

Research Article

TECHNOLOGY AND ENGLISH LANGUAGE PRONUNCIATION

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ABSTRACT

To be a native like in pronunciation, the crucial factor is applying the native like teachers in EFL classes. Unfortunately in some countries like Iran, there is not any availability of the native teacher. For this reason, our teachers should prepare some authentic materials as a proper technology for teaching purposes; this study tries to investigate the effectiveness of technology -based pronunciation instruction to help EFL advanced learners at Zanjan University to understand and learn the stress patterns correctly. I will focus on e communicative approach on “Phonology”. I would like to introduce this software to all instructors for improving EFL pronunciation teaching in our country. This study is carried among 50 EFL learners in advanced level EFL classes in Islamic Azad University of Zanjan. The findings of this study indicated that technology assisted pronunciation instruction is very effective in promoting learner’s attitudes, perception, learning, and production of correct stress patterns.

Keywords: *CALL, Suprasegmental Features, Stress*

INTRODUCTION

The Technology-assisted language learning (CALL) is the use of technology enhanced techniques in EF learning and teaching (Anani, 1989). One aspect of CALL is Technology-assisted pronunciation (CAP) based on the application of technology to teach the segmental and suprasegmental features of sound system. It is stated by Bott (2005) as the use of digitized speech for improving language pronunciation. CAP (Technology-Assisted Pronunciation) has been used in teaching pronunciation to achieve two purposes: assessing and teaching stress patterns of EF pronunciation.

Because of the failures of EEL students in Iran to progress in pronunciation, the researcher decided to introduce above mentioned software (CAP) as a beneficial and authentic materials for teaching EF pronunciation. Technology-Assisted Language Learning (CALL) is the use of technology enhanced methods and techniques in language learning and teaching (Dekaney, 2003).

CAP is the use of technology for teaching and learning the sound system, to improve and achieve native like pronunciation. CALL Has a different software packages to provide EFL learners with chances to exercise pronunciation, Felix (2005). Raux and Kawahara (2002) emphasize that CAP enables students to get unlimited authentic EF input using different channels and provides access to feedback automatically and spontaneously.

Technology helps FL learners and instructors to improve their pronunciation system. Interactive features of CALL introduce a very effective approach to pronunciation instruction (Roach, 2004). CALL provides autonomy to the students to develop EFL ability (Pennington, 1999).

Technology has been used in acquiring pronunciation to maintain two purposes: (a) understanding learner’s deficiencies in pronunciation and (b) helping learners to correct the deficiencies (Rostron and Kinsell, 1995). CAP has best-quality for sound giving the students the chances to look at articulatory movements to producing sounds (Grant, 1995). He also points out that good pronunciation ability can be optimized not by segmental but suprasegmental production.

Therefore, this research is based on suprasegmental features to help students to learn pronunciation ability. Four important factors for stressed syllable in the word can be: loudness, pitch, length, and quality (Bott, 2005).

In order to get more familiar with stress, its description is necessary, so the definition is as the prominence of a syllable, achieved through a relative increase in loudness. It also is longer in duration and be at a higher pitch.

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Research Background

Recent computer-based pronunciation teaching focuses on the communicative method. Bott (2005) emphasizes student's need to achieve the "semi-perfect accents" So, attention should be placed on suprasegmental features of pronunciation, to help EFL students to reach high level of communicative competence (Roach, 2004). Tanka *et al.*, (2004) assert various researches and pronunciation materials develop state that teaching suprasegmentals to advanced EFL students can be more very useful in a shorter period of time.

Researchers investigate EF sound system in two main steps: segmental and suprasegmental, Bott (2005) states that "Segmental aspect of the sound system includes vowels and consonants, but the suprasegmental aspects are word, phrase, and sentence stress, intonation, and rhythm", (p. 304). This study pay attention to teaching of suprasegmental features rather than segmental since the later can be easily taught than former, Tanka *et al.*, (2004). Recently, attention to pronunciation has been shifted from segmental to suprasegmental aspects of sound system (Bott, 2005).

Recently, more attention has been paid to the learning word and sentence stress (Levis, 2007). Based on the researcher experience as an EFL teacher in the universities of Iran, there is an urgent need to conduct more studies on the use of different techniques in teaching pronunciation. Delmonte (2011) studied the effect of the segment-based approach involving the elicitation of individual sounds and syllables and the suprasegmental approach which focuses on larger units incorporating stress. Siennicki (2005) found that the technology is useful in learning different aspects of language pronunciation such as stressed and unstressed words.

Levis (2007) explored student's perceptions toward suprasegmental features of pronunciation in English, referring to features associated with the concept of 'stress timing'. He concluded that the learners got the stress timing quite accessible, and the use of software provided them any chances that they did know before. Levis (2007) also investigated learners perception toward technology-based pronunciation devices designed to teach stress and found it to be useful.

Statement of the Problem

In every language the vital ability is to master speaking is having a good pronunciation skill, close to the native like accent. Many EF teachers meet some difficulty in teaching pronunciation, mainly those who are not specialists in that field and do not know how to use Technology based materials.

Many technology based pronunciation studies have been carried out with few students in a short period of time but this study will be done with many subjects and in long period of time using to make it very reliable and valid.

The Purpose of the Study

The main purpose of this research is the use software for the learning stress pattern, to achieve native like competence. This study also will focus on not only strong stress full vowel, but also on weak unstressed in weak vowels.

Significance of the Study

Due to the lack of authentic pronunciation materials, teachers have hardest difficulty in teaching of EF pronunciation and in intonation (Levis, 2005). Bott (2005) points out the instructors must select appropriate material for teaching pronunciation aspects. There are fragments of studies focusing on the usefulness of technology-based pronunciation emphasizing the impact of CAP instruction (Roach, 2004). Therefore, this study stresses the usefulness of CAP for learning pronunciation.

The Research Questions

This study tried to find justifiable answers to the following questions:

- 1) Will the use CAP leads to significantly better results in pronunciation than traditional techniques?
- 2) Will CAP optimize learning of stress pattern of the students?

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MATERIALS AND METHODS

Methodology

Subjects

50 participants were randomly selected from 80 students of Islamic Azad University in Zanjan-Iran. Their age ranged from 22 to 24 and they were in advanced level. They were all native speakers of Turkish and nonnative speakers of English and Farsi. The participants were randomly divided into two groups: one experimental and one control group.

The experimental group practiced using software individually over two sessions for 14 weeks, one session per week over the semester for about 1.30 minutes each session. The experimental group used CD-ROM, and the control group got the traditional pronunciation instruction. After instruction, students were asked to pronounce the words correctly and performed the dialogues. The control group received feedback equivalent to the feedback provided by the CD-ROM but in classroom setting.

Instruments

1. Software

Mouton Interactive Introduction to Phonetics and phonology software is used as instructional tool. It is based on communicative approach and an interactive pace for students in phonetics and phonology. It includes 1. Phonetics section containing all aspects of articulation of speech sounds, auditory and acoustic phonetics. 2. Phonology section having many pronunciation aspects “such as the phoneme, distinctive features, non-linear phonology, British and American English sound system (Handke, 2000). The program has a variety of pronunciation activities, various exercises to develop suprasegmental features awareness of pronunciation (Handke, 2000).

2. Task

The basic points were briefly introduced to EFL learners. The focus of the course was stress. Phonemic transcription, including the stressed syllable and the weak form, was also important as students learned how to transcribe EFL passages.

3. Tests

KET 2000 was administered to 300 students to check Language proficiency of the learners. The EFL pronunciation test taken from this site <http://www.eslflow.com>, was applied as the test for homogenizing the students in terms of pronunciation. 50 students were chosen based on the one standard deviation below and one standard deviation above the mean

Procedure

The following seven phases were applied in this study:

50 participants were randomly selected from 80 students of Islamic Azad University in Zanjan-Iran. Their age ranged from 22 to 24 and they were in advanced level. They were all native speakers of Turkish and nonnative speakers of English and Farsi. The participants were randomly divided into one experimental and one control group. The experimental group worked on the software individually over two sessions for 14 weeks, for about 1.30 minutes each session. KET 2000 was administered to students to check Language proficiency of the learners. A piloted teacher made EFL pronunciation test was applied for homogenizing the students in terms of pronunciation knowledge. This test was also considered as a pre-test to be compared with post-test performance. Both groups were taught by the researcher. The experimental group used CD-ROM, and the control group got the traditional pronunciation instruction. After listening, students were asked to pronounce the words correctly and perform the dialogues. The control group received feedback equivalent to the feedback provided by the CD-ROM. Technology based instruction was used with the treatment group while traditional methods were used with the control group. Finally a post was administered to check the differences.

In this study following activities were performed:

1: Identification of Stressed Syllables in Real Words

A real word was given, then, they were asked to identify the stressed syllable. Then, they listened to the correct pronunciation of the word; afterwards, they got feedback from the system evaluating user electronically; and finally, they listened again and pronounce the word correctly.

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2. Stressed Syllable in Synthetic Words

Students listen to the expressions and sentences by a native speaker; then, they were asked to identify the main stress carrying syllables; afterwards, c. they were assessed electronically by the program and then provided with feedback about the sentence and listened again to say the expression correctly.

3. Phonemic Transcription

The learners were submitted with the phonemic transcription; they needed to transcribe the word phonetically and identify the main stress carrying syllable by using of virtual keyboard; then, they listened to the native speaker to say the word; afterwards, they were evaluated electronically and then provided feedback about the response.

4. Weak Form Identification

A sentence including the words that maybe weaken, since, they are placed in unstressed position were show the students; they should mark the words by clicking; then, they listened to the native speaker and then said that; afterwards, they were evaluated electronically and received feedback about the sentence; finally, sentences were rehearsed and then performed.

RESULTS AND DISCUSION

Results

Results of data analysis indicated that technology based instruction is much better than traditional one in learning EFL word stress. Table 1 & 2 shows means and standard deviations for both groups stating that experimental group outperformed control group on the post-test. The t-test was run to check the differences between the means and it was found that results were significant at the $p < .05$ level.

Table 1: Descriptive Statistics for Pre-test

| N | Minimum | Maximum | Mean | Std. | Deviation |
|--------------------|---------|---------|-------|-------|-----------|
| Experimental group | 25 | 10.00 | 21.50 | 15.25 | 7.432 |
| Control group | 25 | 8.50 | 22.50 | 15.50 | 5.467 |

The results of the study indicated that there was no significant differences between the scores of the two groups (Group 1: mean =15.25; Group 2: mean = 15.50) on the pre-treatment pronunciation test. There were no significant differences in the performance of the two groups on the pronunciation pre-test. The results of T test analysis also confirmed this.

Table 2: Descriptive Statistics for Post Test

| N | Minimum | Maximum | Mean | Std. | Deviation |
|--------------------|---------|---------|-------|--------|-----------|
| Experimental group | 25 | 28.00 | 47.00 | 37.500 | 6.60 |
| Control group | 25 | 4.30 | 20.00 | 22.25 | 4.75 |

Group ($N = 15, M = 9.16, SD = 5.23$); control group ($N = 15, M = 9.80, SD = 5.65$); experimental group on the pronunciation pre-test: ($N = 15, M = 9.16, SD = 5.23$); control group on the pronunciation pre-test: ($N = 15, M = 9.80, SD = 5.65$).

Comparing the results of the groups descriptively; the mean of experimental group = 37. 50, and the mean of control group = 22.25, it was concluded that the experimental group has improved in learning of stress patterns than control group. Finally, comparing T values, obtained T was less than critical T, therefore, it can be concluded that the treatment was effective in learning of stress patterns in EF pronunciation.

Conclusion

So far, stress patterns, using CAP, have not been studied effectively. Bott (2005) reports that teaching of word and sentence stress has not been paid that much attention like Language skills. Therefore, The researcher felt urged need to conduct a study to develop more techniques to teach pronunciation.

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Siennicki (2005) finds that technology is very effective in teaching different aspects of language pronunciation such as stressed and unstressed words.

Some studies have investigated learner's attitudes toward suprasegmental features like stress. Bott (2005) explores EFL learner's use of the audio-digitizing software gives them a perspective that they have not been able to experience before. He also investigates students attitudes toward computer-based self-access pronunciation materials designed to teach EFL stress. Student state that they have improved EFL awareness of features of stress in EFL pronunciation.

As researchers state CAP can be the effective and innovate way to learn and produce pronunciation of stress patterns authentically. Yildiz and Atkins (1993) concluded that technology can be effectively incorporated into EFL curriculum since, the experimental group out performed control group in pronunciation.

In conclusion, the students who participated in the technology based pronunciation training obtained better results in their overall test scores than the control subjects did on the stress tasks and activities based on real words, phrases or sentences received higher scores than those including unreal or non-existing sequences of English words or sentences.

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