



The Effect of Computer Anxiety and Computer Self-Efficacy on Iranian EFL Learners' Performance in the Speaking Section of the TOEFL iBT

Khadijeh Sangi¹, Bahram Bagheri^{2*}

¹Department of English, Faculty of Humanities, Garmsar Branch, Islamic Azad University, Garmsar, Iran

²Department of English, Faculty of Humanities, Garmsar Branch, Islamic Azad University, Garmsar, Iran

Received: 08 August, 2016

Accepted: 09 December, 2016

Abstract

Over the last few years, role of computers has become a controversial issue in language learning. This study was designed to examine the impact of computer anxiety and computer self-efficacy on the speaking section of the TOEFL iBT test taken by Intermediate EFL learners. The researchers intended to find out, which variable i.e. computer anxiety and/or self-efficacy would result in better performance in speaking section of the TOEFL iBT. Independent-Samples t-test and ANOVA were run to analyze the data. The results of the study demonstrated that computer anxiety and computer self-efficacy significantly affected the performance of Iranian EFL learners. Computer anxiety and self-efficacy, however, function differently. The computer self-efficacy was more effective on Iranian EFL learners' performance in the speaking section of the TOEFL iBT.

Keywords: Computer anxiety, Computer-assisted testing, Computer self-efficacy, Speaking, TOEFL iBT.

INTRODUCTION

Nation and Newton (2008) asserted that speaking is one of the most important skills in language learning and this maybe because communication needs speaking ability. They, moreover, stated that speaking deals with presenting reports or presenting points of view on a particular topic. Edalatkhah and Arjmandi (2015) noted that being able to speak a foreign language could be very important for most of the people. Nunan (1988) asserted that speaking is one of the most important aspects in learning a second or foreign language. Success in language learning can be measured through learners' ability to carry out a

conversation in the target language. Speaking can be, therefore, the main factor in communicative purpose of language learning. Fulcher (2003) also stated that ability to speak in a foreign language could be difficult for language learners since effective communication needs the ability to use the language. Richards and Renandya (2002) asserted that the ability to use the language appropriately is an important factor for effective speaking. Hence it can be expressed that speaking capacity is a fundamental instrument for conveying the meaning in a foreign language.

There are some high-stakes standardized tests e.g. the Test of English as a Foreign Language (TOEFL), which are delivered using the Internet. The Internet-based version of the TOEFL

*Corresponding Author's Email:
bahram_bagheri51@yahoo.com



(iBT) was introduced in September 2005 and gradually spread worldwide during 2005 and 2006. This computerized test requires test takers to have computer competency as well as a general knowledge of English. The scores obtained from a computer-based test might be affected by such factors such as students' level of computer anxiety, computer self-efficacy, attitude toward computer, and computer use experience (Simek, 2011).

THEORETICAL BACKGROUND

Computer Anxiety

Anxiety may be experienced in any situation such as a language classroom including online classrooms, or a new cultural setting. When anxiety cooperates completing a task in an e-learning setting, it is known as computer anxiety, which can inhibit learning. Simek (2011) stated that, there is no definite definition of computer anxiety. Terms such as computer phobia, apprehension, fear, discomfort, and anxious reactions, however, can be interchangeably used to define computer anxiety. McNamara and Deane (1995) related computer anxiety to psychological distress, which is provoked when a person works with computers. Chua, Chen, and Wong (1999) defined computer anxiety as a fear felt by learners while using computers. Agbatogun (2010) stated that computer anxiety directly and indirectly has an impact on the option of learners becoming competent users of computers. Heinssen, Glass and Knight (1987) postulated that computer anxiety is associated with negative emotions evoked in real or fictitious interactions with computers. Computer anxiety is generally characterized as emotional fear, apprehension, or phobia felt by those who work with or think of using computers (Herdman, 1983).

Computer Self-Efficacy

Computer self-efficacy is "the extent of an individual's perceived ability to use a computer" (Embi, 2007, p. 18) Delcourt and Kinzie (1993) defined computer self-efficacy as the degree to which computer users are confident with their

capacity to comprehend and apply computer skills and knowledge. They found that individuals with high-level of computer self-efficacy would feel skilled in using computer hardware and software. On the contrary, those who have low-level computer self-efficacy would believe that they could experience difficulty in using computers. Additionally, Agarwal et al. (2000) mentioned that there are two types of computer self-efficacy such as general self-efficacy and task specific self-efficacy. General self-efficacy is a judgment of a person about his/her efficacy in using computers across general areas of knowledge, while task specific self-efficacy refers to performing specific tasks via computers in a particular context. Fagan, Neil and Wooldridge (2003, 2004) also state that, according to Bandura's Social Cognitive Theory, computer experience, computer self-efficacy, and computer anxiety provide a causative model in that each of them determines the other one. Computer experience positively correlates with self-efficacy and self-efficacy negatively correlates with anxiety.

Teo and Koh (2010) stated that, self-efficacy can also exert influence on behavior of the learners. A high degree of computer self-efficacy leads learners to become competent users of computers whereas a low degree of computer self-efficacy makes learners fearful of using computers. Also learners who are highly self-efficacious are more likely to complete the tasks successfully (Teo & Koh, 2010). Some factors influence the concept of self-efficacy (Fagan, Neil & Wooldridge, 2003-2004). These are described below.

- Enactive mastery
- Situational support
- Emotional arousal

Enactive mastery is related to how much computer experience learners have. The more experienced they are in using computers, the more self-efficacious they become in completing tasks. Situational support refers to socially active and persuaded people who are capable of doing tasks successfully. Emotional arousal is associated with some negative feelings learners may ex-

perience in using computers and the negative effect computers have on self-efficacy (Fagan, Neil & Wooldridge, 2004).

On the other hand, Ertmer, Addison, Lane, Ross, and Woods (1999) claimed that teachers with higher computer self-efficacy are expected to be more eager to apply computer-based technology in their classrooms than those with lower levels of self-efficacy. They found that teachers' personal beliefs regarding their computer expertise are the main factors in deciding whether they will benefit from computers in teaching and learning or not. The researchers also pointed out that many naive and newly graduated teachers are more skillful and proficient at using computers than their more experienced coworkers. Such skills, however, often may not be used because monotonous teaching duties often slowed down their efforts.

Durndell and Lightbody (1994) first assumed that computer anxiety results from lack of experiences in using computers, and if the examinees become more familiar with computer use, anxiety must decline. However, they reported that despite the spread of computers, there is no evidence of a decrease in computer anxiety. Todman and Lawson (1992) similarly failed to find a link between computer experience and anxiety in university students or school children.

There are some other works that support the belief that computer anxiety results from a lack of familiarity with computer. For example, Weil and Rosen (1995) found that computer experience is related to lower levels of technophobia in 19 of the 23 countries they studied. Chua, Chen, and Wong (1999) confirmed an inverse association between computer experience and level of computer anxiety, but they found that the extent of this association varies considerably among studies. Another study was performed by Gos (1996) on English teacher trainees revealed that an important factor in the development of computer anxiety was not exposure itself, but the quality of the exposure or experience. Some believe that anxiety reduces the capacity of working memory (Eysenck, 1988). Some of the symptoms of anxiety are worry and self-concern

that may interfere with test takers' performance on the test tasks.

Statement of the Problem

Assessment can play an important role in social aspects of learners' lives. Language proficiency tests (e.g. TOEFL) are usually used to measure the English language ability of non-native speakers wishing to enroll in English-speaking universities, to immigrate to another country and/or to receive a job promotion. The actual ability of the test takers (learners) can be, however, affected by some interfering factors. Students with various computer competencies may perform differently on a computer-assisted test. Since the focus of this study was on computer-assisted testing, the researchers investigated the effectiveness of factors including computer anxiety and computer self-efficacy of students which are expected to have a large impact upon Iranian EFL learners' speaking of a TOEFL iBT.

Research questions

The following research questions were formulated for the purpose of the study.

The following research questions were formulated for the purpose of the study.

1. Does computer anxiety have any statistically significant effect on Iranian EFL learners' performance in the speaking section of the TOEFL iBT?
2. Does computer self-efficacy have any statistically significant effect on Iranian EFL learners' performance in the speaking section of the TOEFL iBT?
3. Is there a statistically significant difference between computer anxiety and computer self-efficacy in terms of learners' performance in the speaking section of the TOEFL iBT?

METHODS

To accomplish the purpose of this study, the researchers followed a procedure consisting of several phases which are going to be explained in

details below:

Participants

This study was carried out at Mina institute in Garmsar, Iran. A total of 67 intermediate level male and female language students participated in this study. However the partial data collected from 22 students were excluded in the data analysis phase due to their withdrawal. The final number of students, therefore, was reduced to 45.

Instruments

Data for the present study were collected through the performance of the participants on the speaking section of an iBT test and two questionnaires. To homogenize the participants, the OQPT was used. This test includes 60 multiple-choice items with standardized difficulty, which measure students' ability in cloze test, grammar, and vocabulary. OQPT was used, because it was considered as a good proficiency test. The participants were supposed to choose the correct choices in 35 minutes. The OQPT scores range from 0 indicating a low level of language proficiency to 60, which indicate a high level of language proficiency.

The Computer Anxiety Rating Scale (CARS) was used to assess the subjects' level of computer anxiety. CARS, was a 19-item self-report inventory, designed and validated by Heinssen, Glass and Knight (1987). Items were scored on a five-point Likert-type scale with five choices ranging from "strongly disagree" rated as 1 to "strongly agree" rated as 5 (1 = strongly disagree, 2 = disagree, 3 = undecided, 4 = agree, and 5 = strongly agree).

The CARS scores range from 19, indicating a low level of computer anxiety, to 95, which indicated a high degree of computer anxiety. The participants' computer self-efficacy was measured using the Computer Self-Efficacy Scale (CSES) developed by Murphy, Coover, and Owen (1989). A total of 35 statements regarding participants' self-efficacy in using computers were coded on a Likert scale with five choices ranging from 1 (strongly disagree) to 5 (strongly agree). The CSES scores range from 35 indicating a low

level of computer self-efficacy to 175 which indicates a high level of computer self-efficacy. The items on the two questionnaires indicated a good internal consistency using Cronbach's alpha: 0.72 for CARS and 0.75 for CSES.

The Speaking section of the test included six tasks: two independent and four integrated. In the two independent tasks, test-takers answered opinion questions on familiar topics. Test-takers were assessed according to their ability to speak spontaneously and convey their ideas clearly and coherently. In two of the integrated tasks, test-takers read a short passage, listened to an academic course lecture or a conversation about campus life and answered a question by combining appropriate information from the text and the talk. In the two remaining integrated tasks, test-takers listened to an academic course lecture or a conversation about campus life and then responded to a question about what they heard. In the integrated tasks, test-takers were evaluated on their ability to appropriately synthesize and effectively convey information from the reading and listening material. Test-takers took some notes as they were reading/listening and used their notes to help prepare their responses. Test-takers were given a short preparation time before they began speaking. The responses were digitally recorded, sent to ETS's Online Scoring Network (OSN), and evaluated by three raters, the raters were three experience teachers who who were experienced TOEFL teachers. The raters used the independent speaking rubrics and integrated speaking rubrics for speaking rating retrieved from the <https://www.ets.org/toefl/ibt>. Each of six tasks was rated from 0 to 4. The sum was converted to a scaled score of 0 to 30. The speaking performances were rated as follows (Table 1).

Table 1
Speaking performance

| | | |
|----------|------------------|-----------------|
| Speaking | 0-30 score scale | Good (26-30) |
| | | Fair (18-25) |
| | | Limited (10-17) |
| | | Weak (0-9) |

Procedure

In the initial phase of the study, 67 students, who were recruited from Mina language institute in Garmsar, Iran, took the OQPT. Based on the results of the OQPT, 22 students were excluded from the study, because their scores were not between one point below and above the standard deviation, the results of this test revealed that 45 participants were at the intermediate level of proficiency. Having been homogenized into one group of proficiency level, the participants were asked to fill out the required questionnaires (CARS & CSES) and participate in the TOEFL iBT speaking section. The participants filled out the questionnaires in a 30 minute session with a five-minute break time between them. Based on the obtained results from the study, students were divided to four groups, the first group was students with high anxiety and the second group was learners with low anxiety. The third group consisted learners with high self-efficacy and the fourth group consisted of learners with low efficacy learners. The number of students was, 10, 13, 12 and 10 respectively in high and low anxiety groups, and high and low self-efficacy groups. Since the study sought to examine the computer anxiety and computer self-efficacy level of the Iranian EFL learners in speaking, the participants participated in the TOEFL iBT speaking through using computers and speaking on the microphones. The test was a sample of TOEFL iBT test and the students used computers. Because of the high price of the test for each student the researcher used the sample one. The test was done at the laboratory and all the students answered to the same test.

The process of distributing, collecting the questionnaires and checking the speaking ability took about 4 sessions. Prior to completing the questionnaires, the participants were briefed on how to answer the questionnaires. It was also clarified that contribution to the study is voluntary. Finally, the participants were ensured of anonymity and data disposal. In speaking test, the students answered to six questions by speaking into the microphones. In question one and two they spoke about familiar topics and their scored

based on the ability to speak clearly and coherently. In question three and four they read a short text and then they listened to the same topic. Then the students were asked to answer and talk about what they heard. In question five and six they listened to a conversation or a lecture, and they were asked to talk about what they heard. The students were allowed to take notes while they were listening to a conversation or lecture.

Research Design

In the present study, the researchers adopted an expose facto research strategy and design. The study was concerned with three variables of interest including Iranian EFL learners' level of computer anxiety, computer self-efficacy, and their performance on the speaking section of the TOEFL iBT. The independent variables of this study were computer anxiety and computer self-efficacy and test takers' performance on the speaking section of the TOEFL iBT was considered as dependent variable. It is worth noting that the context, institution, and place of origin were all controlled.

RESULTS AND DISCUSSIONS

The collected data were coded and analyzed with SPSS (Statistical Package for the Social Sciences) version 18th. The inferential statistics helped the researchers to decide whether the results that were observed in the sample were powerful enough to generalize to the whole population or not because descriptive statistics do not allow drawing any general conclusions that would go beyond the sample. The researchers used Independent sample T-test and ANOVA procedure.

The first research question

To examine the effect of computer anxiety on Iranian EFL learners' performance in the speaking section of the TOEFL iBT test, the researchers, first, considered the differences between students with low and high anxiety level. The researchers used independent sample t-test to check the differences between the two groups.

Table 2
Group Statistics of speaking anxiety

| | grouping.2 | N | Mean | Std. Deviation | Std. Error Mean |
|-------------------|------------|------|------|----------------|-----------------|
| Speaking. Anxiety | dimension1 | high | 24 | 3.7833 | 1.00249 |
| | | Low | 21 | 5.6352 | 1.79843 |

As the table 2 shows the mean score is 3.78 and 5.63 for high and low anxiety students respectively.

Table 3
Independent Samples Test of Speaking Anxiety

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|-------------------|-----------------------------|---|------|------------------------------|--------|-----------------|-----------------|-----------------------|---|---------|
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference | |
| | | | | | | | | | Lower | Upper |
| speaking. Anxiety | Equal variances assumed | 6.662 | .013 | -4.337 | 43 | .000 | -1.85190 | .42698 | -2.71299 | -.99082 |
| | Equal variances not assumed | | | -4.184 | 30.400 | .000 | -1.85190 | .44260 | -2.75531 | -.94850 |

Table 3 also shows that the $t(43) = 4.33$, $p=00$ was statistically significant. So it could be concluded that the differences between the mean score of the two groups is significant, in other words the performance of the participants is significantly different. The mean score in high anxiety students is (3.78) which is significantly lower than the mean score in low anxiety which is (5.63). In other words there is a significant difference between the performances of high and low anxiety students of Iranian

EFL learners in speaking iBT. The low anxiety students outperformed high anxiety students in speaking iBT.

The second research question

To examine the effect of computer self-efficacy on Iranian EFL learners' performance in the speaking section of the TOEFL IBT test, the researchers applied independent t-test and considered the differences between students with low and high level of self-efficacy.

Table 4
Group Statistics of Speaking Self-Efficacy

| | grouping.2 | N | Mean | Std. Deviation | Std. Error Mean |
|-------------------------|------------|------|------|----------------|-----------------|
| Speaking. Self-efficacy | dimension1 | high | 24 | 6.7042 | 1.58058 |
| | | low | 21 | 4.5043 | 1.24054 |

As the table 4 shows the mean score is 6.70 and 4.50 in for high and low self-efficacy students respectively.

Table 5
Independent Samples Test of Speaking Self-Efficacy

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|----------------------------|-----------------------------------|---|------|------------------------------|--------|---------------------|----------------------|--------------------------|---|---------|
| | | F | Sig. | t | Df | Sig. (2- tailed) | Mean Dif- ference | Std. Error Difference | 95% Confidence Interval of the Dif- ference | |
| | | | | | | | | | Lower | Upper |
| Speaking. Self-efficacy | Equal Variances assumed | 1.664 | .204 | 5.139 | 43 | .000 | 2.19988 | .42804 | 1.33665 | 3.06311 |
| | Equal variances not assumed | | | 5.223 | 42.538 | .000 | 2.19988 | .42116 | 1.35026 | 3.04950 |

Table 5 also shows that the $t(43) = 5.13$, $p = .00$ was considered to be statistically significant. It could be, therefore, concluded that there is a significant difference between the groups. In other words the high self-efficacy students outperformed low self-efficacy students in speaking iBT. The third null hypothesis, formulated on the basis of the third research question, concerns the differences between computer anxiety computer

and computer self-efficacy in terms of learners' performance in the speaking section of the TOEFL iBT.

The third research question

Table 6 below shows the difference between computer anxiety and computer self-efficacy in terms of Iranian EFL learners' performance in the speaking section of the TOEFL iBT test.

Table 6
Group Statistics of speaking

| | | N | Mean | Std. Deviation | Std. Error Mean |
|----------|---------|----|--------|----------------|-----------------|
| speaking | self | 45 | 5.6776 | 1.79925 | .26822 |
| | anxiety | 45 | 4.6476 | 1.69366 | .25248 |

As in Table 6, show the mean score of computer self-efficacy group in both high and low group was 5.67 and in computer anxiety group in both high and low group is 4.64. To be ensur

ing about the significance difference between the four groups (high and low self-efficacy group and high and low anxiety group), ANOVA was run.

Table 7
ANOVA Test of Computer Self-Efficacy and Computer Anxiety

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|----|-------------|-------|------|
| Between Groups | 26.116 | 1 | 26.116 | 8.639 | .004 |
| Within Groups | 262.993 | 87 | 3.023 | | |
| Total | 289.109 | 88 | | | |

Results of the one-way ANOVA showed that the level of significance was .00, which was well below the p value ($p = .05$); therefore, it could be concluded that there was a significant difference among the computer anxiety and computer self-efficacy groups in their performance. The major objective of the present study was to investigate the effect of computer anxiety and computer self-efficacy on Iranian EFL learners' performance on the speaking section of the TOEFL iBT. Based on the results, it was concluded that there was a significance different between the effect of computer anxiety and computer self-efficacy on speaking.

And based on the results of Table 6 computer self-efficacy was more effective than computer anxiety.

FINDINGS AND CONCLUSION

The participants were asked to fill out the CARS (Computer Anxiety Rating Scale) and CSES (Computer Self-Efficacy Scale) questionnaires and also participate in speaking TOEFL iBT. The statistical analysis performed on the data produced the following results. The present study revealed that computer anxiety and computer self-efficacy affect learners' iBT speaking performance. The findings of this study were aligned with the results reported by Achima, and Al Kassim (2015) that there was a weak relationship ($r = .32$) between computer anxiety and computer self-efficacy among employees. Another study was conducted by Piran (2014) to investigate the possible relationship between three indices of self (self-concept, self-efficacy, and self-esteem) and students' score in reading comprehension test. The results for the relationship between self-concept and reading comprehension scale (Spearman's $\rho = .65$, Sig. = .01), and that of self-esteem and reading comprehension score (Spearman's $\rho = .35$, Sig. = .01) was significant while the relationship between self-efficacy and reading comprehension score was not significant (Spearman's $\rho = .06$, Sig. = .53). The results of this study showed that the reading comprehension grades were affected strongly by students' self-efficacy and self-esteem. The results of this

study also confirmed the results of the study conducted by Embi (2007) who found a moderate negative relationship between the variables. It was revealed that the levels of computer self-efficacy have a moderate negative correlation with computer anxiety.

This finding could serve as an incentive for teachers to use computers in their classes with the hope of reducing learners' computer anxiety and increasing their computer self-efficacy. Moreover, the results of this study should encourage teachers to design supplementary courses in an attempt to familiarize students with computers and to alleviate their computer anxiety.

Some of the TOEFL test-takers may suffer from technophobia and/or some may lack computer competency; therefore, the findings of this study can help test-takers to reduce their computer anxiety and/or to improve their computer self efficacy.

References

- Agbatogun, A. O., (2010). Self-concept, computer anxiety, gender and attitude towards interactive computer technologies: A predictive study among Nigerian teachers. *International Journal of Education and Development using Information and Communication Technology*, 6(2), 55-68.
- Achim, N., & Al Kassim, A. (2015). Computer usage: The impact of computer anxiety and computer self-efficacy. *Social and Behavioral Sciences*, 172, 701-708.
- Chua, S. L., Chua, D. T., Chen A. F., & Wong, L. (1999). Computer anxiety and its correlates: a meta-analysis. *Computers in Human Behavior*, 15(5), 609-623.
- Delcourt, M. A. B., & Kinzie, M. B. (1993). Computer technologies in teacher education: The measurement of attitudes and self-efficacy. *Journal or Research and Development in Education*, 27, 35-41.
- Durndell, A., & Lightbody, P. (1993). Gender and computing: Change over time? *Com-*

- puters in Education, 21, 331-336.
- Embi, R. (2007). *Computer anxiety and computer self-efficacy among accounting educators at Universiti Teknologi Mara (UiTM), Malaysia*. Unpublished doctoral dissertation, The University of Malaysia.
- Ertmer, P., Addison, P., Lane, M., Ross, E., & Woods, D. (1999). Examining teachers' beliefs about the role of technology in the elementary classroom. *Journal of Research on Computing in Education*, 32(1), 54-72.
- Eysenck, M. W. (1988). Anxiety and attention. *Anxiety Research*, 1(1), 9-15.
- Durndell, A., & Lightbody, P. (1993). Gender and computing: Change over time? *Computers in Education*, 21, 331-336.
- Fagan, M., & Neill, S. & Wooldridge (2004). An empirical investigation into the relationship between computer self-efficacy, anxiety, experience, support and usage. *Journal of Computer Information Systems*, Winter 200.
- Gos, M. W. (1996). Computer anxiety and computer experience: a new look at an old relationship. *The Clearing House*, 69(5), 271-276.
- 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.
- Herdman, P. C. (1983). High tech anxiety. *Management Focus*, 30(3), 29-31.
- McNamara, M., & Deane, D. (1995). Self-assessment activities toward autonomy in language learning. *TESOL Journal*, 5, 18-23.
- Murphy, C. A., Coover, D., & Owen, S. V. (1989). Development and validation of the Computer Self-Efficacy Scale. *Educational and Psychological Measure* ment, 49, 893-899.
- Nation, I. S. P., & Newton, J. (2008). *Teaching ESL/EFL listening and speaking*. Routledge.
- Nunan, D. (1988). *The learner-centered curriculum: A study in second language teaching*. Cambridge University Press.
- Piran, N. A. (2014). The relationship between self-concept, self-efficacy, self-esteem and reading comprehension achievement: Evidence from Iranian EFL learners. *International Journal of Social Sciences and Education*, 5(1), 23-27.
- Richards, J. C., & Renandya, W. A. (2002). *Methodology in language teaching: An anthology of current practice*. Cambridge: Cambridge University Press.
- Simek, A. (2011). The relationship between computer anxiety and computer self-efficacy. *Contemporary Educational Technology*, 2(3), 177-187.
- Teo, T., & Koh, J. H. L. (2010). Assessing the dimensionality of computer self-efficacy among pre service teachers in Singapore: a structural equation modeling approach. *Int. J. Educ. Dev. Using Information Commun. Technol*, 6(3), 7-18.
- Todman, J., & Lawrenson, H. (1992). Computer anxiety in primary schoolchildren and university students. *British Educational Research*, 18(1), 63-72.
- Weil, M. M., & Rosen, L. D. (1995). A study of technological sophistication and technophobia in university students from 23 countries. *Computers in Human Behavior*, 11(1), 95-133.
- Wood, R. E., Bandura, A., & Bailey, T. (1990). Mechanisms governing organizational performance in complex decision-making environments. *Organizational Behavior and Human Decision Processes*, 46, 181-201

Biodata

Khadijeh Sangi graduated with a master's degree in the field of TEFL (Teaching English as a Foreign Language) at the Islamic Azad University of Garmsar. She has been teaching English in different institutes and is currently working as an English teacher in Garmsar.

Email: kh.sangi2012@yahoo.com

Bahram Bagheri is an assistant professor in the field of TEFL (Teaching English as a Foreign Language) at the Islamic Azad University of Garmsar. He graduated with a PhD in TEFL at the Islamic Azad University, Science and Research Branch in Tehran. He is a faculty member and currently Head of the English Department in Islamic Azad University of Garmsar. He has also been teaching English at the Iran Language Institute (ILI) for 20 years and is currently the Educational Research and Planning Manager in the same institute. He has published articles on TEFL in different journals and authored several textbooks at the ILI. His main areas of interest are materials development and test construction.

Email:bahram_bagheri51@yahoo.com