

An Applied Contrastive Analysis of Consonants in Egyptian Colloquial Arabic and Received Pronunciation of British English

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Abstract

This study aims to investigate the common pronunciation difficulties that face Egyptian university students learning English consonant sounds. It presents an applied contrastive analysis between Egyptian Colloquial Arabic and the Received Pronunciation of British English. It is a quantitative and qualitative research that applies the contrastive analysis to a group of fifty-two Egyptian university students who have been randomly selected from the faculty of languages and translation at Sadat Academy and the center of languages and translation at Cairo University as it targets to discover their pronunciation difficulties in pronouncing British English consonant sounds. The study has utilized an oral test instrument, which has been designed by the research and validated by a professor in linguistics, two times to measure the pronunciation of the students before and after adopting the contrastive analysis in learning the English consonant pronunciation. According to the results of the oral test, it is clear that the students have faced difficulties in pronouncing a group of twelve consonant sounds which are /p/, /t/, /d/, /ð/, /θ/, /ʒ/, /ʃ/, /tʃ/, /dʒ/, /ŋ/, /l/, and /r/. Therefore, the students have attended a pronunciation course to work on their errors. The results of the overall oral exam before and after the course have been analyzed using Statistical Package for the Social Science "SPSS" which has shown that using contrastive analysis has had a significant effect on 92.3% of students' pronunciation of English consonants. This study has contributed to settling that contrastive analysis is advantageous in learning the pronunciation of a second language.

Keywords: applied research, contrastive analysis, pronunciation, consonant sounds, Egyptian university students.

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1. Introduction

Verbal communication is indispensable for the exchange of ideas, thoughts, and culture. A crucial part of effective verbal communication is the proper pronunciation of sounds. A lot of Egyptian university students have common problems in pronouncing English consonants because there are differences between the sound systems of the Received Pronunciation of British English (RP) and the Egyptian Colloquial Arabic (ECA). Thus, this research presents an applied contrastive study between consonant sounds in ECA and RP of British English to highlight the pronunciation problems that may face Egyptian university students in learning the consonant sounds of the English language as well as employs contrastive analysis in teaching the pronunciation of British English RP as a teaching technique.

1.1 Contrastive Linguistics (CL)

Contrastive linguistics can be defined as the branch of linguistics that is concerned with two languages that are linked on social and cultural levels. It aims to reach results that can be used for applied purposes; it provides a descriptive basis to be used in the application. Contrastive linguistics provides a link between theory and application because It makes use of theoretical findings for the objective of applicability. Its role is to highlight the differences between the languages systematically. Lado developed the contrastive proposition in his assumption that " (W)e can predict and describe the patterns that will cause difficulty in learning, and those that will not cause difficulty, by comparing systematically the language and culture to be learned with the native language and culture of the student"(Lado, 1957, p. vii). Further, he emphasized the importance of contrastive linguistics in learning the sounds of a language: " (A)s a means of predicting and describing the pronunciation problems of the speakers of a given language learning another." (Lado, 1957, p.11). He established that using contrastive

analysis is a need to shed the light on the differences between languages to help in learning the sound system of a second language.

1.2 Applied Contrastive Linguistics

Applied contrastive studies are part of the applied linguistics field. They are defined as "(D)rawing on the findings of theoretical contrastive studies they provide a framework for the comparison of languages, selecting whatever information is necessary for a specific purpose"(Fisiak, 1981, p.2). They select the information that is needed for a specific aim such as teaching, bilingual analysis, or translation. Fisiak (1981) has argued that the applied contrastive analysis can be used for two tasks; the first one is to deal with a problem and its consequences between the first and second languages and the second task is to define the areas that may cause difficulties in learning a foreign language.

Applied contrastive studies are adequately different from theoretical contrastive studies, especially when related to teaching, as the applied studies necessarily depend not only on theoretical and contrastive linguistics but also on other fields relevant to teaching such as psycholinguistics, sociolinguistics, didactics, and psychology of learning and teaching. (Fisiak, 1981)

1.3 Aims of the Study

Finding the differences between the mother tongue and the foreign language can be considered a teaching system for solving the pronunciation problems in acquiring the pronunciation of the foreign language. In this context, this research aims to:

- 1- Investigate the common problematic sounds that face Egyptian university students in acquiring the consonant sounds of the English language,
- 2- Contrast the consonant sounds of the Received Pronunciation of British English and the Egyptian Colloquial Arabic,
- 3- Apply the field of contrastive linguistics in teaching and learning the pronunciation of the RP of British English.

1.4 Research Questions:

In the context of the aims of the research, the present research raises three questions. These questions are:

- 1- What are the common problematic sounds that face Egyptian university students in acquiring the consonant sounds of the English language?
- 2- What are the differences between the Consonant sounds in the Received Pronunciation of British English and the Egyptian Colloquial Arabic?
- 3- How can the contrastive linguistic approach be practical in teaching and learning the common pronunciation problems of English consonant sounds?

1.5 Significance of the Study

This research is significant for two reasons. First, it is a study applied to a selected sample of university students to bring to light the common pronunciation difficulties made by Egyptian university students learning RP of British English. Second, the research will show how the field of applied contrastive analysis can be employed in teaching and learning pronunciation for university students. In other words, this research constructs a new teaching technique using the field of contrastive linguistics in teaching the pronunciation of English.

1.6 Limitation of the Study

The study is limited to fifty-two students from Sadat Academy and the Center of Languages and Translation, Cairo University. The study confines itself to contrasting the pronunciation of the Egyptian Colloquial Arabic and Received Pronunciation consonant sounds. The study is limited to consonant sounds in both languages for two reasons; the first reason is that consonants contribute more to understanding English. The second reason is that consonants are formulated by a clear interference of the vocal organs with the air stream, so they are easier to describe and understand (O'Connor, 2012).

2 Theoretical Framework

Contrastive analysis is defined as a systematic study of two languages, which are the mother tongue and the second language, to find out the similarities and the differences between them to help the students and the teachers to find out the difficulties that can face the students and to predict and rectify these difficulties. In other words, Contrastive analysis can be used for applied purposes such as the research's concern, language teaching; when a second language is studied with differences from the mother tongue, these differences can cause problems for language learners. the Contrastive analysis can be used to design a course material that can help to efficiently correct errors.

This hypothesis was clear when Lado explained that students transfer the linguistic forms and culture of their mother tongue to the second language and culture (Lado, 1957). From this hypothesis, it is clear that the need to systematically compare and contrast the two languages is vital to find the difficulties and plan the teaching material that can overcome these difficulties. Contrastive analysis is viewed as different versions. There are three versions of the contrastive analysis hypotheses: the strong version, the moderate version, and the weak version.

The strong version proposed by Lee (1968) has focused on the idea of interference of the first language in learning a second language. Some claims were outlined by Lee (1968); the main cause of the difficulty is the interference of the first language, the difficulties are because of the difference between the two languages, when there are many differences, there are many difficulties, there is a need for a comparison between the two languages to predict the errors and help in learning the second language, and it is better to remove the similarities and concentrate on the differences between the languages. (Keshavarz, 2012)

The weak version was offered by Wardhaugh (1970) after recognizing that the assumptions of the strong version were too

wide. It is proposed as an analytical and descriptive model which is contradictory to the strong version that was predictive. According to this version, the errors are analyzed and explained after they are made by the learners based on a contrastive analysis. The weak version has combined the importance of the interference and the explanation of the errors so that it will be more profitable to the learners. (Keshavarz, 2012)

James (2005) discussed the differences between the strong and the weak versions of CA. He has explained that the strong version is entitled to be able to predict errors whereas the weak is said to be able to identify the errors after they have been made. However, James does not believe in the two versions, but he has identified that CA is always predictive, whereas the job of analyzing errors after they have been made belongs to Error Analysis (EA). So, it could be understood that CA must be undertaken before EA, to avoid problems with error identification and to know what errors to feature in negative transfer (James, 2005). Further, Gass and Larry (2001) have made a distinction between the strong and the weak versions as predictive and explanatory. The strong version can predict the errors and the weak version can diagnose them.

A third version is introduced as a moderate version between the strong and the weak. It is proposed by Oller & Ziahosseiny (1970). It was based upon their analysis of spelling errors made by English learners. They have rejected the strong and the weak version in favor of their new version which is the moderate version. They have supposed that their version has more explanatory power because it centers the human learning in the contrast between two languages. They have claimed that their classification is about theoretical and strong patterns are the main base of the first and second versions. Thus, any forms, that are different in form or meaning in one or more systems, may be confusing. (Keshavarz, 2012)

3 Literature Review

Several studies have dealt with contrastive linguistics between the mother tongue and the foreign language, which are Arabic and English, in the field of phonetics. The main aims of these studies are to illustrate the similarities and differences between the two languages and to find out the pronunciation problems that face the learners of English. In the coming subsections, several studies have been introduced by different researchers that are Lehn & Slager, (1959), Todaro (1970), Al-Hattami (2000), Huthaily (2003), Amer (2010), and others.

As a reflection on Robert Lado' Book in 1957, the idea of contrasting two languages in the field of phonetics and pronunciation, especially between Arabic and English, was tackled by Walter Lehn and William R Slager (1959) who introduced a theoretical contrastive study of the segment phonemes between Egyptian Arabic and American English. They aimed to introduce, for the non-specialist, a study that shows the differences between Egyptian Arabic and American English phonemes. They have fulfilled their study by summarizing the reasons for the difficulties that face the speaker of Arabic. Additionally, they have underscored the differences that are in English not in Arabic. They have stated that English has many more vowel contrasts, and more consonant contrasts in the labial to velar regions than Arabic Furthermore, they have revealed that some sounds exist in the Arabic and English sound systems but Arabic has consonants that are conventionally symbolized. However, these sounds represent alveolars in English, whereas in Arabic they represent dentals because there is a difference in the place of articulation. These sounds are /t d s z/.

Todaro (1970) has presented a contrastive analysis between American English and Egyptian Arabic. His study aimed to find the major problems that face the Egyptian people learning English as a second language because of the structural differences between the mother and the second language. He has predicted that the learners

would not produce the sounds that are not in their spud system as /p/ and they will substitute these sounds with what they have in their systems as they substitute /b/ for /p/. He has gathered his data from two parts: first, from students and the higher institute of education in Alexandria and a wide range of people from different social statuses. Second, he got his data in the USA from seven Egyptian people who are from Cairo and Alexandria. He has found four types of pronunciation errors that are made by the Egyptian people; These errors are: phonemic, phonetic, allophonic, and distributional.

Continuing with contrasting the consonant sounds, Abdulghani Al-Hattami (2000) has contrasted a phonological and phonetic study of the consonants of English and Arabic. His study aimed to theoretically predict the similarities and differences between the Received Pronunciation of English and Classical Arabic. Al-Hattami has found that there are problems in pronunciation and problems with the correct placement of the accent on the correct syllable. The results of his study have shown phonetic and phonological differences between Arabic and English. The researcher has found that /p/, /t/, and /k/ can be mispronounced in Arabic. He also has predicted the mispronunciation of /dz/ and /ŋ/. The English phoneme /r/ is different between English and Arabic.

Khaled Huthaily (2003) has discussed the difficulties that face adult native speakers of American English. He aimed to investigate the phonological difficulties that adult native speakers of the Western dialect of American English encounter while learning Modern Standard Arabic as a foreign language. He has focused on describing the segmental phonemes of both Arabic and English. He applied to three American students of Arabic to track the first language transfer. Also, He has scrutinized the role of contrastive analysis in predicting pronunciation errors. He has concluded that proving his idea that the first language affects producing the second language sounds.

Amer (2010) has introduced a contrastive study about the differences between the sounds of English and Arabic. His study aims to detect the differences between English and Arabic in consonant and vowel sounds in manner and place of articulation. Also, he has presented some educational ideas for teaching English and Arabic phonology. First, he presented a theoretical description of the sound systems in the two languages regarding the place and the manner of articulation. After that, he contrasted the two sound systems. For the consonant sounds, he has found some differences in the production of the sounds like /p/, /t/, /v/, /θ/, and /ð/. Also, he has found that some sounds in English are not articulated in Arabic such as /ʒ/, /tʃ/, and /ŋ/. Similarly, he has found that /r/ is different between the two languages. For the vowel sounds, he has described the vowel sounds in both languages as well as contrasted them and has found three differences between them: First, the vowels in English are more than in Arabic, second, some English vowels do not occur in Arabic, such as /e, ɔ:, ɒ, ɜ:, ə, ɑ:/, and Third, English vowels are affected by consonants before them, but Arabic vowels are not. Lastly, he has offered some recommendations for pedagogical learning. Teachers should use several teaching activities which help learners realize the differences in the sound systems of Arabic and English. He also has indicated that teachers should use some of the features of contrastive analysis to increase awareness concerning errors.

In an attempt to try to help the students to master the English vowel sounds, Al-Saqqaf & Vaddapalli (2012) have contrasted the vowel system of Arabic with several varieties of English. This research aims to contrast the vowel sounds of Arabic and English to provide teachers with suitable models to teach vowels to Arabic-speaking students. Their sample of the study was eight Arabic speakers from different countries in the Middle East. This sample was asked to read a list of words that contains English vowels. The research has looked at the vowel sounds that are produced by the

sample to find the difficulties that have faced the Arabic speakers. The researchers have concluded that the field of contrastive analysis is very important in teaching the vowels of the English language. They have discussed that it is important to give examples from the mother tongue in teaching the second language to show that the mother tongue has similar sounds to the second language.

Another study that tackled the Arabic and English vowels was by Kadir and Sepora (2014). The study has discussed the difficulties that face the Arabs who are learning English. They have explained that the Arabic vowels are far different from the English vowels. They have stated that Arabic has three short vowels and three long vowels. They have theoretically described the vowel sounds in the two sound systems. Then, they concluded that the pronunciation of vowel sounds in English will be the most problematic aspect of learning English phonology; This is because English has additional vowels, glide, and diphthongs than Arabic and because the vowel constructions of the two languages are unlike.

Shehata (2015) has studied the comprehension of 107 adults Native American English speakers concerning the difficulties of Arabic consonant phonemes in their perception and production, as well as their opinions about the important issues in the gaining of Arabic consonant sounds. The researcher used a questionnaire that has been divided into three sections: the first section was about the participants' background, the second section was a self-rate section about the difficulty of the Arabic consonants, and the third section questioned the sample about rating the factors that can help to enhance the learners' pronunciation. This research has shown that the participants consider Arabic as an important language, but it has some difficult consonant sounds. It has also been found that learners consider individual enthusiasm, conduct with native speakers, and listening to the radio and television are the most powerful reasons to acquire Arabic consonants. However, the other individual capabilities such as the ability to imitate and musical ears are defined

to be less effective reasons. Also, English speakers have recognized the difficulty of learning Arabic consonants that contrasts with English, in other words, that have no equivalents in English.

Shariq (2015) has phonetically investigated the differences between consonant sounds in Arabic and English as a tool to overcome interference that faces EFL students. The study aimed to improve the pronunciation of Saudi learners. He has used the manner of articulation, point of articulation, and the distribution at different positions in Arabic and English words as tools to help to find the differences between the two languages. He has concluded that it is important to train the learners in the way that the sounds of English and Arabic are pronounced along with the similarities and the differences between the two languages elaborated to help to find out the problems that face the EFL learners in Saudi Arabia.

In contrasting the vowel sounds, Ezzeldin Ali (2015) has attempted to measure the exclusion of pronunciation problems of English vowels that are experienced by Saudi students through a language course. His research aimed to enhance the students' perceptions of English vowels. The participants of his study were students preparing for a B.A. degree in English. The content of the language course has been designed to target the nature, classification, and syllabification of English vowels. The purpose behind that course was to provide students with full background on the pronunciation of English vowels together with the underlying relationship existing between vowel letters and vowel sounds. Ali has shown that the pronunciation of English vowels of the students has improved concerning English vowels on monosyllabic and disyllabic words. Despite the course was crucial for improving the pronunciation of vowels, the researcher has recommended listening practice as it would help in reaching the learners' awareness of pronunciation.

Hameed and Aslam (2015) have aimed to find out the difficulties in pronunciation that face Saudi students and to find

some possible remedial measures to correct the pronunciation problems. The sample of this research was a group of students at two universities in Saudi Arabia. The data has been collected from the students and the teachers as well through using surveys, interviews, and classroom observations. The results of the study have summarized the problems. They have described that the students seemed to struggle when they speak English, they have problems pronouncing some sounds, using intonation, and stress making sentences clear, most of the students did not know where the sentence stops, and the consonant clusters represented a problem too. The researchers have concluded some factors that can help in correcting the pronunciation of the students for example they have highlighted that the motivational level in the classroom is very important to give the students the confidence to express themselves in English.

To identify the errors made by Moroccan EFL learners, Benhima (2016) has introduced an attempt to describe the patterns of errors that are made by Moroccan learners. He has adopted different models to investigate pronunciation errors. His study aimed to analyze the pronunciation errors that are made in vowels and consonants at the segmental level and in stress at the suprasegmental level. He has used contrastive analysis, error analysis, and interlanguage. The results of his research have been drawn to reveal that Moroccan learners make a common pattern of errors that indicate the recurrent mispronunciation of vowels, particularly in diphthongs. Furthermore, he has explained that replacement errors are the main factor in the spoken language of Moroccan learners in that the schwa is substituted by other vowels due to the changeability between spelling and pronunciation. He has provided other explanations for errors that are recognized in other linguistic aspects such as the L1 and L2 transfer and extra-linguistic factors such as the learner who encounters new words and other affective factors such as anxiety. The gravity of errors depends on whether the affected

speech sound is phonemic or phonetic. Finally, he has introduced an appropriate remedial work that is suggested for the treatment of errors that includes recasts in the form of providing the correct pronunciation.

Alzinaidi and Abdel Latif (2019) have tried in their study to pinpoint the difficulties that face Saudi university students in pronouncing English consonant sounds. their study aimed to find out which English consonant sounds and clusters are considered problematic for Saudi university students. The participants of this study were a group of forty female university students. They have completed a pronunciation test that examines their errors in pronouncing English consonants and clusters. The analysis of the data has revealed that the common pronunciation errors percentages were in pronouncing: /ʒ/, /ŋ/, /p/, /r/ and /tʃ/. Their study has also found that the lower-level students made more errors than the intermediate ones in pronouncing most of the consonant sounds and clusters and that the change between their errors is commonly higher in the word-initial positions than in the word-medial and -final ones. The study has shown that the consonants in the word-initial and -final positions are likely to cause more pronunciations problems than the ones in the word-medial place.

Abd Elwahab (2020) has discussed that these pronunciation errors are caused by the effect of native language interference. He has argued that Arabic ESL students, for instance, face several pronunciation difficulties such as adding or replacing new phonemes that do not exist in the target language. He also has claimed Arabic and English by stating that linguistic alterations between Arabic and English usually have a vital effect on how a student studies to utter the English sounds. his study aimed to find out the effect of the local dialects and accents of the Arab students and how these dialects and accents can lead to problems in pronouncing English sounds. the researcher has contrasted the sounds in Arabic and English. He has clarified the differences between the two languages in sounds such

as:" /P/, /v/, /θ/, /j/, /t/, /l/. he has stated that the students replace them with similar sounds in their dialect. He also stated that Arabic has got several throat sounds that do not exist in English, in addition to the fact that the vowels in Arabic are pure, but in English, most of the what is called long vowels are diphthongs. He has concluded his study by expressing that correct pronunciation of English should contain a complete change in the native ways of articulation and the Arabic learners should take care of all these variations when learning a new language like English as well as the students have to understand that the change in pronouncing habits have to include the essentials of articulation and impact consonants, vowels, and intonation.

To conclude, after reviewing the previous researches, several studies have been concerned with learning English as a second language employing contrastive analysis as an approach to try to simplify SL learning. However, it has been found that; first, these researches have been designed to utilize the contrastive analysis only to identify the similarities and the differences between Arabic and English. Second, the researchers also have attempted to reveal the sounds that can be problematic in pronunciation.

Conversely, this research is conducted to fill a gap in the literature since it is the first to present an applied contrastive study between consonant sounds of Egyptian Colloquial Arabic and Received Pronunciation of British English for the sake of highlighting the common problematic sounds which face the Egyptian university students. Furthermore, it introduces a statistical analysis using SPSS to discuss if using contrastive analysis is statistically significant or not. Moreover, this study introduces the contrastive analysis in teaching the correct pronunciation of the RP; it simplifies the problematic sounds for the students by contrasting the ECA, which is spoken by the students, and RP, that is learned by the students. It seeks to help them to acquire the English correct pronunciation. In other words, this research seeks to construct a

teaching technique using contrastive analysis for teaching English pronunciation to Egyptian university students.

After discussing all these researches, the coming sections employ the applied contrastive analysis to show how this study fills the gap in the literature review and it shows how the applied contrastive analysis can be used in rectifying the common errors that are made by Egyptian university students.

4 Methodology

4.1 Subjects

The data of this research has been collected from randomly selected fifty-two Egyptian university students whose age range is between seventeen to twenty-one years old. They were eight males and forty-four females. They have been selected from two educational institutions; thirty-four students have been selected from Sadat Academy, Faculty of Languages and Translation, Spanish Department, first year; And eighteen students have been selected from the Center of Languages and Translation at Cairo University, from different faculties. All of the participants are Egyptian undergraduate university students.

4.2 Materials

The materials that have been used during the workshop are (1) *English pronunciation in use Elementary course* by Jonathan Marks. It is divided into fifty units and each unit is about a different pronunciation point. (2) audio CDs to help the students to listen and practice. The good thing about this book is that terminology has been kept as simple as possible. (3) the mobile application of the book that has been used because it contains extra material for pronunciation so the students can practice on their phones.

4.3 Instrument

To fulfill the aims of the research, the study utilized an oral test as an instrument to measure the pronunciation of the students before and after adopting the contrastive analysis in learning English consonant pronunciation. Then, their responses have been recorded

and explained in detail in an assessment form before and after the course (see appendix B) which includes the consonant sounds, the frequency of each sound produced correctly and incorrectly, and the total number of a sound produced.

The instrument, the oral test, consists of twelve sentences, a seven-line reading passage, and ten semi-free interview questions, (See appendix A). This oral test has been designed carefully to cover all the consonant sounds in English. The students have been asked to do this test twice, which is before and after the workshop. The objective of doing this oral test before the course is to check the students' knowledge of the English consonant sounds and to collect the common pronunciation problems the students make in pronouncing the English consonants. In addition, the objective of doing the same oral test after the course is to identify the range of the sounds that are corrected after adopting the contrastive analysis in learning the sounds of the English language.

4.4 Research Design:

The current research is qualitative and quantitative. The reason for choosing mixed research here is for two purposes; the first aim is to reach an elaboration and understanding of the study problem and to look at it from different viewpoints. The second aim is to confirm the conclusion by presenting results achieved by different approaches (Dörnyei, 2007). This research seeks to find out the common problematic sounds that face Egyptian university students as well as explores how contrastive analysis can be used to fix pronunciation mistakes. Moreover, this research is applied research. It is applied research because it helps in finding solutions for rectifying the common problematic English sounds that face Egyptian university students through adopting the contrastive analysis as a framework to teach the English consonants' pronunciation to Egyptian university students. That is clear throughout the research as it seeks to identify the common problematic sounds through the oral test, which is the instrument.

4.5 Data-Collection Procedures:

The data has been collected twice; The first time was at the center of languages and translations at Cairo University and the second time was at Sadat Academy faculty of languages. Both two times were done with the same procedures. The data were collected from the students two times before and after the course and at each time the students are asked to do the oral test. Thus, we can compare the students' performance before and after the course. The oral test is designed to focus on the consonant sounds of the RP of British English.

The students have been invited to a free pronunciation course to enhance their pronunciation. First, they have been asked to do a placement test, the instrument. This has been done to check their background of the English pronunciation. They have been given the oral test sheet to have around five minutes to prepare themselves for the recording. The students have been asked to read the twelve sentences, the seven-line reading passage out loud. After that, each student had an interview with the researcher and the order was that they read the sentences and the passage and then answer the interview questions. After completing the oral test, the students were given the material and they left class. Their answers have been voice recorded for further description and analysis. The description and the analysis have been explained in detail in an assessment form for each student. This assessment form has shown the English consonant sounds, the number of times a sound has been produced by each student incorrectly, the number of times that a sound is produced correctly, and the total number. Consequently, the researcher has collected the data from the assessment forms of the students and identified the common problematic sounds which are the sounds with high frequency of incorrect pronunciation. The researched has worked to design a course to rectify the errors that are made by the students. According to these data, the students attended a pronunciation course to work on their errors.

The recordings of the students have been saved and labeled separately by numbers as S1, S2, S3...etc. for the sake of confidentiality. The students' responses and answers to the oral test have been voice recorded for further description and analysis. The description and the analysis of the pre-test recordings have been explained in detail in an assessment form for each student. This assessment form has shown the pronunciation of each student of the English consonant sounds; the number of times a sound has been produced incorrectly, the number of times that a sound is produced correctly, and the total number.

Consequently, the data that has been collected from studying the students' performance has been calculated. The pronunciation of all the students has been collected into tables based on the sounds' categories for example plosives, fricatives.... etc. to find out the average percentage of the frequency of pronouncing the consonant sounds correctly or incorrectly. Then, the consonant sounds that were with high incorrectness frequency have been highlighted as common problematic sounds. in other words, the common problematic sounds that the students have mispronounced have been identified.

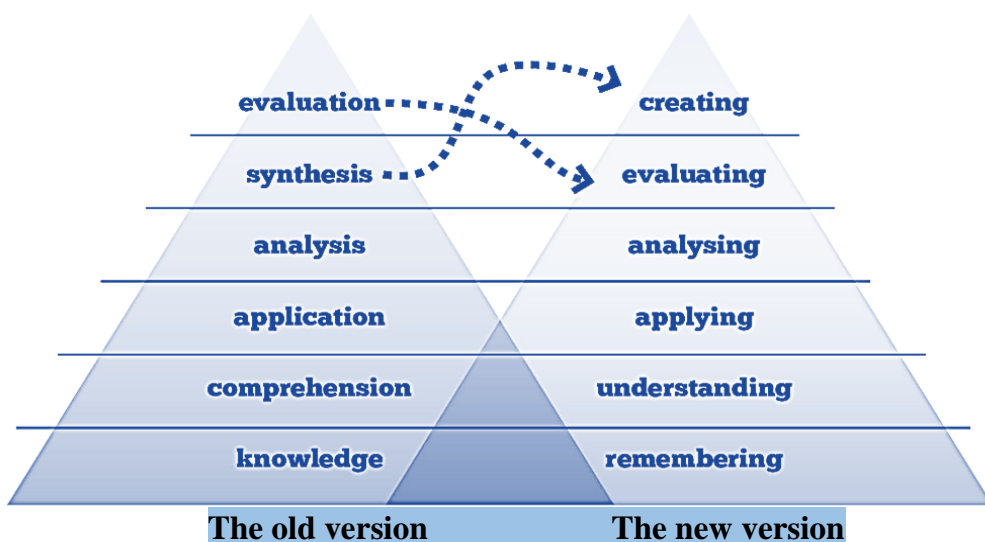
The researcher has used *Cambridge Advanced Learner's Dictionary-Third Edition* to make sure of the correct pronunciation of words during analyzing the data. Likewise, to avoid bias, the researcher has asked for help from four other English department instructors who teach in different universities to recheck the records of the students' pronunciation of the oral test and the results of the analysis that have been done by the researcher: the first is an associate professor at the Faculty of Languages and Translation at Sadat Academy, the second is a CELTA holder, a master degree candidate, and an English instructor at Badr University, the third and the fourth are master degree candidates and English instructors at El-Shorouk Academy. All of them are specialists in linguistics and they have been teaching phonetics for more than three years. The reason

for choosing four raters is to guarantee the reliability of checking the data that has been collected from students.

In the beginning, the researcher analyzed the records of the fifty-two students. This analysis has been presented in the assessment forms of the students. The target here is to find out the common problematic sounds. The researcher used the dictionary to make sure of the pronunciation of each word the students said. Then, the records and the assessment forms have been sent to the second, third, and fourth rater to review the work that has been done by the researcher. The records and the assessment forms have been divided among them; eighteen students for the second rater, and seventeen students for the third and the fourth raters. Then, the ratings of the students have been swapped between them to guarantee inter-rater reliability. Finally, all the analyses of the researcher and the raters have been sent to the first rater who has played the role of the arbitrator to agree and settle any disputes in describing the data that have happened between the other three raters and the researcher. According to this work on the assessment forms among the researcher and the four raters, the pronunciation course has been designed to rectify the errors in the mispronounced sounds.

The pronunciation course has been designed to be for one month, eight hours, four sessions, and each session has been for two hours. The material, that has been used during the course, is *English pronunciation in Use* (2007). At the beginning of the course, there was an orientation for the students to introduce the course and the students have been informed about the main course objective which is to correct the common pronunciation problems in pronouncing RP English sounds to help them to improve their speaking skills. The sessions have been drawn on contrastive analysis; the common problematic sounds have been explained in detail using the contrastive analysis between Arabic and English consonant sounds for learning and simplifying the common problematic sounds. According to the arrangement of the book, the course has been

designed to start with the plosive sounds and then the fricative sounds, formerly the affricate sounds, afterward the nasal sounds, and finally the approximant sounds. The course has been designed based on the new version of Bloom's taxonomy; Bloom's taxonomy is a group of graded levels that are used for the classification of learning objectives into levels of complication and specificity. it has been named after Benjamin Bloom, who led the board of educators that planned the taxonomy.



At the beginning of the course, the students came to the classroom. There was an orientation about the course; they have been introduced to the course that it is a pronunciation course and the main objective is to correct the common pronunciation errors in pronouncing English sounds to help them to improve their speaking skills. This could help them to speak English correctly and fluently. Then the students have started their first session.

The first session has covered the lowest level of Bloom's taxonomy, on the level of knowledge, they were introduced to the idea of pronunciation; how it is important to speak fluently. Moreover, the idea of the speech sounds is explained to the students

to illustrate that the sounds are the smallest unit for building words and sentences as well as they have been educated on the phonemic symbols for both ECA and the RP sound systems, so they can differentiate between the sounds and the letters. In addition, they have been trained about the differences between the place of articulation, the manner of articulation, and the voicing and how these three terms determine the production of the sounds. they were set in groups of five they listen to the sounds to discuss together how each sound is produced

The second session covered the other two lower levels, the understanding, and the application levels. On the level of understanding, this process has been done for each sound from the common problematic sounds, that were collected before, separately. The students were asked to pronounce the sound in colloquial Arabic then they listen to the sound in English and contrast the sound in RP and ECA. They contrast the sounds regarding the place of articulation, the manner of articulation, and voicing levels.

During the second session, the students were divided into small groups of five students to let them think and discuss the differences together before discussing their answers with the researcher. The researcher worked on eliciting from the students the differences in pronunciation. For example, the sound /t/ is in both ECA and RP. The research asked the students to pronounce the sounds in Arabic. Then in their small groups, they identified how they pronounce these sounds; they said that we pronounced /t/ in Arabic by putting the tip of the tongue between the teeth. Then the research explained the way that they described the sound as dental sound. After that, the researcher let the students listen to the /t/ in RP several times. they set again in their small groups. They discussed the place of articulating this sound in RP. They said that the tip of the tongue this time is behind the teeth. The research explained that this sound is alveolar. Likewise, they discussed the manner of articulating the sound that it is a plosive sound, and also that the

sound is voiceless. Then they contrasted in their small groups the /t/ sound in ECA and RP. The objective here is that the students understand the place and the manner of articulation of each problematic sound, so they avoid the wrong pronunciation of the sounds when they utter the sounds again.

On the application level, the students have practiced the sounds first through separate words that include the sounds in different positions in the word to drill the sounds and then in sentences to practice the sound in longer utterances. The words and the sentences that have been used are from the book. The objective of this level is to drill the common problematic sounds to confirm the correct pronunciation for them. And these are the Low levels of Bloom's taxonomy.

The third session covered the first level of the higher levels of Bloom's taxonomy. It is the analysis level. The students were asked to compare the consonant sounds in Arabic and in English to elicit from them the sounds that are in English and not in Arabic and vice versa as a kind of revision of what they have studied in the first two sessions. Moreover, the students were asked to listen to different passages, short stories, and extracts from novels in English, and that was done by using the mobile application of the book *English pronunciation in use*. While they were listening to the passages, they had the script and they were following the track word by word so that they investigated the correct pronunciation of the English sounds. The objective of this level is that the students have been able to analyze the correct place and manner of articulation of each sound.

The fourth session was on the level of evaluation and the level of creating. On the evaluation level, each student has been asked to read a short passage from the book or the stories that are on the application out loud and his or her colleagues have tried to correct the pronunciation for him or her. First in pairs then in groups. The objective of this level is to enable students have been able to

identify and analyze the correct and incorrect pronunciation for themselves and others. Every student has a reading passage to read and his or her colleague evaluated his pronunciation. On the last level, the level of creating, the students have been assigned to different speaking activities such as open discussions, debates, and role-plays, so they could practice speaking English after correcting all the common errors at the previous levels. The objective of this level is that the students have been able to use the English language not with reading this time, but through natural speaking.

Finally, the students had the same oral test, which has been done before the course, for the second time after the pronunciation course with the same data collection procedures that have been used for the first time that the students had the exam. The objective of doing the exam again is to make sure that sounds have been corrected, they pronounce the sounds accurately, and to confirm that using the contrastive analysis can help in correcting the common problematic sounds in uttering the words and the sentences of the RP. Also, the researcher has highlighted the students' answers and recordings in the assessment form for further comparison between before and after using the contrastive analysis in learning the pronunciation of a second language.

As described above, this research has applied the contrastive analysis approach to a group of Egyptian university students. Initially, they had an oral exam by asking them to read out loud a group of 20 words and a reading passage and answer interview questions covering all the consonant sounds in English. The voice recordings, that have been collected from the students after doing the oral exam for the first time before the pronunciation course, are detailed in students' assessment forms. They have presented an initial analysis of each student because the recordings have been analyzed in the assessment forms that have shown the number of times each consonant sound has been produced correctly, the times the sound has been uttered incorrectly, and the total number of times the sound

produced. Therefore, the assessment forms have been used to find out the common problematic sounds that face Egyptian university students.

After the end of the course, the students had the same oral test again to check if using the contrastive analysis between ECA and RP has been successful in learning the pronunciation or not. The students had the same oral test after the course and their responses have been voice recorded again and their recordings have been detailed in another assessment form after the course. Consequently, it has been possible to compare the assessment forms for each student before and after the course. After the data was collected from the recording before and after the course, the SPSS program has been used to find the statistics to check if the students' pronunciation has improved or not.

It has been clear from the results that the students' pronunciation has been improved and using contrastive analysis in learning English pronunciation has a great impact on the students. The statistics before and after the course have highlighted the difference in pronunciation and the great impact of contrastive analysis. These statistics will be highlighted in the results and discussion.

5 Results and discussion

As described above, this research has applied the contrastive analysis approach to a group of students. According to the data that is collected from the recordings, the common problematic sounds, that the students have, have been highlighted. It has been revealed that the students have had common pronunciation mistakes in the following sounds:

Table 1: The common problematic consonant sounds.

Manner of articulation	Place of articulation	Consonant Sounds
Plosives	Bilabial	/p/
	Alveolar	/t/
		/d/
Fricatives	Dental	/ð/
		/θ/
	Palatal	/ʒ/
		/ʃ/
Affricates	Palatal	/tʃ/
		/dʒ/
Nasal	velar	/ŋ/
Lateral approximant	Alveolar	/l/
Approximant	Post alveolar	/r/

The common problematic sounds can be explained in detail as follows:

1. The voiceless bilabial plosive /p/ is mispronounced as the ECA voiced bilabial plosive /b/ or ب in words like:
/ˈprɒbləm/, /ˈpɑːspɔːt/, /ˈhæpi/, /ˈhæpiər/, /hɛlp/, and /ˈgæləp/.
2. The voiceless alveolar plosive /t/ is mispronounced as the ECA voiceless dental- alveolar plosive /ت/ in words like:
/ˈtjuːzdeɪ/, /ˈɑːftər/, /ˈpɑːspɔːt/, /θɔːt/, and /fækt/.
3. The voiced alveolar plosive /d/ is mispronounced as the ECA voiced dental-alveolar plosive /د/ in words like:
/diˈlɪʃəs/, /ˈædʌlts/, /ˈwʌndərɪŋ/, /niːd/, /kʊd/, and /ˈɑːnsəd/.
4. The voiceless dental fricatives /θ/ is mispronounced as the ECA voiceless dental-alveolar fricative /s/ or /س/ in words like:
/θɔːt/, /ˈθɜːzdeɪ/, /ˈθaʊzənd/, /ˈbɜːθdeɪ/, and /twɛlfθ/.
5. The voiced dental fricatives /ð/ is mispronounced as the ECA voiced dental-alveolar fricative /z/ or /ج/ in words like:
/ðə/, /ðæn/, /ðæt/, /ðeə/, and /ˈʌðə/.

6. The voiceless palatal affricates /tʃ/ is mispronounced as the ECA voiceless palatal fricative /ʃ/ or / ش in words like:
/ʃu:z/, /'kwɛstʃən/, and /i:ʃ/.
7. The voiced palatal affricates /dʒ/ is mispronounced as the ECA voiced palatal fricative /ʒ/ in words like:
/'dʒɒŋŋ/, /dʒʌst/, /'eɪdʒɪz/, /'prɒdʒekt/, and /lɑ:dʒ/, /'ɒrɪndʒ/.
8. The voiced velar nasal /ŋ/ is mispronounced as the ECA voiced dental-alveolar nasal /n/ or /ن in words like:
/'wʌndərɪŋ/, /'li:vɪŋ/, /'wɒʃɪŋ/, and /'weərɪŋ/.
9. The voiced alveolar lateral approximant /l/ is mispronounced as the ECA voiced dental alveolar later /l/ or / ل in words like:
/'li:vɪŋ/, /'prɒbləm/, /'tɛlɪvɪzən/, /'əʊldə/, and /'eɪprəl/
10. The voiced post-alveolar approximant /r/ is mispronounced as the ECA voiced dental-alveolar flap /r/ or / ر in words like:
/'rɪ'membə/, /raɪt/, /'prɒbləm/, /'wʌndərɪŋ/, /'dʒɛnərəli/, and /'nʌmbə/.

The results section provides the frequencies of participants in the pronunciation of the RP consonant sound. The results section is divided into three subsections. The first subsection provides the results of the students' pronunciations of the problematic consonant sounds in the pre-test that has been done before using the contrastive analysis in demonstrating the differences between the consonant sounds in ECA and RP during the course. The second subsection provides the analysis of the students' pronunciation of the problematic consonant sounds in the post-test that had been done after the contrastive analysis was adopted during the pronunciation course. the third subsection presents a statistical analysis of the overall research to show the significance of the study.

5.1. Frequency Results of Students' Pronunciation in Pretest

In this subsection, the frequencies of the participants' errors in pronouncing the RP consonant sounds are provided. The following table and figure show an analysis of the frequency of the students'

pronunciation based on the recordings of the students from doing the oral test for the first time before using the contrastive analysis in the pronunciation course. the aim of doing the test before the course has been to find the common problematic sounds that face Egyptian university students. The coming table shows the pronunciation of the consonant sounds. The table includes the consonant sounds, the total number of correct times a sound is produced, the total number of incorrect times, the total number of sound production, the percentage of correctness, and the percentage of incorrectness.

Table 2: Frequency of Common Problematic Consonant Sounds in Pre-test

Consonant Sounds	Description of the sounds	Frequency of Correctness		Frequency of incorrectness		Total number of sounds production	
		No.	%	No.	%	No.	%
/p/	Voiceless Bilabial plosive	224	15.4%	1233	84.6%	1457	100%
/t/	Voiceless alveolar plosive	311	15.3%	1723	84.7%	2034	100%
/d/	Voiced alveolar plosive	218	19.1%	929	80.9%	1147	100%
/tʃ/	Voiceless Post-alveolar affricates	77	25.8%	221	74.2%	298	100%
/dʒ/	Voiced post-alveolar affricates	115	24.9%	346	75.1%	461	100%
/ð/	Voiced dental fricative	254	17.8%	1169	82.2%	1423	100%
/θ/	Voiceless dental fricative	195	20.9%	736	79.1%	931	100%
/z/	Voiced post-alveolar fricative	104	68.9%	47	31.1%	151	100%
/ʃ/	Voiceless post-alveolar fricative	259	94.5%	15	5.5%	274	100%

/ŋ/	Voiced velar nasal	25	6.1%	385	93.9%	410	100%
/l/	Voiced alveolar lateral	229	26.9%	622	73.1%	851	100%
/r/	Voiced post-alveolar approximant	324	18.6%	1414	81.4%	1738	100%

Table 2 clarifies the common problematic sounds that have been highlighted through the percentage of the correctness and the incorrectness using the oral test for the first time before the course. It is clear that common problematic sounds for the students are /p/, /t/, /d/, /tʃ/, /dʒ/, /ð/, /θ/, /ʒ/, /ʃ/, /ŋ/, /l/, and /r/ because these sounds have the highest incorrectness percentages. Thus, the course has been designed to rectify the mistakes that the students make by using contrastive analysis. the coming table and figure can discuss the significance of using the contrastive analysis because the frequency of pronouncing the sounds after adopting the contrastive analysis in explaining the differences between the consonant sounds in ECA and RP has been highlighted.

Correspondingly, from the previous table, it is clear to notice the arrangement of the sounds regarding the highest incorrectness percentage in the pre-test:

1. The highest incorrect sound is /ŋ/. This sound does not exist in the ECA because ECA only has /n/.
2. The /t/ comes in second place and this is because of the difference in the place of articulation between /t/ in RP and /t/ in ECA.
3. /p/ is one of the high incorrectness percentage sounds because /p/ does not exist in ECA, so the students mispronounce it with /b/.
4. /ð/ is one of the highest incorrect sounds since this sound does not exist in ECA.

5. The next sound is /ɪ/ and it has a big percentage of incorrectness because of the difference in the manner of articulation between RP and ECA.
6. /d/ is the same as the /t/ which is incorrectly pronounced due to the different place of articulation in RP from ECA. /t/ and /d/ have the same manner and place of articulation, but they are different in voicing. /t/ is 84.7 and /d/ is 80.9%. Hence, the students have difficulties pronouncing the plosive voiceless sounds more than the plosive voiced sounds.
7. /θ/ is the next sound. Similarly, this sound does not exist in ECA. Like /t/ and /d/, /θ/ and /ð/ have the same place and manner of articulation. However, /ð/ is more incorrect than /θ/. So, the students have difficulties pronouncing the fricative voiced sounds more than the voiceless ones.
8. /tʃ/ and /dʒ/ are two of the highest incorrect sounds because they do not exist in the ECA.
9. /l/ is the sound that is mispronounced because of the difference in place of articulation between RP and ECA.
10. The least incorrect sound is /ʒ/. It exists in ECA, but the students confuse it with /ʃ/. They pronounce the /ʒ/ as /ʃ/ because /ʃ/ is easier to pronounce. Similarly, it has been mentioned before that the students have more difficulty with voiced fricatives than voiceless fricatives.

Hence, after reviewing the common problematic sounds that are demonstrated in the previous table, the next subsection provides a table for the frequency of pronouncing the RP consonant sounds in the post-test. It clarifies how adopting the contrastive analysis in learning and teaching the RP pronunciation can be significant and has a positive development on the pronunciation of the students. Furthermore, it is obvious to compare the improvement of frequencies of pronouncing the sounds in the pre-test and the post-test.

5.2 Frequency Results of Students' Pronunciation in Post Test

In this subsection, the frequencies of the participants' pronunciation of the RP consonant sounds are provided. The following table and figure demonstrate an analysis of the frequency of the students' performance based on the recordings of the students from doing the oral test for the second time after using the contrastive analysis in the pronunciation course. The aim of doing the test for the second time after the course has been to find out how the contrastive analysis has been significant in adopting it in learning the pronunciation of the RP.

Table 3: Frequency of Common Problematic Consonant Sounds in Post Test

Consonant Sounds	Description of the sounds	Frequency of Correctness		Frequency of incorrectness		Total number of sounds production	
		No.	%	No.	%	No.	%
/p/	Voiceless Bilabial plosive	1244	85.3%	215	14.7%	1459	100%
/t/	Voiceless alveolar plosive	1652	80.3%	405	19.7%	2057	100%
/d/	Voiced alveolar plosive	969	83.9%	186	16.1%	1155	100%
/tʃ/	Voiceless Post- alveolar affricates	288	95.1%	15	4.9%	303	100%
/dʒ/	Voiced post- alveolar affricates	426	95.1%	22	4.9%	448	100%
/ð/	Voiced dental fricative	1188	83.8%	230	16.2%	1418	100%
/θ/	Voiceless dental fricative	837	82.3%	180	17.7%	1017	100%
/z/	Voiced post- alveolar fricative	151	98.7%	2	1.3%	153	100%

/ʃ/	Voiceless post-alveolar fricative	268	94.7%	15	5.3%	283	100%
/ŋ/	Voiced velar nasal	294	70.3%	124	29.7%	418	100%
/l/	Voiced alveolar lateral	609	74.4%	209	25.6%	818	100%
/r/	Voiced post-alveolar approximant	1348	77.5%	392	22.5%	1740	100%

It is noticeable now that after using the contrastive analysis in explaining the problematic sounds to the students during the pronunciation course, the percentage of correctness for the problematic sounds that were mentioned above in table 2 has increased. This indicates the effectiveness of using contrastive analysis in learning and teaching the pronunciation of the RP to Egyptian university students.

The development that has happened to the pronunciation of the students is observable comparing the results of the common problematic sounds in table 2 and 3; the order of the sounds regarding the highest correctness percentage is noticeable after the post-test:

1. The highest correctness percentage is for the affricates /dʒ/ and /tʃ/. they are the sounds that the students have rarely made errors in pronouncing these sounds in the post-test. So, the affricate sounds are the first group that is positively affected by contrastive analysis.
2. The second position is for two groups of sounds, that are affected positively by using contrastive analysis in teaching it. They are fricative and plosive sounds respectively. there is big progress in pronouncing /ʒ/, /ð/, and /θ/. Similarly, with /p/, /t/, and /d/, the three sounds have been affected by contrasting them with their counterparts in ECA. Moreover, it is recognized that there are four sounds that they have almost the same correctness percentages after the post-test which are /p/, /d/, /ð/, and /θ/, these sounds caused difficulties for them in the pre-test though. This means that the students now are aware of the correct pronunciation of these four sounds on the same level and they have acquired the differences in pronunciation between the RP and ECA.

3. The third place of correctness is for the approximant sounds /l/ and /r/. it is important to clarify an important fact regarding analyzing the students' pronunciation in the post-test for the /r/ and the /l/; if a student pronounced /r/ or /l/ in a different accent, which is an English accent, not the RP, it is assessed a correct pronunciation of the sound. Some of the students were able to pronounce /r/ and /l/ in isolated words such as RP, but they were not able to do the same in sentences or during the interview. They sometimes go for the American accent /r/ or /l/. since the American accent is an English accent, the pronunciation of the students has been assessed as correct.
4. The last group that was appropriately affected by adopting the contrastive analysis in learning the pronunciation of the RP is the nasal sound /ŋ/; some of the students still blend between the /n/ and the /ŋ/ sounds or sometimes they pronounce a clear /g/ after /ŋ/.

After reviewing the frequency of the consonant sounds production in detail before and after applying the contrastive analysis in explaining the differences between the consonant sounds in RP and ECA in learning the pronunciation of RP, there is a clear development of the pronunciation of the problematic sounds that have been identified throughout the comparisons between the tables and the figures. Moreover, to enhance the results of this thesis, a statistical analysis is presented for the frequency of consonant sound production that has been uttered by each student.

5.3 An Overall Statistical Analysis of Students' Production

after reviewing the results of the consonant sounds in detail before and after applying the contrastive analysis in explaining the differences between the consonant sounds in RP and ECA in learning the pronunciation of RP, an overall statistical analysis using the SPSS program is provided for the number of times the sounds have been uttered from all the students. This shows how the study and the course are significant in helping the student to enhance their pronunciation of sounds by applying contrastive analysis. The program that has been used to calculate the statistics is the SPSS tool (version 22). The SPSS analysis has generated three analysis tables. The three tables are designed to show the following:

1- **Paired samples statistics:** it is designed to show the Mean which is the average of correct sounds before and after using contrastive

analysis, the number of sounds, std. Deviation, which measures the variation of the results, and the Std. Error Mean,

2- **Paired samples correlation:** it is designed to show the relationship between the results of the test before and after using the contrastive analysis,

3- **Paired sample test:** it shows the paired differences and the significance of the study. If the P.Value is less than 0.05, this means that the contrastive analysis has a significant effect on the students.

Table 4: Paired Samples Statistics

	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 Incorrect before	370.96	24	538.280	109.876
after	83.50	24	127.952	26.118
Pair 2 Correct before	553.92	24	441.208	90.061
after	827.33	24	409.821	83.654

Table 5: Paired Samples Correlations

	N	Correlation	Sig.
Pair 1 Incorrect before & after	24	.970	.000
Pair 2 Correct before & after	24	.463	.023

Table 6: Paired Samples Test

	Paired Differences					t	df	Significance. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 Incorrect before - after	287.458	415.282	84.769	112.100	462.816	3.391	23	.003
Pair 2 Correct before - after	273.417	441.880	90.198	460.006	86.827	3.031	23	.006

The tables show the results of the oral test that is done before the course and after the course that implemented the contrastive analysis to rectify the pronunciation mistakes for the Egyptian

university students in uttering the RP of British English. It is clear from the tables that the P. Values are .003&.006, which are less than 0.05.

Meanwhile, the P. Values of the data analysis are less than the significance level of 0.05, the results of this study are statistically significant; there is a real difference between the two variables, which are the pronunciation of the students in the pre-test and post-test, and it is not due to chance. This means that the course has had a significant effect on the students' pronunciation of English consonants. In other words, using contrastive analysis in learning the pronunciation of English consonants is very beneficial and has a significant result on the students.

The present study has been introduced to apply the contrastive analysis to the process of learning the pronunciation of RP as a second language so that it can facilitate the learning process for Egyptian university students through the contrastive analysis between the Egyptian Colloquial Arabic and the Received pronunciation of British English. This thesis has presented an applied study in the field of phonetics between the consonant sounds in ECA and RP of British English. It has highlighted the pronunciation problems that face Egyptian university students learning English as a second language. It has employed contrastive analysis in teaching the pronunciation of the RP. The study has aimed to contrast and investigate the difficulties that face Egyptian university students in acquiring the consonant sounds of English. This has been clear as the study has determined that the students face difficulties in pronouncing the sounds. Moreover, it has introduced a statistical analysis for the students for the application of contrastive analysis to the students.

The study has provided evidence concerning the difficulties Egyptian university students find in pronouncing some English consonant sounds. It has found that the students make many errors in pronouncing /p/, /t/, /d/, /ð/, /θ/, /ʒ/, /ʃ/, /tʃ/, /dʒ/, /ŋ/, /l/, and /r/. The results also have indicated that adopting the contrastive analysis in explaining the consonant sounds of the RP plays a significant role in simplifying the difficulty of students' pronunciation. This has been noted from the analysis that has been done for the recording of students' responses to the oral test that has been done after the

pronunciation course. There has been a great improvement in the pronunciation of the students compared to the recordings of the students of their responses to the oral exam before the pronunciation course. that has been done.

The study has been applied to a group of fifty-two Egyptian university students to correct their errors in the pronunciation of RP. Furthermore, the study has applied contrastive analysis to be employed in learning the pronunciation of RP. The pronunciation course that has been based on contrastive analysis has been very effective. This is clear from the statistics of the students, in the results part, before and after the course. The study has been effective for forty-eight students out of fifty-two and it has not been effective only for four students. This is presented as follows:

Table 7: Frequency and Percentage of Effectiveness

Students	Total number of students	The study was effective	The study was not effective
Number of Students	52	48	4
Percentage	100%	92.6%	7.4%

From table 7, It is obvious that the study has been significant for forty-eight students. Their pronunciation has been developed from the pretest to the post-test. This is clear especially with the eleven common problematic sounds that have been mentioned before. The coming points illustrate the development that has happened to these sounds:

1. In the pretest, all of the students had pronounced the RP /p/ between zero to five times correctly; they had used to pronounce /b/ instead because the /p/ sound does not exist in the ECA. However, in the post-test, they correctly pronounced /p/ between twenty-five to thirty times because, by the end of the course, the students were able to identify the differences between the voiced bilabial plosive /b/ that exists in ECA and the voiceless bilabial plosive /p/ in RP. They have learned that the difference between the two sounds is to produce a blow of air in pronouncing /p/.

2. They had mispronounced the RP /t/ and the /d/ sounds. all of the students had exchanged them with the ECA dental-alveolar /t/ and /d/ because of the interference of the MT in acquiring RP. However, in the post-test, they could have contrasted between the alveolar plosive /t/ and /d/ in RP and their counterparts in ECA. They can correctly pronounce the RP /t/ between fifteen to forty-five times and /d/ between eleven to twenty-five times.
3. For the RP /tʃ/, /dʒ/&/ʒ/, they had replaced them with the ECA /ʃ/ and that is because the three sounds of RP do not exist in ECA, so the student had replaced them with a similar sound in ECA. In the post-test, they can pronounce /tʃ/, /dʒ/&/ʒ/ five to nine, two to ten, and two to six times correctly.
4. The students had not pronounced The RP /θ/&/ð/ correctly. This happens because they could not pronounce the dental fricative sounds since they do not exist in ECA. So, they replaced them with /s/ and /z/. in the post-test, after contrasting the four sounds, the students can put the tip of the tongue between their teeth to correctly pronounce the dental fricatives /θ/&/ð/ ten to twenty-five & eight to twenty-six times.
5. The RP /ŋ/ was one of the common problematic sounds for the students. In the pretest, they could not have pronounced it at all for the same reason as the previous sounds as it does not exist in the ECA sound system. They had replaced it with the /n/ as it exists in the ECA. In the post-test, they could easily pronounce the velar nasal /ŋ/ which is different from the dental alveolar nasal /n/ in ECA. They could pronounce it correctly three to eight times.
6. The RP /l/ is different from ECA /l/, so it was one of the common problematic sounds for the students. They used to exchange the RP lateral approximant alveolar /l/ with ECA dental alveolar lateral /l/. in the post-test, he could pronounce the RP /l/ six to nineteen times correctly.
7. The /r/ is also one of the common problematic sounds for students. They used to pronounce the RP /r/ as dental alveolar flap

which is /r/ sounds in ECA. The correct pronunciation for /r/ posts alveolar approximant which they have acquired in the post-test and they could pronounce it correctly fifteen to thirty-two times.

From the previous points, it is clear that the study has been significant. That is, the application of contrastive analysis to the students is very significant because it can facilitate the process of learning the pronunciation of the Received Pronunciation of British English. Therefore, this technique can be used in teaching and learning pronunciation to university students.

6 Conclusion

The conclusion of this research can prove that accurate pronunciation is very important when learning a second language, for the speech to be comprehensible to others. Fluency is an essential part of any communication and pronunciation is its tool. There are always differences between the mother tongue and the second language. Therefore, the learners can have some difficulties pronouncing the sounds of the second language. The study has aimed to contrast the consonant sounds of the Received Pronunciation of British English and the Egyptian Colloquial Arabic, Investigate the difficulties that face Egyptian university students in acquiring the consonant sounds of the English language, and apply the field of contrastive linguistics in teaching and learning the pronunciation of the RP of British English.

Many researchers have tackled contrastive linguistics and the main aims of these studies have been to illustrate the similarities and differences between the two languages and to find out the pronunciation problems that face the learners of English. Thus, this research is proposed to fill a gap in the literature because it has presented an applied contrastive study between consonant sounds of Egyptian Colloquial Arabic and Received Pronunciation of British English for highlighting the common problematic sounds which face the Egyptian university students and it will employ the contrastive analysis in teaching the correct pronunciation to simplify these

difficulties for the students and to make them easy to acquire the English correct pronunciation.

Regarding the results, the statistics for each sound have been discussed before and after using the contrastive analysis in learning the pronunciation of the English consonants during the English course that has been built upon the contrastive analysis. These statistics have proven to the reader that using contrastive analysis is beneficial for university students to rectify their pronunciation mistakes. This is clear from the statistics of the students, in the results part, before and after the course. The study has been effective for 48 students out of 53 with a percentage of 92.6 % and it has not been effective only for 5 students with a percentage of 7.4%.

Finally, this research emphasizes the applied contrastive analysis. The effects of the study are valuable for the learner. The language learners will be able to recognize the language areas with which they have more difficulties focusing on them. However, this shows that additional investigations are needed to help in language learning enterprise a second language. Extra research is required to explore other linguistic fields such as some socio and psycholinguistics that should be examined. Consequently, a combination of linguistic and extra-linguistic research can offer a clearer representation of second language learning and making pronunciation errors from various aspects.

Appendix A Oral Exam

I- Sentences:

1. When was the baby born?
2. Can you remember peter's phone number?
3. Victor has got a big problem with his neighbors.
4. Pack your bags and bring your passport.
5. We need to meet each other next week.
6. I wonder if you could send me the drafts of the project.
7. Are you going jogging again?
8. When I asked for her autograph, she just laughed.
9. We are leaving at five past seven.
10. I thought that we have a birthday on Tuesday, April the twelfth, but it is on Thursday.
11. All our food is fresh and we serve delicious specialties.
12. I am watching the television now.
13. Who is wearing the large orange jacket?
14. Which question did you choose in the exam?
15. Can you help me for half an hour?

II- Reading passage:

Are people less happy or more happy the older they get? If you answered more happy, then you were right, based on a study in 2008. It found that people generally become happier and experience less worry after age fifty. In fact, it found that by the age of eighty-five, people are happier with their life than they were at eighteen. The findings came from a Gallup survey of more than three hundred forty thousand adults in the United States in two thousand eight. At that time, the people were between the ages of eighteen and eighty-five.

III- Semi-Structured Interview Questions:

1. What is your name?
2. How old are you?
3. Where do you study?
4. What do you study?
5. What is your daily routine?
6. What do you do in your free time?
7. What did you do last weekend?
8. For what reasons do you use the internet every day?
9. Who is your best friend and why?
10. Where do you live? Describe your neighborhood.

Appendix B

Assessment Form

Student's Name:

Faculty:

Department:

Year:

Consonant Sounds	Total of correct times	Total of incorrect times	The total number of sounds produced
/p/			
/b/			
/t/			
/d/			
/k/			
/g/			
/tʃ/			
/dʒ/			
/ð/			
/θ/			
/f/			
/v/			
/s/			
/z/			
/ʒ/			
/ʃ/			
/h/			
/m/			
/n/			
/ŋ/			
/l/			
/j/			
/w/			
/r/			

Date:

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ملخص

تهدف هذه الدراسة إلى التحقق من صعوبات النطق الشائعة التي تواجه طلاب الجامعات المصرية الذين يتعلمون اللغة الإنجليزية، و تقدم تحليلاً تطبيقياً تبايناً بين اللغة العربية العامية المصرية والنطق النموذجي للغة الإنجليزية البريطانية، و يعد هذا البحث بحثاً كمياً، و يطبق التحليل التقابلي على مجموعة مكونة من اثنين و خمسون طالباً جامعياً مصرياً تم اختيارهم عشوائياً من كلية اللغات والترجمة بأكاديمية السادات ومركز اللغات والترجمة بجامعة القاهرة، و تهدف هذه الدراسة إلى اكتشاف صعوبات النطق التي تواجه الطلاب الجامعيين المصريين في نطق الأصوات الساكنة الإنجليزية البريطانية، و استخدمت الدراسة اختباراً شفهيّاً كأداة بحث مرتين لقياس نطق الطلاب قبل وبعد اعتماد التحليل التقابلي في تعلم نطق الاصوات الساكنة في اللغة الإنجليزية. تم شرح وصف وتحليل نطق الطلاب بالتفصيل في استمارة تقييم لكل طالب ، ووفقاً لنتائج الاختبار الشفوي ؛ فإن من الواضح أن الطلاب واجهوا صعوبات في نطق مجموعة من اثنتي عشر صوتاً ساكناً. لذلك ، فقد حضر الطلاب دورة النطق للعمل على أخطائهم. تم تحليل نتائج الامتحان الشفهي العام قبل وبعد الدورة باستخدام الحزمة الإحصائية للعلوم الاجتماعية أو (SPSS)، والتي أظهرت أن استخدام التحليل المقارن كان له تأثير ايجابي كبير على تحسن نطق الطلاب للأصوات الساكنة الإنجليزية بسنبة ٩٢.٣٪، و ساهمت هذه الدراسة في إثبات أن التحليل التقابلي مفيد في تعلم نطق لغة ثانية.