Journal of Foreign Language Teaching and Translation Studies, Vol. 1 No. 2, August 2012, ISSN: 2645-3592

A Study of the Iranian EFL Students' Errors in the Pronunciation of Ten High-frequency Technology-related English Loan Words

Alireza Hojati
Yazd University
harries.alireza@gmail.com

Abstract

The increasing use of technology in different parts of the world has inevitably led to the borrowing of a sizeable number of English words by many languages, including Farsi. This study was carried out with the aim of determining the extent to which a group of undergraduate Iranian EFL students studying at Sheikhbahaee University could accurately pronounce ten commonly-used technology-associated loan words with regard to two criteria: the placement of word stress and the pronunciation of words' sounds. To this end, 50 students were randomly drawn from among the foregoing university's students. Each student was given the chance to pronounce each of the ten loan words in and out of context. The students' oral performance was recorded and then was subjected to quantitative and qualitative analysis. The quantitative analysis revealed that the errors' frequencies were relatively high with respect to most words and very high with regard to two words. The qualitative analysis, which was done utilizing the literature of contrastive phonetics and pronunciation systems of Farsi and English, helped partly explaining many of the students' errors and highlighting the need for the devotion of more pedagogical and research attention to the problems confronting Farsi-speakers in the area of the pronunciation of loan words.

Key Terms: technology-related words, pronunciation errors

Introduction

The increasing use of computers and a number of other technological devices have brought about sweeping changes in our lives and dramatically enhanced human's lives in different spheres, including higher education (Inoue, 2007).

According to Peters (2010), language students are among the beneficiaries of recent advances in technology, especially those associated with computers and the Internet; millions of them utilize these technological marvels for their educational purposes.

In this respect Kaplan and Baldauf (1997) noted that recent technology-associated changes and advances have led to the borrowing of a large number of English words by other languages, including Farsi.

As Celce-Murcia, Brinton and Goodwin (1996) point out, most loan words undergo spelling-associated and pronunciation-related changes when absorbed by and incorporated into other languages. Hence, it can be said that EFL learners and students whose mother languages have absorbed English loan words are likely to find it difficult to adhere to the accurate pronunciation of such words. It can further be said that such learners are likely to commit errors while using English loan words.

The available literature illustrates that English loan words pose certain problems for non-native learners and students of English (Bator, 2010; Partington, 1998; Swan & Smith, 2001). Further, a number of researchers have focused specifically on the area of pronunciation and have reported that English loan words present non-native learners and students from different linguistic backgrounds with a number of pronunciation-related problems (Daulton, 2008; Oksefjel, 1999; Perfetti, Rieben & Fayol, 1997; Viereck, Carstensen & Bald, 1986). Due to the increasing use of technology-related loan words in Iran and the limited amount of research attention they have received, there is the need for further research in this area. Therefore, this study seeks to explore the extent to which one group of Iranian EFL students can accurately pronounce 10 frequently-used technology-associated terms both in and out of context. The placement of primary word stress and the pronunciation of sounds relating to ten technology-related terms constitute the features examined in this study.

Methodology

Participants

A total of 50 EFL students studying TEFL, English Literature and Translation Studies at Sheikhbahaee University participated in this study. Twenty of the students were specializing in TEFL, eighteen in Translation Studies and twelve of them in English Literature. In terms of gender, thirty-nine of the participants were females and eleven of them were males. Apropos of the age of the participants, all of them were between 20 and 27 years of age. With regard to participants' level of English proficiency, all of them were third-year undergraduate students and; therefore, their proficiency level was fairly high.

Materials

Two sets of materials were used for collecting the required data in this study. The first set comprised 50 copies of a list of ten frequently-used technology-related terms (see Appendix 1). The second set of materials consisted of 50 copies of a two-page-long passage written by the researcher and edited three times by two professors affiliated with the Islamic Azad University. The passage contained all the ten technology-related words and was four paragraphs long (see Appendix 2).

Procedures

To elicit the required data from the participants, two separate, but related procedures were followed. First, each student was given a copy of the list containing the ten technology-associated terms and was asked to enunciate each word on the list. This procedure was followed with each participant separately and a recording device was used to record the participants' pronunciation of the words. Second, each participant was given a copy of the passage into which technology-related terms had been embedded and was asked to read the passage aloud one time. Each technology-related word had been used in the passage two times. So, each participant pronounced each of the ten words three times, once while reading it from the list and twice while reading the passage aloud. All the data corresponding to the oral performance of the participants at this stage were recorded by a recording device.

One point which must be noted here is that the recording device used in the study was not shown to the participants and its use by the

researcher was not revealed to them. The reason behind this is that, after consulting a number of professors teaching different reading-and speaking-based courses to students, the researcher came to realize that placing the recording device in a place where the participants could clearly see it while performing the required procedures, or providing them with information about its presence in the environment where they performed the procedures could undermine the validity of the elicited data since it could engender undue anxiety in them and make them speak somewhat unnaturally.

Data Analysis

For the analysis of the collected data, first, participants' recorded performance on the two procedures was listened to three times by the researcher and a two times by a professor of phonetics affiliated with the Islamic Azad University to ascertain if the participants had accurately pronounced each word in and out of context. The analysis criteria used here were the accurate placing of word stress and the accurate pronunciation of sounds corresponding to each technology-related word. The number of errors in participants' pronunciation of the words was then reported in percentage terms and summarized in tables.

Results

The following tables summarize the findings of the study. Detailed explanations of the results as well as their interpretation can be found in the next part of the paper.

Table1

Frequencies of errors made in the placement of word stress in out-of-context pronunciation of words

Technology-associated Words	Frequencies of Stress-placement Errors in Out-of-context Pronunciation of Words
Computer	42
Internet	49
E-mail	36
Mobile Phone	26
Bluetooth	23
Google	50
Flash Drive	12
Twitter	22
SIM card	45
Power Point	27

The above table, as indicated earlier, illustrates the frequencies of errors made by the study' participants with respect to the proper placement of word stress. As the table's data show, generally speaking, the frequencies of such errors were moderately high, although one word had a very low frequency of stress-placement errors.

Table 2

Frequencies of errors made in the pronunciation of sounds corresponding to the words in out-of-context pronunciation of words

Technology-associated Words	Frequencies of Sound-pronunciation Errors in Out-of-context Pronunciation of Words
Computer	37
Internet	0
E-mail	41
Mobile Phone	0
Bluetooth	34
Google	46
Flash Drive	12
Twitter	10
SIM card	0
Power Point	11

As stated earlier, the above table lists the frequencies sound-pronunciation errors made by the study's participants in out-of-context settings. The noticeable point which the frequencies reveal is that the number of errors relating to out-of-context pronunciations was fairly low. More noticeably, participants made no sound-related errors in pronouncing three of the words.

Table 3

Frequencies of errors made in the placement of word stress in the pronunciation of words in context (each word was pronounced two times by each participant)

Technology-associated Words	Frequencies of Stress-placement Errors in the Pronunciation of Words in Context
Computer	88
Internet	100
E-mail	70
Mobile Phone	52
Bluetooth	40
Google	100
Flash Drive	18
Twitter	40
SIM card	94
Power Point	46

As indicated earlier, the above table presents frequencies of stress-associated participant errors. What makes the data presented in this table different from the data presented in Table 1is that this table's data are related to those stress-related errors made by the participants while reading out contextualized technological terms. The table's data indicate that the frequencies of errors were relatively high, a trend similar to the one Table 1 illustrates.

Table 4

Frequencies of errors made in the pronunciation of sounds corresponding to words in the pronunciation of words in context (each word was pronounced two times by each participant)

Technology-associated Words	Frequencies of Sound-pronunciation Errors in the Pronunciation of Words in Context
Computer	68
Internet	0
E-mail	74
Mobile Phone	0
Bluetooth	62
Google	60
Flash Drive	10
Twitter	22
SIM card	0
Power Point	18

The above table, as pointed out, lists frequencies of errors made by the study's participants with respect to the area of sound pronunciation. What makes this table's data different from those presented in Table 2 is that the data included in this table are related to those participant errors made while reading out the technological words embedded in a text. The figures illustrate that while participants made few errors with respect to the in-context pronunciation of three words and no errors in the pronunciation of another three words, they had a substantial number of errors in their pronouncing three more problematic words. Further, this table's data reveal the existence of some salient differences between the frequencies of participant errors committed in out-of-context and in-context settings.

Table 5

Total number of errors in the out-of-context pronunciation of words

Total Number of Errors in Out-of-context Pronunciation of Words	Frequency
Errors in the Placement of Word Stress	332
Errors in the Pronunciation of Sounds	191

The above summary table reveals that the total number of participant errors in the area of stress-placement was appreciably higher than the number of errors they made in the area of sound pronunciation. This point, which deserves attention and analysis from a contrastive analysis perspective, has been taken care of in the next section of the paper.

Table 6

Total number of errors in the pronunciation of words in the context of reading the text

Errors in Pronunciation of Words in the Context of a Passage	Frequency
Errors in the Placement of Word Stress	648
Errors in the Pronunciation of Sounds	314

This summary table illustrates that the frequencies of participant errors differed substantially in areas of stress-placement and sound pronunciation. As it shows, the total number of errors in the area of stress-placement was more than two times the total number of errors made in the area of sound pronunciation. This salient point has been picked over and explained in the next part of the paper.

Discussion and Conclusions

As Tables 5 and 6, which summarize the results of the study, indicate, participants made more pronunciation-related errors in the area of stress-placement than they did in the area of sound-pronunciation. As Table 5 illustrates, errors falling into the latter category were substantially fewer than those falling into the former category in out-of-context settings. Table 6 illustrates a similar trend and shows that errors associated with

the placement of word stress were more than two times the number of errors corresponding to the accurate pronunciation of words' sounds.

The existing literature on the contrastive analysis of Farsi and English pronunciation systems may be of great help in explaining and interpreting the findings of this research.

With regard to the area of word stress, as Yarmohammadi's (1995) detailed contrastive analysis of Farsi and English pronunciation systems reveals, there are outstanding dissimilarities between Farsi and English in many areas of pronunciation, not least in the area of word stress. Yarmohamadi (1995) has explained that one prominent difference between Farsi and English as relates to word stress is that, unlike English, Farsi word stress enjoys "a high degree of predictability" (1995, p. 75). Echoing the same point, Rafiee (2001) has pointed out that in Farsi; word stress is oftentimes assigned to the final syllable of a word. Swan and Smith (2001) have reiterated this point: "Stress in Farsi stress is highly predictable, and generally falls on the final syllable of a word" (2001, p. 182). Swan and Smith (2001) have also focused on the pedagogical implications stemming from the predictability of word stress in Farsi in the context of learning English by Farsi-speaking learners and students. According to them, Farsi-speaking learners and students encounter "great difficulty mastering the unpredictable stress of English" and often tend to place stress on the final syllables of English words (2001, p.182).

Regarding the area of pronouncing sounds corresponding to the words, although the number errors committed was substantially lower than that of the area of word stress, the already-existing literature entails a couple of notable points which serve to partially explain the occurrence of a comparatively large number of errors falling into this area and are worth mentioning here.

The first point is that, as Swan and Smith (2001) have said, Farsi and English differ from each other "in their range of sounds" (p.179). One implication of this is that Farsi-speaking learners and students "have great difficulty in perceiving and articulating the full range of English vowels and diphthongs" (p. 179).

Another point in connection with sound differences between Farsi and English has been referred to by Coelho and Rivers (2004). According to them, speakers of many languages, including Spanish and

Farsi, find it difficult to pronounce a number of "individual sounds and combinations of sounds" of the English language (p. 58). One reason for this, according to the foregoing authors is that in Farsi, there are no initial consonant clusters. Swan and Smith (2001) argued that "Consonant clusters do not occur within single syllables in Farsi, and Farsi speakers therefore tend to add a short vowel, either before or in the middle of the various English Clusters (p.181).

Reflecting the same point, Celce-Murcia, Brinton and Goodwin (1996) have referred to the insertion of vowels in consonant clusters, especially the ones occurring syllable-initially, as a common phenomenon among speakers of Farsi and a number of other languages.

Juxtaposing the results of the study with the points mentioned above, many of the stress-related and sound-related errors committed by the participants of this study can be better interpreted.

The technology-associated words „Bluetooth' and „Flash drive' were mispronounced many times by the study's participants. Most of the errors detected in relation to these three words were the ones associated with the insertion of vowels between the consonant clusters of the words. The syllable 'bl' in the word 'bluetooth' was pronounced /bul/ twenty-three times out of context and forty times in context by the participants.

In a similar vein, the first part of the word „flash drive" was pronounced /felash/ twelve times in out of context and eighteen times in context. Further, the mispronunciation of the final syllable of the word „Google", which was pronounced /gel/ fifty times in out of context and 100 times in context by the participants, can be partly explained invoking the same point.

In the case of the word 'Twitter', although the word does not have a consonant cluster, it was observed that the first syllable of the word, viz. 'Twi-' was mispronounced many times by the participants through the insertion of a redundant vowel sound between the word's two beginning sounds. So, the word in question was pronounced /tuwiter/, which clearly represents a case of mispronunciation.

Although the available literature does not give an explanatory clarification of this type of pronunciation error, it can be speculated that the blending of Farsi and English pronunciations of the word and the

tendency of the participants to ease the pronunciation of the first syllable of the word are to blame for the insertion of a redundant vowel in it.

The mispronunciation of the technology-related words 'Internet', "e-mail" and "SIM card", which were mispronounced with regard to word stress placement by the study's participants one-hundred, seventy and ninety-four times out of context respectively can also be partly explained using the above-presented data. As stated earlier, word stress in Farsi is highly predictable and usually falls on the final syllable of words, whereas stress in English is anything but predictable and is governed by a wide variety of complex rules. Therefore, the strikingly high frequencies of word-stress-related errors in the pronunciation of the word "Internet" can be partly accounted for by invoking differences in the area of word stress between English and Farsi and perhaps the tendency of the participants to assign primary stress to the word's final syllable. The same holds true of "e-mail" SIM-card, "mobile phone" and "Power Point", all of which were mispronounced by the participants through the assigning of primary word stress to their final syllables.

Errors corresponding to the word "computer", which was mispronounced 37 times out of context and 68 times in context, can be partly explained by invoking another concept called "spelling pronunciation". A clear definition of the foregoing term has been offered by Gelderen (2006). According to him, 'spelling pronunciation' refers to "a phenomenon where speakers pronounce words as they are spelled" (p.17). To link the above-mentioned concept to the mispronunciation of the word 'computer', the words of Swan and Smithcan be invoked.

According to Swan and Smith (2001), Farsi spelling is "more or less phonetic" and largely represents the way words are spelled (p. 182). Therefore, Farsi-speaking learners "tend to associate particular letters with particular sounds" (p.182). In the case of the word "computer", the tendency to pronounce the letter "o" as "a" (Ĭ) is partly to blame for the mispronunciation of the word. Another point the invoking of which helps account for this error is that, as Swan and Smith (2001) have suggested, some English vowel sounds are problematic in terms of their pronunciation for Farsi-speaking learners and students since they don't have precise counterparts in Farsi.

In the light of the above-listed points and the fact that Farsi-speaking learners and students frequently use English load words, the occurrence of a large number of errors in the accurate placement of word stress on

technology-associated words and the accurate pronunciation of their sounds seems bound to persist. Ergo, this area of research seems to be worthy of further scholarly and research attention in Iranian EFL contexts.

References

Bator, M. (2010). *Obsolete Scandinavian loanwords in English*. Frankfurt: Peter Lang.

Celce-Murcia, M., Brinton, D., & Goodwin, J. (1996). *Teaching pronunciation: A reference for teachers of English to speakers of other languages*. New York: Cambridge University Press.

Coelho, E., & Rivers, D. (2004). *Adding English: A guide to teaching in multilingual classrooms*, (Vol. 2003). Toronto: Pippin Publishing Corporation.

Daulton, F. (2008). *Japan's built-in lexicon of English-based loanwords*. New York: Multilingual Matters.

Gelderen, E. (2006). *A history of the English language*. Amsterdam: John Benjamins Publishing Company.

Inoue, Y. (2007). *Technology and diversity in higher education: New challenges*. The United States of America: Idea Group Inc (IGI).

Kaplan, R., & Baldauf, R. (1997). *Language planning from practice to theory*. Bristol: Multilingual Matters.

Johansson, S., Hasselggard, H., & Oksefjell, S. (Eds.). (1999). *Out of corpora: Studies in honor of Stig Johansson*. The Netherlands: Rodopi.

Partington, A. (1998). *Patterns and meanings: Using corpora for English language research and teaching*. Philadelphia: John Benjamins Publishing Company.

Perfetti, C., Rieben, L., & Fayol, M. (Eds.). (1997). *Learning to spell: Research, theory, and practice across languages*. New Jersey: Taylor & Francis.

Peters, D. (2010). *International students and academic libraries: A survey of issues and annotated bibliography*. United Kingdom: Scarecrow Press.

Rafiee, A. (2001). *Colloquial Persian: The complete course for beginners. London:* Rutledge.

Swan, M., & Smith, B. (2001). *Learner English: A teacher's guide to interference and other problems,* (Vol. 1). United Kingdom: Cambridge University Press.

Viereck, W. (1986). *English in contact with other languages: Studies in honor of Broder Carstensen on the occasion of his 60th birthday*. United States of America: Akadémiai Kiadó.

Yarmohammadi, L. (1995). *A contrastive phonological analysis of English and Persian: A course book in applied phonological studies*. Shiraz: Shiraz University Press.

Appendix (1)

List of Ten Technology-associated Words

Computer

Internet

E-mail

Mobile Phone

Bluetooth

Google

Flash Drive

Twitter

SIM card

Power Point

Appendix (2)

The Passage Containing the ten-technology-related tersmTechnology influences our daily lives. Today, people of almost all age groups, especially teenagers and young adults between the ages of 20 and 30, are familiar with and use a wide range of technological devices and services almost on a daily basis.

Computers are perhaps the most commonly-used technological machines these days. They are used to process data, access the Internet, which is a network of networks, contact others through sending them electronic mails, widely known as "e-mails", and make complex scientific calculations. Despite their increasing use, some say that computers do more harm than good. They argue that these machines make people addicted to an dependent on themselves, endanger their health and reduce face-to-face contacts between humans. The Internet, they say, is also essentially addictive and can alienate people from the real world around them. Also, e-mails promote virtual contacts, which can never be as effective as real, face-to-face contacts and drive a spiritual wedge between humans. Further, social networking sites, such as Twitter, critics say, create "pseudo-real-life" relationships and bonds between people. The more people use such harmful websites, the more isolated from real-life they will become. To highlight this, one critic has suggested that "Twitter" should be called "the all-enticing virtual trap". Even the hugely popular search engine "Google" has come under fire for a number of reasons. One reason is that, like many other online entities, users can get addicted to and excessively reliant on Google's search engine, something which is often referred to as "obsessive Googling". Moreover, some educationalists have recently drawn attention to the increasing use of the Power Point program to organize and present academic materials in schools and universities. They have expressed serious concern that the outsized use of Power Point presentations can have a negative impact on the quality of education since it can create boredom in students and encourage instructors to do away with the effective use of the board and the adequate explaining of instructional points in the class. Besides, flash drives, special data-storage devices used for data-storage and transfer, are so small that people frequently miss them. Also, most flash drives are too delicate and are easily damaged.

Mobile phones are also popular with millions around the world. They, like many other technological gadgets and machines, have attracted

widespread criticism. One criticism is that to make these phones, rare minerals are needed in large quantities, and these materials are often obtained through illegal activities including smuggling and child labor. Further, cellular phones can be used to spread all sorts of information. Bluetooth technology, for instance, has made it possible for people to readily transfer socially and morally inappropriate materials from one mobile phone to another. Teenagers are particularly vulnerable to inappropriate materials spread through the Bluetooth service, and it has led many parents unwilling to buy cell phones for their teenage children. Moreover, if the SIM-card of a cell phone, which contains important information, is damaged or lost, the phone will stop functioning. Having a damaged SIM-card repaired or buying a new one costs the cell phone owner a lot of money, and the repair activities can take time.

Despite all of the bad things linked to technological machines and devices, they have certainly benefited humans in different ways. Also, the increasing use of such machines and gadgets means that they represent a potent force to be reckoned with in the twenty-first century.