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Using Text to Speech Software in Teaching Turkish for Foreigners: The Effects of Text to Speech Software on Reading and Comprehension Abilities of African Students

Bekir GUCLU*
M. Sinan YIGIT**

Abstract

In this study we will examine TTS software and its effectiveness on Reading Comprehension in teaching Turkish Language for foreigners.

Computer Assisted Language Learning (CALL) has started with the advent of computers and related software. After the dominance of English as a global language, many people became interested in learning English individually thus Language learning softwares emerged as a self-aid for learners. As the computer technology progressed, it has given opportunity for learners to develop language skills using computer. Text to speech software is the latest development of computer technology which is applicable at communication sector such as call centers, talking watches and mobile phones but it has made a big impact on language learning as well. TTS enables learners of the language to practice on reading passages at their own pace without teacher and social pressure. The experiment showed that using a Text to Speech Software in Turkish Language has some drawbacks but still effective for learners.

Keywords: Reading Comprehension, Turkish for Foreigners, Text to Speech, Language Teaching

Introduction

Using technology in language learning goes back to 1950's and 1960's after the introduction of language laboratories in terms of audio and video cassette players (Keller, 2000). Learners were able to practice the target language using tape recorders so that they can record their own voices and later they could compare their voices with the native speaker's easily. This type of entities has served a big purpose since the means of mass communication like internet and media has not yet developed in those days (Sobkowiak, 1998). These language labs have made the language learning more fun and effective for both teachers and the learners. With the advent of personal computers, language learning has taken a new direction which produced more personal and do it yourself methods for language learners (Chapelle, 2001). With the English language's dominance all over the world parallel to the spread of internet, the demand for learning a new language especially English has gone up. As a result to that, lots of language learning software has been produced mostly in computer software format. New multimedia learning softwares were consisting visual and audio format. Although the main objective of these softwares were to teach the new global language English, later other world languages were included in the software (Chapelle, 2001).

The developments of technology has made it possible to store and sort the language resources which enabled developers and researchers to find the similarities and differences of the world languages. Using computers in teaching languages has grown rapidly that language instructors all around the world were forced to use computer softwares to conduct their language classes.

Although some researchers like Egbert and Chapelle (2010) claims that language softwares are attractive and colorful for learners so that they can learn the languages more easily than the face to face lessons in the class since

* M.A., Canik Basari University, International Relation Office, Samsun, Turkey.
E-mail: bekirguclu@basari.edu.tr

** M.A., Fatih University, Ankara, Turkey.
E-mail: m1sinan@hotmail.com

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the learners are given an artificial classroom environment where no fear and no anxiety towards the language and the teachers. On the other hand some researchers state that expecting the computer softwares to make the learners happy and successful is a deception created by the illusion of the technology (Keller, 2000).

With the advent of technology and its use in language learning have emerged a new term called Computer Assisted Language Learning (CALL) in the last decade. (Keller, 2000). CALL later evolved into a branch of science dealing with the use of computers and related softwares in language learning. One of the sub elements of CALL which has developed recently is called Text to Speech which basically makes the computers talk in target language through Speech Synthesis (Santiago, 1999).

Text to Speech programs were built to provide speech from the text input in different speech models according to the target languages (Cohen, 1993). TTS software and its use in Language learning is still under progress and the computer applications to provide TTS for learners are limited (Egan and LaRocca, 2000). Most of the computer software claiming the Text to speech synthesis are not yet evaluated by the researchers therefore the aim of this study to evaluate the effects of TTS software on Reading Comprehension ability of students in Turkish Language for Foreigners Class. Since it has not been applied before this experiment stands a chance to be a Pioneer to the researchers who would do research in this area in the future. In this experiment the researcher has investigated the effects of TTS software on reading and comprehension abilities of the learners of Turkish Language for foreigners.

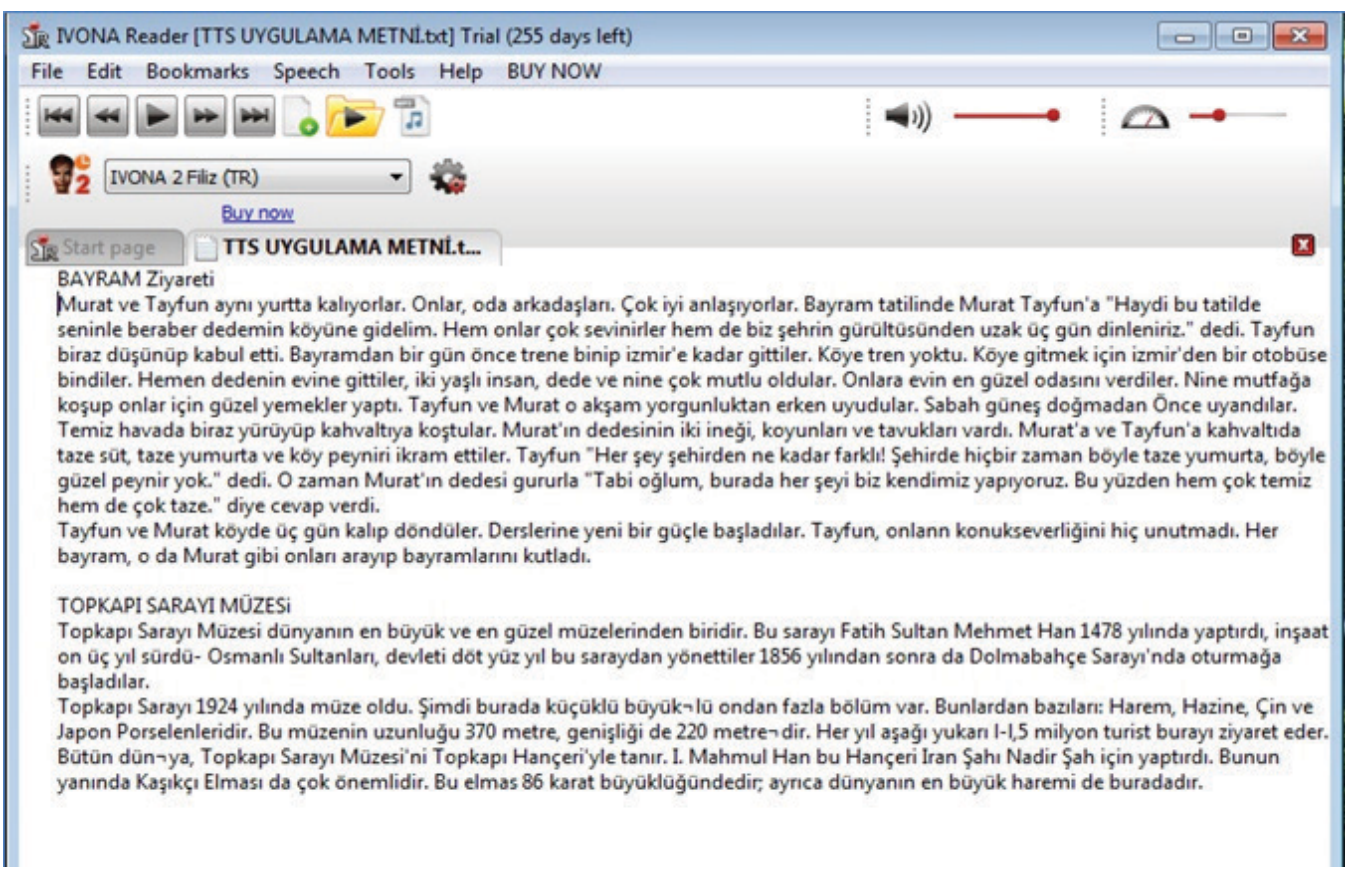
Course Materials

In this study IVONA Text-to-speech software 1.4.21 Turkish was used. We preferred the programwhich enables user to copy and paste any text at any length.Users ability to adjust the speed of the speech was another advantage. Since the students were at B1 level, normal level of the speech speed was selected but repeated 3 times for each reading passage. In our study, LaleTürkçeÖğretimSeti 3rd Book chapter 10 (Akçay, 2012) listening section texts were used. Student were provided with a blank paper first then they have listened to the passage once then they were given 6 WH- questions (Ne=What, Nasıl=How, Ne zaman=When, Niçin=Why, Nerede=Where) and Who =Kim). Students have listened the passage 3 times and they were asked to answer questionsabove. The reason why the passage was listened 3 times is that the program was not reading the text clearly and it had some intonation problem.

At the end student were given the written format of the TTS text to compare their answers with the passage. (Picture 1)

Application of TTS in Turkish Language Class

The experiment took 120 minutes. The study was conducted in a Turkish Language class of 10 students. First half an hour was used to explain how the study will be conducted. Students were given information about the TTS and its usage in



Picture 1.

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the study so that they get familiar with the software. To make the students familiar with the software some basic sentences practiced before the study. The teacher isolated himself from the class so that the effect of TTS can be analyzed openly. 3 different chapters were given to the students and each passage was repeated 3 times so as to make students understand the text better. During the study there was no control group. At the end of the reading sessions students were given answer sheets to write their answers for each WH- questions.

The statistics of the test as below:
Total number of students: 10
The number of questions asked: 18
The average correct answers: 8
The highest score: 18 out of 18
The lowest score: 5 out of 18

Results: Experiment results showed that the students' mean score was 10, 2 out of 18although it was repeated 3 times at slow speed. Students have complained about the wrong intonation of the words and wrong pronunciation of the Turkish words by TTS software. Another complain was the distortion of the sound during the listening section of the reading material. The software was not adequate to provide human like voice in Turkish. Lack of personal interaction of teacher and intonation has led the low score of the reading comprehension of the students.

Table 1: *The Statistics of the Correct and Wrong answers.*

Students	**Correct Answers**	**Wrong Answers**
Aminata	12	6
Djeneba	9	9
Fanta	8	10
Amy	9	9
Mariam	7	11
Bintou	11	7
Sabbath	12	6
Onesime	12	6
Balla	14	4
Adizatou	7	11
Average	10,2	7,8

Conclusion

Although TTS software has many practicality in major fields as communications and IT sector. It has some drawbacks in language learning. Although it has proved its effectiveness in English, French and German language, TTS software is not capable in delivering Turkish text yet. Lack of intonation, eye contact and real time class interaction can be named as major drawbacks of text to speech software. These drawbacks have made the students loose concentration since the software was missing the spirit of the teacher and was incapable of giving the exact intonation and pronunciation of the words so that students can understand the text clearly. Although Text-to-Speech has a future and good practicality in daily life, Face to face interaction in the class and humanistic approach has yet to be replaced by the computerized text to speech software in a short time.

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