern (Eds.), *Network-based language teaching: Concepts and practice*. New York: Cambridge Universiti Press.
- Kongrith, K., & Maddux, C. D. (2005). Online learning as a demonstration of type II technology: Second-language acquisition. *Computers in the Schools, 22*(1/2): 97-110.
- Kotrlik, J. W., & Smith, M. N. (1988). Computer anxiety levels of vocational teachers. *Journal of Agricultural Education, 30*(2), 41-48.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining Sample Size for Research Activities, *Educational and Psychological Measurement, 30*, 607-610.
- Marcoulides, G. A. (1989). Measuring computer anxiety: The computer anxiety scale. *Educational Psychological Measurement, 49*, (3) 733-739.
- Myers, J. M., & Halpin, R. (2002). Teachers' attitudes and use of multimedia technology in the classroom: Constructivist-based professional development training for school districts. *Journal of Computing in Teacher Education, 18*(4), 133-140.
- Nickell, G. S., & Pinto, J. N. (1986). The computer attitude scale. *Computers in Human Behavior, 2*, (4)301-306.
- Passerini, K., & Granger, M. J. (2000). A developmental model for distance learning using the internet. *Computers and Education, 34*, 1-15.
- Rahimi, M., & Yadollahi, S. (2011). Computer Anxiety and ICT Integration in English Classes among Iranian EFL Teachers. *Procedia Computer Science, 3*, 203-209.
- Ramírez, E., Cañedo, I., & Clemente, M. (2012). Attitudes and Beliefs of Secondary Teachers about Internet Use in their Classrooms. *Comunicar, 38*, 147-155.
- Raub, A. (1981). *Correlates of computer anxiety in college students*. Unpublished doctoral dissertation, Universiti of Pennsylvania, Philadelphia.
- Roblyer, M. (2003). *Integrating educational technology into teaching* (3rd ed.). Upper Saddle River, N.J: Merrill/Prentice Hall.
- Rosen, L., & Maguire, P. (1990). Myths and realities of computer phobia: A meta-analysis. *Anxiety Research, 3*(1), 175-191.
- Rosen, L. D., & Weil, M. (1995). Computer availability, computer experience and technophobia among public school teachers. *Computers in Human Behaviour, 11*(1), 9-31.

- Sabzian, F., & Gilakjani, A. P. (2013). Teachers' Attitudes about Computer Technology Training, Professional Development, Integration, Experience, Anxiety, and Literacy in English Language Teaching and Learning. *International Journal of Applied Science and Technology*, 3(1), 67-75.
- Salaberry, M. R. (2001). The use of technology for second language learning and teaching: Aretrospective. *Modern Language Journal*, 85(1), 39-56.
- Sam, H. K., Othman, A. E. A., & Nordin, Z. S. (2005). Computer Self-Efficacy, Computer Anxiety, and Attitudes toward the Internet: A Study among Undergraduates in Unimas. *Educational Technology and Society*, 8(4), 205-219.
- Schumacher, P., & Morahan-Martin, J. (2001). Gender, Internet and computer attitudes and experiences. *Computers in Human Behavior*, 17(1), 95-110.
- Seyyedrezaie, Z. S., Ghabanchi, Z., & Seyyedrezaie, M. S. (2013). Relationship Between EFL Learners' Computer Anxiety and Their Preferred Feedback Method (s) in Writing. *International Journal of Basic Sciences & Applied Research*, 2(1), 174-182.
- Simonson, M. (1995). Instructional technology and attitude change. In G. J. Aglin (Ed.). *Instructional Technology: Past, Present, and Future* (pp. 365-373). Englewood, CO: Libraries Unlimited.
- Thornton, P. (1997). Can you tell me? In T. Boswood (Ed.), *New ways of using computers in language teaching* (pp. 73-74). Alexandria, VA: TESOL.
- Todman, J. G. (2000). Gender differences in computer anxiety among universiti entrants since 1992. *Computers and Education*, 34(1), 27-35.
- Todman, J. G., & Day, K. (2006). Computer anxiety: The role of psychological gender. *Computers in Human Behavior*, 22(5), 856-869.
- Tsou, W., Wang, W., & Tzeng, Y. (2006). Applying a Multimedia Storytelling Website in Foreign *Language Learning*. *Computers and Education*, 47(1), 17-28.
- Watson, D. M. (1998). Blame the technocentric artifact! What research tells us about problems inhibiting teacher use of IT. In G. Marshall and M. Ruohonen (Eds.), *Capacity building for IT in education in developing countries* (pp. 185-192). London: Chapman and Hall.
- Weil, M. M., & Rosen, L. D. (1995). The psychological impact of technology from a global perspective: A study of technological sophistication and technophobia in universiti students from twenty-three countries. *Computers in Human Behavior*, 11(1), 95-133.
- Whitley, B. E. (1997). Gender differences in computer-related attitudes and behavior: A meta-analysis. *Computers in Human Behavior*, 13(1), 1-22.
- Wilfong, J. D. (2006). Computer anxiety and anger: The impact of computer use, computer experience, and self-efficacy beliefs. *Computers in Human Behavior*, 22(6), 1001-1011.
- Wong, S. L. (2002). *Development and Validation of an information technology (IT) based instrument to measure teachers' IT preparedness*. Unpublished doctoral dissertation, Universiti Putra Malaysia, Malaysia.
- Yang, S. C., & Chen, Y. (2007). Technology-enhanced language learning: A case study. *Computers in Human Behavior*, 23, 860 - 897.
- Yeh, S., & Lo, J. (2005). Assessing metacognitive knowledge in web-based CALL: A neural network approach. *Computers and Education*, 44, (2) 97-113.
- Zamani, B. E. (2010). Successful implementation factors for using computers in Iranian schools during one decade (1995-2005). *Computers and Education*, 54(1), 59-68.