

A COMPUTER ASSISTED PRONUNCIATION TEACHING (CAPT) PROGRAM FOR DEVELOPING ENGLISH PRONUNCIATION SKILLS OF EFL YOUNG LEARNERS

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Abstract

The main aim of the study was to investigate the effect of using an electronic language program for developing English pronunciation skills of primary stage students. To fulfill the purpose of the study, two instruments were constructed; first, a questionnaire to identify the most important and appropriate pronunciation skills for grade four primary stage students. Second, a pre-post pronunciation test with a rubric to score students' pronunciation productive skills during the pre-post test. The study adopted the quasi-experimental design. The participants of the study were (60) males and females students of grade four primary stage students. They were assigned into two groups; a control group and an experimental group. The control group was taught via traditional method while the experimental group was taught via the electronic language program. Results indicated the positive effect of using the electronic language program in developing English pronunciation skills of grade four primary stage students. It was recommended to cope with the trend that calls for utilizing CAPT (Computer Assisted Pronunciation Teaching) programs in a blended learning environment to develop English pronunciation skills of primary stage students.

الملخص

بي لتعليم النطق علي تنمية مهارات النطق للغه الانجليزيه لدي المتعلمين بالمرحلة الابتدائية. وقد تكونت عينة البحث من (٦٠) طالب وطالبه من طلاب الصف الرابع بالمرحلة الابتدائية تم تقسيمهم عشوائيا لمجموعتين:مجموعه ضابطه تكونت من (٣٠) طالب وطالبه تم تدريسهم بالطريقة التقليديه وأخري تجريبية تكونت من (٣٠) طالب وطالبه تم تدريسهم باستخدام برنامج الكمبيوتر. ولتحقيق هدف البحث تم استخدام اختبار تحصيلي قبلي بعدي مع محك للتقييم الشفهي بالاختبار. ولقد أظهرت نتائج البحث وجود فروق طلاب المجموعتين التجريبية والضابطه لصالح المجموعه التجريبية يعزي لطريقة تدريس النطق للغه الانجليزيه باستخدام الحاسوب. وأوصت الدراسة بتصميم برمجيات اخري لتنمية مهارات اللغه الاخرى لبقية المراحل التعليميه المختلفه.

1. Introduction:

communication should be incorporated into classroom activities. In that sense, Attia (2011) recommended that pronunciation should be taken seriously not just for its own sake but also as the basis for speaking and listening comprehension

Pronunciation has been described as the "Cinderella" of language teaching (Seidlhofer 2001), "an orphan" in the world of language program development

Language is the pillar of life and a basis for communication between individuals and nations. Pronunciation is key to gain full communicative competence. According to integrative approach, pronunciation is an integral component of communication rather than an isolated drill and practice sub-skill. Therefore, Hismanoglu and Gilakjani (2011) recommended that pronunciation as a crucial and integral part of

The present study seeks to find answers to the following questions:

- 1) To what extent can the proposed electronic language program be effective in developing primary stage students' pronunciation skills ?

This main question is subdivided into the following sub-questions :

- a) What are the most significant and appropriate pronunciation skills for primary stage students ?
- b) To what extent do students possess these pronunciation skills ?
- c) What are the components of the electronic language program for developing primary stage students' pronunciation skills ?
- d) How far could the electronic language program contribute to the development of primary stage students' pronunciation skills?

2. Review of Literature:

The present study in line with previous studies Gilakjani and Sabouri (2016) aimed to narrow the research-practice gap in pronunciation by offering realistic solutions to pronunciation teaching and learning problems and to facilitate the pronunciation learning process.

Stressing the importance of CAPT Neri, Mich, Gerosa & Giuliani (2008) tried to find out if a computer assisted pronunciation training (CAPT) system can help young learners improve word-level

Gilbert (2010) and Derwing (2010). In the same vein, Hismanoglu (2010) illustrated that little attention is given to the speaking skill and almost none to pronunciation. It was not until the late 1990s that the role of pronunciation pedagogy in English teaching was justified when many international language proficiency tests, such as the IBT, TOEFL Test, began to include the evaluation of speaking ability. To cope with the shift in the testing trend, more and more pronunciation courses have been needed to be incorporated in English Language teaching hua (2015).

The researcher noticed that pronunciation teaching practices are teacher-led not learning-centered. Moreover, teachers are not well qualified to be an ideal example and not well trained to teach pronunciation. They rarely use Communicative pronunciation tasks in their classes and they focus on the segmental level neglecting supra-segmental level although supra-segmental skills are very important for communication.

In correspondence to contemporary electronic renaissance and the viewpoints and recommendations to utilize computer as a tool that enables learners to be engaged in challenging, creative, and collaborative experiential learning, the present researcher attempts to investigate the effect of using CAPT program in developing pronunciation skills of EFL young learners.

Hsieh (2013) conducted a study to evaluate the effectiveness of a simple pronunciation software called Phonics Master. The participants were 55 Chinese native speakers learning English as a foreign language. Participants into two groups: control group receiving teacher-led instruction and experiment group receiving training of a computer assisted pronunciation software. Results showed the improvement of the pronunciation of the experiment group. The results indicated that computer-assisted language teaching could possibly alleviate a teacher's burden in a sizable class and helped remediate students' individual problems such as pronunciation or grammar as well.

Altamimi (2015) questioned whether the use of the minimal pairs' strategy improves English pronunciation of unfamiliar consonant sounds for native Arab students. The participants were thirteen male students in 2nd intermediate grade in Saudi Arabia. The type of research used in this study was action research which was designed to enhance teaching in the classroom. Three instruments were used in this study: pre-test, post-test and oral assessment (based on observation). The findings revealed that minimal pairs strategy is effective in improving the pronunciation of the 2nd intermediate grade Arab speakers.

Luo (2016) investigated a computer-assisted pronunciation training (CAPT) technique that combined oral reading with peer review to improve pronunciation of

pronunciation skills in English as a foreign language. The pronunciation improvement of a group of learners of 11 years of age receiving teacher-fronted instruction was compared to that of a group receiving computer assisted pronunciation training by means of a system including an automatic speech recognition component. Results show that training with a computer-assisted pronunciation training system with a simple automatic speech recognition component can thus lead to short-term improvements in pronunciation that are comparable to those achieved by means of more traditional, teacher-led pronunciation training.

Lee (2008) investigated how the characteristics of two computer assisted Language learning (CALL) programs assisted students learning English pronunciation effectively. The participants were 153 college students in Taiwan. The research methodology was action research, and it used an open-ended questionnaire and participant observation for collecting data, as well as content analysis for the interpretation of the data. The results showed that the students preferred the program with explicit correction feedback, and with repetition and other specific functions, as well as the facility for self-paced and self-directed learning. The key finding of the study CALL is a tool which has the potential to address some of the issues English pronunciation teachers face, such as low student motivation and low English pronunciation proficiency.

Video (IPV) helped in improving their pronunciation,(2) the ways in which the IPV is useful in enhancing pronunciation, and (3) the problems faced in using the IPV. It is a qualitative study where twenty students were interviewed after using the IPV in pronunciation learning. The NVIVO qualitative data analysis indicated that students have positive perceptions towards the use of IPV in improving their pronunciation. They found that the demonstration of how the sounds are being pronounced, flexibility of use, customized content, and diagram of tongue placement in the IPV are features that are useful in helping to improve their pronunciation.

3. Methodology

The researcher followed the mixed method approach. The researcher used more than one method in collecting the data, analyzing and interpreting it. The variation in data collection led to greater validity. For data collection, the researcher applied observation of environmental constraints for teaching pronunciation, interviews with students and experts in the field; senior teachers, supervisors of primary stage and professors of curriculum and instruction. In addition to content analysis of primary stage English books “Time For English” and a questionnaire given to experts in the field to benefit from their opinions and suggestions to determine the most appropriate and needed English pronunciation skills for grade four in primary stage. For analyzing data, the researcher used means and standard

Taiwanese English major students. In addition to traditional in-class instruction, students were given a short passage every week along with a recording of the respective text, read by a native speaker. They practiced at home by listening to the recordings, reading out loud while listening, recording themselves, and comparing their recordings to the native speaker. When satisfied, they posted their own recording to an online discussion board. Results showed that the integration of the CAPT technique was superior in reducing students’ pronunciation problems compared to only in-class instruction.

Mehrpour, Shoushtari and Shirazi (2016) study aimed to explore whether the introduction of accent reduction software in conversation classes at the university level would result in development in EFL learners’ pronunciation. A convenient sample of 30 participants,12 males and 18 females,was selected. The instrument used to gauge students’ pronunciation abilities was a pronunciation battery of tests designed based on software specification. Results of the study suggest that CAPT can provide an enriched pronunciation environment in EFL settings, where exposure to target language is quite rare, software programs can be perfect options to compensate for limited real life pronunciation practice.

Chang, Siew Lee; Shak, Priscilla; Gregory, Natalie Ann (2017) conducted a study to examine students' perception on: (1) whether the Instructional Pronunciation

3.2 Instruments of the Study:

For the purpose of the study, two instruments were designed by the researcher and used in this study:

1. Pronunciation skills questionnaire (designed by the researcher)to identify the most significant pronunciation skills needed to be developed for grade four primary stage students.
2. Pre-Post Test and a rubric (designed by the researcher) for assessing the effect of the proposed program on developing pronunciation skills of grade four primary stage students.

3.3. The Treatment

The researcher in the current study designed an electronic language program for developing English pronunciation skills of grade four primary stage students. The content of the program dealt with the following skills

a. Segmental Skills:

- Pronouncing English consonants properly
- Distinguishing between voiced and voiceless consonants
- Discriminating between short and long vowels
- Pronouncing diphthongs properly
- Pronouncing words with /-r/ forms properly
- .Blending sounds to pronounce words properly
- Pronouncing minimal pairs properly

deviation of the scores, Pearson correlation coefficient to calculate the correlation between main and sub skills and Cronbach's Alpha Coefficient to calculate test reliability. Moreover, One sample T-test, Independent samples T-test , Paired samples T-test and Mac Jojian effect equation were used to investigate the effectiveness of the program

This approach ensures that there are no gaps to the information/data collected and answers to the study questions from different respective. Moreover, it provides a better understanding of the research problem and enhances the validity and reliability of the research instruments, procedures and results. In addition, the use of the mixed-method approach resulted in a multiperspective mapping of English pronunciation teaching practices in governmental schools.

3.1 Design of the study

The researcher followed the following designs:

- a) The descriptive design in presenting review of literature and related studies relevant to the variables of the study
- b) The quasi experimental design in the sense that the study included two groups; an experimental group and control group. The control group was taught via regular method and experimental group was taught via the electronic language program.

McCrocklin (2014) , Wei (2014), hua (2015), Pi-hua (2015), Luo (2016), Mehpour & Shoushtari & Shirazi (2016) provided a relatively balanced image of the great positive effect of using computer with its audio visual presentations in creating an attractive environment that encouraged participants to interact and participate which lead to considerable improvement in students' pronunciation skills.

In addition, the results of the current study supported the results of previous studies (Lou& Chen &Tsai &Tseng and Shish (2012) , A gosto & Copeland and Zach (2013) , Saqlain and Mahmood (2013) , Al-Reemawi (2014), Kem (2015), Al Soylam (2016), in the significance of blended learning for developing students' pronunciation skills.

The researcher has noticed the following points during the treatment :

- The attractive and enjoyable cartoon movies motivated students to learn and helped them to acquire the language more easily.
- Students are motivated to learn when they use all senses during the learning process.
- The proposed electronic language program which offered minimal pairs, sound animations videos, tongue twisters and songs encouraged students to learn and develop their pronunciation skills.

- Identifying silent letters
- Pronouncing the different variations of /-ed/ morpheme/-d/,/-t/,/-id/ in regular verbs in the past simple tense properly
- Pronouncing the different variations of final plural /-s /morpheme /-s/,/-z/,/-iz/ properly

b .Supra segmental Skills

- Using correct intonation patterns for statements and questions
- Identifying the number of syllables
- Pronouncing stressed and un stressed syllables in verbs and nouns properly
- Producing acceptable rhythm of speech .

4. Data Analysis, Results and Discussions

Results of study data analysis lead to the following major findings:

- The experimental group outperformed the control group in all pronunciation skills due to the implementation of the proposed electronic program.
- The effect size of the proposed electronic language program was evident in the overall pronunciation skills and sub-skills.
- Results of the study are in line with other previous studies (Hismanoglu(2006), Al-Qudah(2012), Rezk (2012) ,Vaughan & Lawrence (2013), Hsieh(2013), Alipanahi(2014),Lepore (2014),

to help learners improve pronunciation skills and to help teachers hold successful and efficient pronunciation course :

5.4.1 For Teachers:

- There is a need for ongoing development in the area of pronunciation among teachers. Therefore, it is recommended to train teachers on teaching pronunciation at the pre-service stage, and as part of ongoing professional development programs. This training needs to focus on ways to plan for comprehensive and integrated instruction
- Teachers should shift from teacher centered to autonomous-learning approach.
- It is hoped to promote and reform future teachers' training professional development programs. We need qualified teachers and effective teaching strategies.
- Reflective reports should be used by English teachers for reflective teaching purposes.
- It is recommended to redefine the teachers' role with regard to pronunciation as speech coach responsible for monitoring student speech and encouraging student self-monitoring.
- Teachers need to rethink about their attitude toward pronunciation teaching as teachers' own enthusiasm is what motivates students to learn.

- Audio visual demonstrations in authentic videos had great impact on developing pronunciation skills as students' monitored the pronunciation of native speakers and therefore pronounce correctly.
- Pair and group work encouraged collaborative learning and motivated students to learn
- Teaching pronunciation in communicative context helped students to improve their speaking and pronunciation skills as well.
- To empower students to learn at their own pace at home, in classroom or anywhere is very beneficial. Students had to decide how they can learn they can log into the web site from computer, lab top, mobile, or I Pad. In addition students decided when and where to learn. This supported the autonomous learning.

Based on data analysis, discussion and results, it can be concluded that using electronic language program resulted in developing pronunciation skills of EFL grade four students in primary stage. These encouraging results are not attributed only to the designed program but also to the positive impact of blended learning environment, the autonomous learning strategy and more importantly; the learning-centered approach .

5. Pedagogical Implications and Recommendations

Based on the results and conclusion of the current study, the following key pedagogical implications were suggested

- Ongoing pronunciation assessment is advisable to discover learning difficulties and to remedial them .

5.4.3 For Course Designers:

- Curriculum and course design processes at the primary stage should be based on a survey of pupils' real language needs keeping in mind environmental constraints.
- Pronunciation must not be regarded as sounds production but as a crucial part of communication so new teaching and learning strategies must be developed to teach pronunciation in contexts and in situations.
- The program, the treatment and findings of the current study should be available to course designers and English language specialists interested in developing teaching and learning. English language.

5.4.4 For Research:

- Simulations of real-life situations experienced by the learners serve as learning useful context ,because the relevance and the authenticity of the type of input can boost the learners' motivation.
- The use of technology in pronunciation education is an important component of language education especially the blended learning programs.

- Observation notes and reflective diaries should be used by English teachers for reflective teaching purposes; teachers then can share their accounts with each other to build a common ground(knowledge base) that would inform their language teaching practices.
- It is important to give learners proper feedback to support their pronunciation skills
- Intelligible pronunciation is an essential component of Communicative competence. Therefore, EFL Teachers should focus on supra segmental aspect of English pronunciation because this permits the pronunciation instruction to be integrated into the teaching of spoken language and can meet the needs of EFL learners from different backgrounds.

5. 4. 2 For Students:

- Learner centered approach and autonomous learning should be adopted in the learning process.
- The benefit of learners has to the central objective of teaching process. Therefore, teaching materials, tasks, activities and games should be developed in terms of learner needs.
- Pronunciation learning strategies need to be more enjoyable, autonomous, and suitable to the demands of communicative oriented classes

- Al-Qudah, F. (2012). Improving English Pronunciation Through Computer-Assisted Programs In Jordanian Universities. *Journal of College Teaching & Learning*.9 (3). Al-Balqa University, Jordan.
- Altamimi, A. (2015). Improving English Pronunciation Among Arabic EFL School-Age Students Using Minimal Pairs. Master of Science thesis, State University of New York, Fredonia, New York.
- Attia, H. (2011). The Effectiveness of a Training Program Designed in the light of Brain-Based Learning Theory in Developing Listening and Pronunciation Teaching Skills of English Language Student Teachers. Unpublished doctoral dissertation, Women's College. Ain Shams University.
- Chang, Lee, S., Shak, Priscilla, Ann, N. (2016). Students' Perception on the use of Instructional Pronunciation Video in Improving Pronunciation.. *International Confefence on Education and e-Learning (Eel)*. Proceedings ;Singapore. ISSN:22511814
- Derwing, T. (2010). Utopian Goals for Pronunciation Teaching. In Levis7K. Levelle (Eds). Proceedings of the 1st Pronunciation in Second Language and Teaching Conference, Iowa State University.

5.5 Suggestions for Further Research

As a consequence of this study a number of researches could be suggested:

- Investigating the effect of blended learning in developing other language skills.
- Investigating the effect of developing pronunciation skills on developing spelling, and speaking, skills .
- Designing CAPT (Computer Assisted Pronunciation Teaching) programs to develop pronunciation skills in higher education levels.
- Investigating the effect of ASR (Automatic Speech Recognition) in evaluating students' pronunciation skills correctly.
- Studies could be implemented to develop supra segmental skills in different grades of primary stage.
- More emphasis on producing materials that suit students' abilities and pronunciation proficiency levels is needed.
- Other researches could investigate the effect of CAPT programs in developing pronunciation skills in other educational stages like preparatory, secondary and college.

References

- Alipanahi , F. (2014). *Technology And English Language Pronunciation*. *Indian Journal of Fundamental and Applied Life Sciences*.4(S3). ISSN.2231-6345.

- Pronunciation Teaching Techniques: traditional or modern?. *Procedia Social and Behavioral Sciences*.2 (2010)983-989 .Retrieved from: www.Sciencedirect.com.
- Hsieh,sh (2013). Preliminary Investigation of a Computer'sPronunciation Software for Phonetics Symbols Learning . Foreign Language Division of General Education Center, Yuanpei University
- hua, T.(2015). Computer Assisted Pronunciation Learning in a Collaborative Context: A Case Study in Taiwan. *The Turkish Journal of Educational Technology*.14(4).
- Lee, S. (2008).Teaching Pronunciation of English Using Computer Assisted Learning Software: An Action Research Study in an Institute of Technology in Taiwan. Doctoral Dissertation. Faculty of Education. Austrilian Catholic University.
- Lepore, C.(2014). Developing Pronunciation Skills At the Introductory Level : Motivating Students Through Interpersonal Audio Discussion .Doctoral Dissertation. Department of Modern Languages and Classics in the Graduate School of The University of Alabama.
- Liu,S.& Hung,P.(2016).Teaching Pronunciation with Computer Assisted Pronunciation Instruction in Dogoriti , E. &Pange, J (2012).Teaching ESP with ICT in Higher Education : Foreign language Teachers' Perceptions and Expectations of Computer Technology Use in Foreign language learning and Teaching.Department of Early Childhood Education. University of Loannina . Greece.
- EL-Mowafy, A.& Kuhn, M and Snow,T.(2013). Blended Learning in higher education: Current and future challenges in surveying education.*Issues in Educational Research,23(2):Special Issue*.
- Gilbert, B.(2010). Pronunciation as an orphan. What can be done? TESOL.SPLIS, 7 (2.)
- Gilakjani, A. &Sabouri ,N.(2016). How Can EFL Teachers Help EFL Learners Improve Their English Pronunciation?. *Journal of Language Teaching and Research*, Vol. 7, No. 5, pp. 967-972, September 2016. DOI: <http://dx.doi.org/10.17507/jltr.0705.18>. ISSN 1798-4769.
- Hayati and Pourkhoni (2013), Hilliard, A.(2015).Global Blended Learning Practices For Teaching And Learning, Leadership And Professional Development. *Journal of International Education Research-Third Quarter 11(3)*.
- Hismanoglu, S & Hismanoglu, M. (2010). Language Teachers' Preferences of

- Push or Demand Pull? University of Nijmegen, The Netherlands.
- Pi-hua, T.(2015). Computer Assisted Pronunciation Learning in a Collaborative Context: A Case Study in Taiwan. *The Turkish Journal of Educational Technology*.14(4).
- Rezk, W. (2012). Using Computer for the Treatment of Fifth Grade Dysgraphic Studying English in Primary Stage. Faculty of Education. Mansoura University.
- Saqlain,N and Mahmood,Z (2013).English Language Instructors' Perception About Technology Based Language Learning at NothernBorder University In Saudi Arabia .*The Turkish Online Journal of Educational Technology*. 12(2)
- Tejeda,A.&Santos,N.(2014).Pronunciation Instruction an Students'Practice to develop their confidence in EFL oral Skills. *Profile Issues in Teachers' Professional Development*.16(2).<http://dx.doi.org/>
- Wei, Sh.(2014). Computer Vision Aided Lip Movement Correction To Improve English Pronunciation. Un Published Master thesis. Purdue University West Lafayette, Indiana
- a Technological University. *Universal Journal of Educational Research*.4(9).<http://www.hrpub.org>.
- Luo, B.(2016). Evaluating Acomputer-Assisted Pronunciation Training (CAPT) Technique for Efficient Classroom Instruction. *Computer Assisted Language Journal*. 29(3)
- McCrocklin, Sh. (2014). The potential of Automatic Speech Recognition for fostering pronunciation learners' autonomy Un published Doctoral Dissertation. Iowa State University.
- Mehpour, S &Shoushtari, S &Shirazi,P (2016). Computer –Assisted Pronunciation Training : The Effect of Integrating Accent Reduction Software on Iranian Learners' Paronunciation. *CALL-EJ*, 17 (1).
- Mehpour, S &Shoushtari, S &Shirazi,P (2016). Computer –Assisted Pronunciation Training : The Effect of Integrating Accent Reduction Software on Iranian Learners' Paronunciation. *CALL-EJ*, 17 (1).
- Neri, A.Cucchiarini,C, Strik,H.(). Feedback in Computer Assisted Pronunciation Training: Technology