Differences between Boys' and Girls' Self-Efficacy, Motivation and Attitudes towards Applying Mobile Devices for Learning ESL

Bibi Eshrat Zamani
Associate professor University of Isfahan, Isfahan, Iran
E-mail of the corresponding author: bzamani@edu.ui.ac.ir

Abstract
The main purpose of this research was to provide a serious vision of students' access and use of mobile phone and its peripherals for learning second language skills. The second purpose study was to investigate differences between boys and girls according to their access and usage of Mobile devices for learning English language skills from the Sharkord high school students. Statistical population was included all students in Sharkord high schools. Samples included 600 students that were selected by multi-stage clustering method. Data gathering instruments were included self-made questionnaire that was made according to theoretical background and literature of past research. After determining its validity and reliability it was used in schools. Findings indicated that a majority of students, more than 90% of them had access to some kinds of mobile devices, but less than 10% of them used it for educational purposes especially for learning English as a second language (ESL). Boys had more access to mobile devices than girls and were more knowledgeable about its usage. They were also more motivated and had self-efficacy in learning from mobile tools than girls. There were not any differences between boys and girls regarding to their attitudes toward using mobile devices for ESL. Results also indicated that there were relation between language learning skills and the possibilities of students' Mobile cell phones and also their motivation and self-efficacies for using it. There was significant relation between the type of phone cell usage and language learning skills. According to the results, we conclude that mobile phones and its peripherals could facilitate and help students to learn more language skills. It depends to the student's motivation. Students who had more motivation in learning English language, they have installed more peripherals on their mobile. .
Keywords: Mobile learning, Attitudes, Motivation, Gender, Self-efficacy

1. Introduction

New technologies have a wide range of applications. Gradually, we use technologies more and more in all aspects of our ordinary life directly or indirectly. Consequently, what is occurring in language learning is also affected by technologies. With the advent of multimedia, Internet, and mobile devices more and more students are using computers and other technological devices in their education especially for learning subjects that are not covered by formal settings such as English as a second language for countries that their native language is not English. Iran is one of these countries. This is particularly evident in todays' education, where students and teachers have greater access to computer and Internet and other new technologies (Warschauer, and Meskill 2000). The dominate language in order to use internet and other information and communication technologies components such as e-mail, digital cameras, cell phones and computers is English. So using the mentioned technologies needs fluency in English language. On the other hand, using these technologies increase the learners' proficiency in English language. In addition to ordinary use of these technologies, they could be used as instructional tools for the people who want to learn more without contributing in routine classes without limits of time and restrictions of learning location. One of the exciting tools that will be used by many novice students to English learning is mobile devices. Using these instruments decreases gaps between rich and poor people. The first step for using mobile devices for teaching and learning especially in the field of learning as a second language (ESL) is to accept it as an educational tool. Many researchers have studied and proposed theories and models of technology acceptance in order to anticipate and explain user behavior with technology. Undoubtedly, rapid changes in both technologies and user's environments are inevitable and making theories and models is a difficult task (Kripanont, 2007). Based on the results of the study of Saadé, Nebebe, and Mak (2014), Technology Acceptance Model (TAM) is a basic theoretical model that can be generalized to different multimedia and e-learning companies. The study provides a general perspective of the users' potential behavior towards such systems. At the same time, studies of different modes of TAM have mainly focused on technology based tools to support education, assessing user satisfaction and to characterize the technology-based learning student (Griffiths, 2008; 2010; Saade´and Bahli, 2005; Rhee and Kim, 2004).

This study is based on (TAM) model proposed by Davis (1989) that has been generalized and applied to different information technologies, work environments, and end users. In the TAM model, Davis proposes that two individual beliefs of perceived ease of use (PEU) and perceived usefulness (PU) would influence technology acceptance and use. In the current Study, the degree to which an individual believes that using mobile devices for ESL would be free of cognitive effort refers to PEU. Similarly, PU is defined as the degree to which an individual believes that using mobile devices would optimize his or her performance in learning ESL. TAM

suggests that the actual use of the system is determined by the users' behavioral intentions (INT) to use the system, which is determined by the users' attitudes towards using the system and their perceived usefulness of the system (Davis, Bagozzi, and Warshaw, 1989; Dearnleya, Haighb, and fairballc, 2008).

Therefore, in the current study TAM model is used to study the extent to which mobile devices are accepted and used by Iranian students as a component of learning English as a second language. The research presented here is motivated and guided by two main questions. First, is there any significant difference between genders regarding the use of mobile devices for ELS? Second, is there any significant difference in motivational, attitudinal and self-efficacy of students in terms of using mobile devices for ESL? In the questionnaire of the study some aspects of Davis model such as attitudinal beliefs that consists of perceived ease of use and perceived usefulness are used as well as questions investigating other related obstacles to the use of mobile devices for ESL such as lack of technical knowledge and English literacy that are studied under students' self-efficacy in ESL. Differently stated, using mobile devices for learning English language is considered as phenomenon with three components of self-efficacy, motivational and attitudinal variables. In other words, this study examined TAM in an academic setting, investigating the factors affecting students' acceptance and use of mobile devices as component of English learning language (Lee, Cheung, & Chen, 2005)

The technology acceptance model (TAM) was first proposed by Davis (1989), based on the Theory of Reasoned Action (TRA) (Fishbein & Ajzen, 1975) in psychology research. Masrom (2007) found that "based on TRA the individual behavior is driven by behavioral intention where behavioral intention itself is a function of an individual's attitude toward the behavior and subjective norms surrounding the performance of the behavior". In other words, he states that the individual's behavior and his intention to behave is a function of the individual's attitude toward the behavior and his perceptions about the behavior. Therefore, behavior is the function of both attitudes and beliefs. TRA is presented in Figure 2.1 below.

Figure 1: *Theory of Reasoned Action*
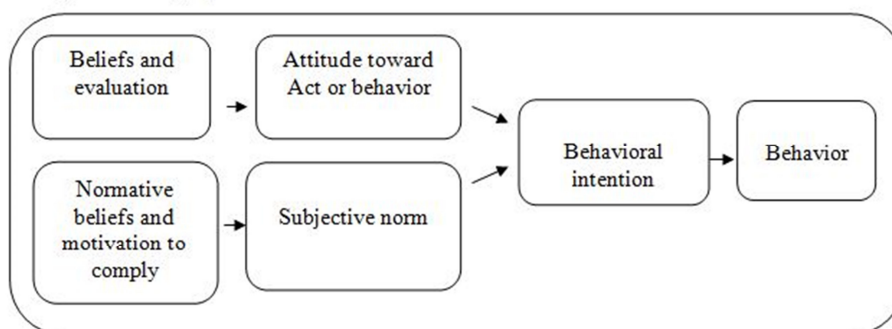
Note . From **"Technology Acceptance Model and E-learning"** by M. Masrom, 2007 cited from Shahbaz, 2010).

In the same vein, Masrom (2007) believe that "TAM proposes that perceived ease of use and perceived usefulness of technology are predictors of user attitude towards using the technology, subsequent behavioral intentions and actual use. Perceived ease of use was also considered to influence perceived usefulness of technology". Figure 2.2 presents original version of TAM (Davis, 1989).

Figure 2. *The original Technology Acceptance Model*
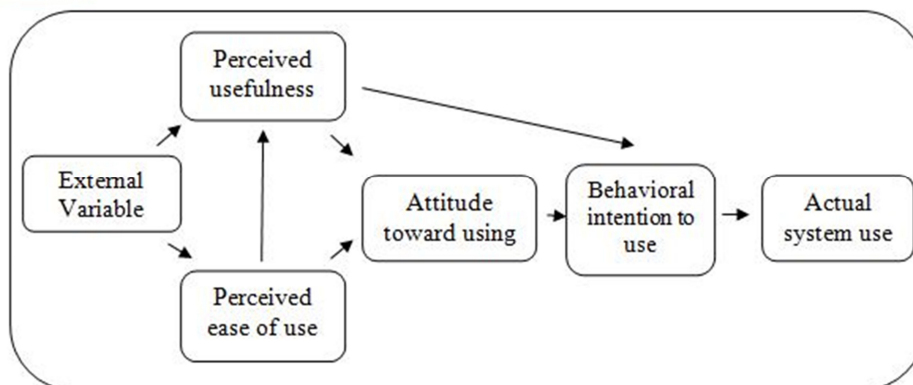
Note .From **"Technology Acceptance Model and E-learning"** by M. Masrom, 2007.

TAM has been applied in several studies testing user acceptance and use of information technology, As an illustration, word processors(Davis et al., 1989), spreadsheet applications (Mathieson, 1991), e-mail (Szajna, 1996), Web browser (Morris & Dillon, 1997), websites (Koufaris, 2002), e-collaboration (Dasgupta, Granger & Mcgarry, 2002), and blackboard (Landry, Griffeth & Hartman, 2006; Lee, Cheung, & Chen, 2005. In

this study, the mobile devices are considered as a tool for transferring English knowledge.

Masrom (2007) continued that "in TAM, 'perceived usefulness' defined as the extent to which the user believes the technology use will upgrade his or her work functions, while 'perceived ease of use' refers perceived easiness of technology use by the user".

These two factors distinctly influence the user's attitude towards technology use. Besides, perceived ease of use is considered to influence perceived usefulness and attitude towards using the technology. Finally, we conclude that students' self-efficacy in using technology and their attitudes and motivations towards using the technology determine the behavioral intention to use that technology. The theory has been used as an underpinning theoretical framework of the present study.

Attitudes and motivations for certain social and personal activities emerge different use of mobile devices. If people have a positive attitude toward the new medium, they can easily adopt it. On the other hand, people with negative attitude toward the new medium potentially would adopt it less (Kim and Rhee, 2004).

Based on the above statements and references most of the non- English countries in the Asia are trying to develop and to promote English learning. Apart from negative impacts of globalization on cultural aspects of each society, all these countries have recognized the fundamental role of English in global economy. In order to be a part of dynamic and growing economy, countries need to have access to sources of knowledge to train skillful workforce. There may be thousands of programs and schemes for each country to reach an acceptable position in global economy. Consequently, many factors are involved. The First and foremost factor is using information and communication (ICT) facilities such as computers, Internet and new technologies such as mobile devices. Evaluating and describing the infrastructures of ICT and related problems and deficiencies are beyond the extent of this study. Consequently, a brief explanation on the relationship between mobile devices skills and capabilities of the user and the potential effects of mobile devices on learning English as a second language will be determined.

An Examination of the previous literature suggests that this research topic not previously considered separately by other investigators in the field. The purpose of this study is to investigate the role of mobile devices on learning English as a second language by students of Sharkord. At the same time, gender differences in factors affecting the acceptance of mobile devices will be explained.

2.   Research Methodology

Participants: The population of this study included all the students of Sharkord high schools in academic year of 2013-2014 who graduated by the end of the academic year. 600 students were chosen randomly by using clustering stratifying methods. 564 students participated in this research by filling the questionnaires. 301 (53.4 %) of them were girls and 263(46.6%) were boys.

2.1.   Instruments

In this study a self - made questionnaire with four different sections is used. The sections of questionnaire are: section 1 was related to the demographic questions such as participants' age, gender, family income, parents' education and students' experiences working with mobiles. The second part of the questionnaire was related to the students' knowledge and their self-efficacy in using mobile devices, and their attitudes toward using mobile devices for learning English language as a second language. For constructing the question of this section items of Technology acceptance model (TAM) proposed by Davis (1989) and the Masrom's explanations (2007) that perceived ease of use and perceived usefulness of technology are predictors of user attitude towards using the technology, subsequent behavioral intentions and actual use. The responses quantified based on 5- point Likert scale. (5= I agree strongly, 4=I agree, 3= I have no idea,2=I disagree,1= I disagree strongly). Furthermore, some of the questions were exceptional and marked reversely. Consequently, the responses quantified differently (1= I agree strongly, 2=I agree, 3= I have no idea,4=I disagree,5= I disagree strongly). Questions of the questionnaire were constructed based on the similar questionnaires and the ideas of experts. The primary questionnaire was distributed among some of the students of target population and they have been asked to mark the vague questions. In the same vein, the questionnaire has been modified based on the ideas of the experts of educational technologists and language faculties.

   Section 3 included 15 questions related to motivational and contextual factor such as having mobile peripherals such as having audio and visual devices, multimedia facilities, films, Bluetooth, camera, music player and installed special software for learning language and their parents' educational levels and family income.

Section 4, was related to using mobile facilities for learning different skills such as writing, speaking, listening and comprehension. Each skill had 5 questions.

2.2.   The validity of the questionnaire

Content validity or face validity assesses the correspondence between the individual items and the under

investigation subject through ratings by expert judgments, and pilot tests or other means.
The validity of the questionnaire was assessed by a review of the survey questionnaire by experts in language and educational technologists of Isfahan University. In addition to the reviews, the questionnaire was also reviewed and completed by a group of students from target population. Responses and feedbacks from all these reviews affirmed the validity of the questionnaire.

2.3.   The reliability of the questionnaire

 In order to estimate the reliability of the questionnaire as an indicator of internal consistency of the questionnaire, Cronbach's alpha coefficient has been calculated. The total coefficient was calculated for the whole questionnaire. Moreover, in order to obtain more precise estimates of reliability, the Cronbach's alpha coefficient was calculated for three subscales of the questionnaire (self-efficacy, motivational and contextual factors, and students' attitude and learning language skills) separately. The reliability of the instrument for various sections of the questionnaire varied from 0.85 for the whole questionnaire and 0.81, 0.82, 83 and.91 for the, self-efficacy for using mobile devices, contextual factors and attitudes and learning language skills).

2.4.   Data Analysis

In order to analyze the collected data, descriptive and inferential statistics have been used in SPSS environment version 19. Frequencies, percentages, means, and standard deviations have been calculated as measures of descriptive statistics. In the same vein, Levene's Test, Analysis of Variance, t test have been calculated as measures of inferential statistics.

3.   Results

93.4 percent of the research sample had access to mobile devices such as lab tops, cellar phone, tablet, notebooks and other mobile devices. Among the students who had mobile devices, 375 of students had ordinary cellar phone, 187 of them had access to intelligent cellar phone, 25 of them had access to different kinds of Tablet and computer notebooks, 79 of them had access to multiplayer systems such as MP3/Mp4 Player ‹iPod ‹Recorder and 24 of them had access to PDA ‹e-Book Reader. 123 of them had planned to buy an new smart cellar phone in the near future and 89 of them are intended to buy one type of tablet in the new future and 29 of them are intended to by one of multimedia tools such as MP3/Mp4 Player ‹iPod ‹Recorder and 18 of them are trying to buy one other type of mobile tools such as PDA ‹e-Book Reader.

   In spite of accessibility to hard and software, their knowledge and self-efficacies about different applications of mobile devices are very important for their using for learning about English language. Other important parameter for using mobile devices is the users' attitudes toward new technologies, and their motivation.

   As chart 1 indicates, 93.4 percent of the research sample had access to mobile devices such as lab tops, cellar phone, tablet, notebooks and other mobile devices. 250 students (43.3%) used mobile tools less than half hours, 159 of students used mobile tools less than one hour. 80 students used mobile tools less than 2 hours. 50 students (8.7%) of them used mobile devices more than 2 hours.
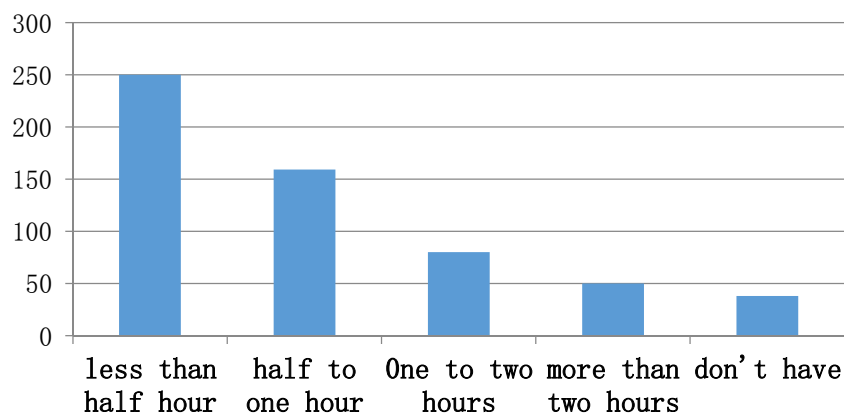

Chart 1: distribution of students' use of mobile technologies (hours)

   According to the data, 93.4 percent of students had access to mobile devices. 58 % of men had access to mobile technologies compared to 42 % of girls. Boys had more advanced cellar phones compared to girls. Boys had used mobile devices in many different fields such as communicating with their friends and other people from Iran and other foreign countries, getting information about new technologies, cars and playing games individually or with their other friends through internet. Girls used mobile devices for doing personal affairs such as communicating with their parents and family members and less for communicating with other

people that do not have known.

Based on the first hypothesis of the study there is a significant difference between students with different genders in using mobile devices for learning English as a second language. The results related to this hypothesis are presented in table 1.

Table 1. *The results of the Levene's test for equality of error variances.*

Significany	F
.54	.36

Note: F= F coefficient of Levene' s test

As shown in table 1, the F coefficient of Levene's test is equal to .36 and it is not statistically significant at *p > 0.05*. Thus, error variance of dependent variable (mobile technologies use) is equal across groups and using independent samples test is permitted.

Table 2. *The Means and standard deviations of mobile devices usages for two genders*

Gender	N	M	SD
Male	263	109.76	19.31
Female	203	95.05	22.24

Table 2 indicated that the mean of mobile devices use for male students is higher (109.76) in comparison to the mean for female students (95.05).

Table 3. *The results of t test to compare the means of the scores for different genders*

Gender	M	Mean Differences	t	Significant
Male	109.76	7.15	5.13	.000
Female	95.05			

As Shown in table 3, the mean of the mobile devices use for males is (109.76), and it is significantly larger than the mean for female students (95.05) at *p< 0.001*. Thus, the first hypothesis is confirmed and the rate of mobile devices use for learning about English language in male students is significantly higher in comparison with the rate for female students.

In response to the second hypothesis about the differences between two genders according to their self-efficacy, motivational and attitudinal factors regarding using mobile tools for learning English language, the results are presented in table 3.

Table 4. *The Means and standard deviations of the subscales' scores for genders for self-efficacy, Motivational and attitudinal factors toward using mobile tools for learning English*

Gender	N	M	SD
Self-efficacy in using mobile devices			
Male	263	49.66	7.38
Female	203	28.51	7.48
Motivational factors			
Male	263	47.15	8.19
Female	203	35.57	8.34
Attitude			
Male	263	33.44	7.31
Female	203	31.25	6.97

According to table, in all the three subscales (Self-efficacy in using mobile devices, motivational and attitude) male students obtained higher scores. This table indicates that boys are more knowledgeable and have higher self-efficacy in using mobile devices than girls and they are motivated to learn about language skills than girls.

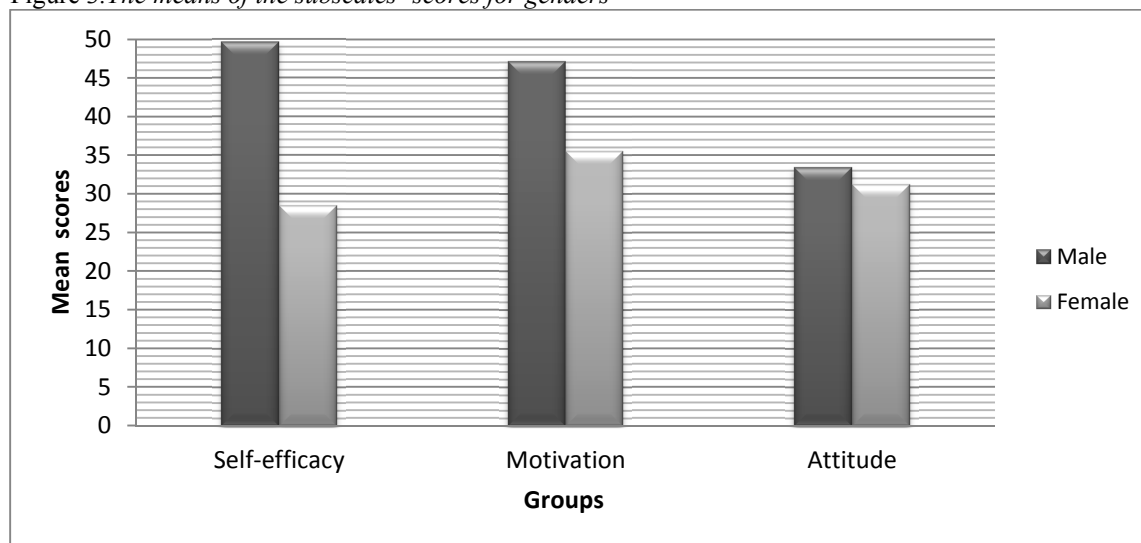Figure 3.*The means of the subscales' scores for genders*

Table 5. *The results of the independent samples test comparing the means of the subscales' scores for genders*

Gender	*M*	Mean differences	Significance	Standard error
Self -efficacy Subscale				
Male	49.66	7.15	.000	1.39
Female	28.51			
Motivation Subscale				
Male	47.15	5.37	.002	1.70
Female	35.57			
Attitude Subscale				
Male	33.44	4.18	.06	1.32
Female	31.25			

Note :* $p<.001$.** $p<.01$.

Based on table 4 and 5, male students obtained larger scores in all three subscales related to factors affected the acceptance of mobile technologies for learning English as a second language. As shown in table 5 male and female students are significantly different from each other regarding self-efficacy subscale at $p<.001$, motivation at $p<.01$. But there is not any difference between their attitudes toward using mobile technologies for learning English language.

4. Conclusion

Using mobile devices for teaching and learning is a new field in Iranian educational system. Although, a great majority (94%) of Iranian high school students in Sharkord had access to mobile devices but most of them do not use them for instructional uses. Like other technologies application of mobile facilities obey socio cultural pattern of the native nation. As other new innovations, men have more access to them and are more knowledgeable than women. As the results indicated, men had more advanced cellar phone than girls. They used these technologies in a variety of ways. Girls' usage was limited to ordinary areas such as for communicating with their parents and their families. Comparing with boys, girls used cellar phone for learning English less than boys. One of the reasons is students' self-efficacies in using new technologies. Boys had higher self- efficacies than girls. One of the most important reason is that they learn from their friends, they seek help from different resources for asking their questions and getting help from them. In contrast, girls are more task oriented and they attempt to satisfy their parents and their teachers, so they will do everything that they are asked them to do. The results of this study is in line with other studies such as Zamani, 1997, 2010a, 2010b, Zamani and Azimi in 2011; Akman and Mishra, (2009), Eurosate (2010) , Ono Zavodny, Limayem , Khalifa ,and Frini (2000) , R. Dholakia ,

N. Dholakia ,and Kshetri (2003). A number of studies have indicated that women are less likely than men to use the Internet, particularly in the mid of the 1990s, when the technology first became accessible to the general public. Gender differences in adoption rates may exist so far as a result of the fact that men and women generally differ in socioeconomic status, which affect computer and the Internet access and use. Unsurprisingly, men tend to be more interested in computers than women. Thus, this contributes to gender differences in other new technologies use. In US and Canada, It seems that genders have equal proportions in the population of the Internet. In contrast, in other advanced economies such as Sweden and Japan, men are still dominant and constitute larger portion of the Internet using population. In some countries, women Internet users have increased dramatically. As an illustration, between 1999 and 2000 the proportion of women Internet users drastically increased from 33% to 42% in Mexico and from 25% to 43% in Brazil. Although women constitute nearly 50% of the labor force in Asia, and occupy more than one third of small and medium businesses in the region, in 2000, only 22% of Internet users on average were women. In Africa, women's portion in The Internet use continues to be low, ranging from 12% in Senegal to 38% in Zambia (Taylor, Zhu, Dekkers, and Marshall (2003), According to Pierce, the gender gap is the largest in Mexico and Colombia. In Czech Republic, Portugal, Sweden, and the United States men have only slightly higher percentages than women as Internet users (Pierce, 2010). A study on gender differences in use of the Internet illustrates that the gender divide has narrowed considerably (Dholakia, 2006). However, DeBell and Chapman (2006) found that no difference was existed between genders regarding overall Internet use rate. It is hypothesized that there is no relationship between gender and people's Internet use. The obtained results indicated that the rate of English Web pages use by male students is significantly higher than the rate of English Web pages use by female student at   *p <.0001*.

The findings of the study are in line with the findings of Akman and Mishra, (2009), Eurosate (2010) , Ono Zavodny, 2003; Limayem , Khalifa ,and Frini (2000) , R. Dholakia , N. Dholakia ,and Kshetri (2003). . In all the above mentioned studies males constitute larger portion of the Internet using population. Study findings contradict researches by), Debell and Chapman (2006), and Ortega Egea, Menendez, and Gonzalez, (2007). In the above mentioned studies, males and females constitute equal portions of Internet user population. One of the probable reasons is that in developed countries such as USA and Canada and some of the European countries male and female residents use the Internet at equal portions. On the contrary, there is a gender gap between male and female Internet users in under developing countries as a result of the cultural biases and limited access that may be the result of the economical limitations.

It should be noted that the results of the current study confirm the results obtained by Rehee and Kim (2004) in South Korea , Chen & Wellman (2004) in China, Germany, Korea, Italy, Japan, Mexico, UK, and USA , Digital Media Across Asia(2010) in Malaysia , Maureen (2009) in Uganda ,and Arab , Blake ,and Neuendortf (2003) in Iran . In all the stated studies males constitute larger population of Internet users? On the contrary, It is worth to mention that according to Siddiqui (2008) In Saudi Arabia females are more likely to adopt and use Internet services , this is mainly due to the nature of the Saudi Arabia society which can be described as conservative (In such a society a female tends and prefers to manage her needs via the Internet from her home.

Having more knowledge about the application of new technologies such as mobile devices, causes people be more interested and motivated for using these tools in variety of situations. They will be persuaded to buy more advanced peripherals such as multimedia, Mp3 player, Educational films and more suitable software.

The results also indicated that both genders had positive attitudes toward using cellar phones for learning English as a second language. The results of this study are beneficial for decreasing the digital gap between different groups. With educating children about the opportunities that this new technologies provide for everyone, they will be motivated for using them in a good way and prevent from the bad effects of using these technologies such as addiction to computer and internet addictions.

5. Thanks

6.   References

Akman,I.,and Mishr,A.(2009). Gender, age and income differences in internet usage among employees in organizations**.**   Retrieved   January10,   2011,   from

http://www.sciencedirect.com/science?_ob=ArticleURLand_udi=B6VDC
4Y52J1J1and_user=10and_coverDate=05/31/2010and_rdoc=1and_fm.

Arab, F., Blake, B. F.,and Neuendorf, K. (2003). Attracting Internet shoppers in the Iranian market. Retrieved January10,2011,from.http://academic.csuohio.edu/cbresearch/papers/Good%20PDFs/Attracting%20Internet%20 Shoppers%20in%20the%20Iranian%20M.

Chen, W. and Wellman, B. (2004) The Global digital divide – within and between countries, *IT and Society*, 1(7), 39-45.

Davis, F. D., Bagozzi, R. P. & Warshaw, P. R. (1992), Extrinsic & Intrinsic Motivation to Use Computers in the Workplace. Journal of Applied Social Psychology, 22: 1111–1132.

Davis, F.D. (1989). Understanding Information Technology Usage: A Test Perceived Usefulness, Perceived Ease of Use, & User Acceptance of Information Technology, MIS Quarterly, Vol. 13, No. 3, PP. 319-340.

Davis, F.D., Bagozzi, R.P., Warshaw, P.R. (1989). User Acceptance of Computer Technology: A Comparison of Tow Theoretical Models, Management Science, Vol. 35, No. 8, PP. 982-1003

Dearnleya, A., Haighb, j. & Fairballc, j. (2008). Using mobile technologies for assessment and learning in practice settings: A case study. *Nurse education in practice*, 8(3,197-204.

DeBell, M., and Chapman, C. (2006). Computer and Internet use by students in 2003 (NCES 2006-065). U.S. Department of Education. Washington, DC: National Center for Education Statistics.

Demetrovics , Z.; Beatrix, S .;& Sándor, R. (2008). The three-factor model of Internet addiction: The development of the Problems. *Behavior Research Methods,* 40 (2) 556-563.

Dholakia, R. R. (2006). Gender and IT in the household: Evolving patterns of Internet use in the United States. *Information Society, 22*(4), 231-240.

Dholakia, R. R., Dholakia,N.,and Kshetri, N. (2003). Gender and internet usage. Retrieved January 5, 2011, fromhttp://ritim.cba.uri.edu/wp2003/pdf_format/Wiley-Encycl-Internet-Usage-Gender-Final.pdf.

Digital Media across Asia. (2010) Malaysia Internet Penetration. Retrieved January 5, 2011, from http://comm215.wetpaint.com/page/Malaysia+Internet+Penetration.

Eurostat (2010). Human resources in science and technology. Retrieved January 12,2011 from http://epp.eurostat.ec.europa.eu/statistics_
explained/index.php/Human_resources_in_science_and_technology.

Fishbein, M. Ajzen, I. (1975). Belief, Attitudes, Intention & Behavior: An Introduction to Theory & Research, Reading, MA: Addison-Wesley.

Griffiths, M. D. (2008). *Video-game and internet addiction*. In Adolescent addiction: Epidemiology, assessment and treatment. New York: Academic Press.

Griffith, M. D. (2010). The role of context in online gaming excess and addiction : some case study Evidence . *Journal of Mental Health and Addictio*n, 8, 119-125.

Hausmann,R. Tyson,L.D.,and Zahidi,S.(2008). The Global Gender Gap. Retrieved January 8, 2011, from https://members.weforum.org/
pdf/gendergap/report2008.pdf.

Kripanont, N. (2006). Using a technology acceptance model to investigate academic acceptance of internet. Journal of Business System, Governance and Ethics, 1(2), 13-28.

Landry, M. Griffeth & Hartman, T. (2007). Socio-demographic characteristics in the German Health Interview and Examination Survey for Children and Adolescents (KiGgS)- operation list and public health significance, taking as an example the assessment of general state of health. Bundesgesundheitsblatt- Gesundheitsforschung-Gesundheitsschutz, 50,578-589.

Lau , B.T., and Sim ,C.H(2008). Exploring the extent of ICT adoption among Secondary school teachers In Malaysia. International Journal of Computing and ICT Research, 2(2). Retrieved January 10, 2011, from http://www.ijcir.org/volume2-number2/article 3.pdf.

Lee, M.K.O., Cheung, C.M.K., & Chen, Z. (2005).Acceptance of Internet-based leaning medium: The role of Extrinsic and intrinsic motivation .*Information and management*, 42(8), 1095-1104.

Lorenzo ,D ., Murray, S., Terzoli ,A.,and Xiaogeng ,Z .,(2004) . Development of a Web-based multilingual resource for equal access to ICT education in South Africa .Retrieved January 11, 2011.from http://ictes2004-gstit.edu.et.

Maureen, M.(2009). Internet governance forum (IGF) and gender issues in Uganda. Retrieved January 10, 2011, fromhttp://www.citizenjournalismafrica.org/en/blog/[user]/17-aug-2009/1933.

Ortega Egea, J. M., Menendez, M. R., and Gonzalez, M. V. R. (2007). Diffusion and usage patterns of Internet services in the European Union. Information Research*, 12*(2). Retrieved January 21, 2011, from http://InformationR.net/ir/12-2/paper302.html.

Oye, N. D. A.Iahad, N, A. B. Rabin, N. (2010). Behavioral Intention to Accept and Use ICT in Public University: Integrating Quantitative and Qualitative Data, Journal of Emerging Trends in Computing and Information Sciences

Rhee, K., and Kim, W. (2004). The adoption and use of the Internet in South Korea. *Journal of Computer-Mediated Communication (JCMC),* 9(4). Retrieved January 6, 2011, from http://jcmc.indiana.edu/vol9/issue4/rhee.html.

Saadé, R. G., & Kira, D. (2006). The emotional state of technology acceptance. Issues in Informing Science and Information Technology, 3, 229-239.

Saadé, R. G., Nebebe, F., & Kira. D. (2014). E-Learning Campus: A decade of lessons learned. Proceedings of Informing Science & IT Education Conference (InSITE) 2014 (pp. 245-253). Retrieved from http://Proceedings.InformingScience.org/InSITE2014/InSITE14p245-253Saade0656.pdf

Saade´, A. & Bahli, B. (2005). The impact of cognitive absorption on perceived usefulness and perceived ease of use in on-line learning: an extension of the technology acceptance model.*Elsevier Journal of Information & Management,   42   .*Retrieved   January,   23,   2011,   from http://140.133.9.112:8080/cgit/PaperDL/TKW_090921110107.pdf.

Siddiqui, H. (2008) Investigation of intention to use e-commerce in the Arab countries: A comparison of self-efficacy, usefulness, culture, gender, and socioeconomic status in Saudi Arabia and the United Arab Emirates. Ph.D. dissertation, Nova Southeastern University, United States – Florida.

Taylor, W. J., Zhu, G. X., Dekkers, J., and Marshall, S. (2003). Socio-economic factors affecting home Internet usage patterns in central Queensland .*Informing Science Journal, 6*, 233-246. VOL. 3, NO. 6, May 2012 ISSN 2079-8407

Wang, Y., Lin, H., & Tang, T. (2003). Determinants of User Acceptance of Internet Banking: An Empirical Study, International Journal of Service Industry Management, Vol. 14, No. 5, PP. 501-519.

Wang, Y.S., Wu, M.C. & Wang, H.Y. (2009). Investigating the determinants & age & gender differences in the acceptance of mobile learning, British Journal of Educational Technology, Vol. 40 No. 1, pp. 92-118.

Wang, Y.S., Wu, M.C. & Wang, H.Y. (2009). Investigating the determinants, age and gender differences in the acceptance of mobile learning*, British Journal of Educational Technology*, 40(1), 92-118.

Warschauer, M. and Meskill, C. (2000) Technology and Second Language Teaching and Learning. in J. Rosenthal (ed) Handbook of Undergraduate Second Language Education. Mahwah, NJ: Lawrence Erlbaum.

Warschauer, M. and Meskill, C. (2009). Practical approaches to foreign language teaching and learning, Peter Long AG, International Academic Publishers, Bern, 2009.

Zamani, B. E. (1997). Implementation issues in using computers in Iranian high schools, Unpublished PH.D dissertation, University of Toronto: Canada.

Zamani, B. E. (2010a), Challenges for using ICT in secondary schools of developing countries in 21th century: study of Iranian educational system, In Buckeet, D.S: Secondary education in 21 century, Nova science publishers: New York.

Zamani, B. E. (2010b), Successful Implementation factors for using computers in Iranian schools during one decade, Computers and Education, (1995-2005. Computers and Education, Volume 54 , Issue 1 (January 2010),Pages 59-68.

Zamani, B.E & Azimi, S.A. (2011), Cultural and ethical issues in using computers, in Kutais, B.G. Internet policies and issues, Nova science publishers: New York.

Zhang, L. (2003). Globalization and the teaching of English in China. *Hwa Kang Journal of TEFL,* 9, 36-48.

The IISTE is a pioneer in the Open-Access hosting service and academic event management. The aim of the firm is Accelerating Global Knowledge Sharing.

More information about the firm can be found on the homepage:
http://www.iiste.org

CALL FOR JOURNAL PAPERS

There are more than 30 peer-reviewed academic journals hosted under the hosting platform.

Prospective authors of journals can find the submission instruction on the following page: http://www.iiste.org/journals/   All the journals articles are available online to the readers all over the world without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. Paper version of the journals is also available upon request of readers and authors.

MORE RESOURCES

Book publication information: http://www.iiste.org/book/

Academic conference: http://www.iiste.org/conference/upcoming-conferences-call-for-paper/

IISTE Knowledge Sharing Partners

EBSCO, Index Copernicus, Ulrich's Periodicals Directory, JournalTOCS, PKP Open Archives Harvester, Bielefeld Academic Search Engine, Elektronische Zeitschriftenbibliothek EZB, Open J-Gate, OCLC WorldCat, Universe Digtial Library , NewJour, Google Scholar