Teaching Pronunciation via Computer Technology: Principles and Best Practices

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Abstract

This paper sheds light on the case of integrating computer technology to teach pronunciation to EFL learners, precisely, Arab learners. It explores different computer programs that have been discussed in the literature and suggests best practices and principles for teaching pronunciation via computer software. Also, it provides a practical example of how to use pronunciation software to teach pronunciation in a Saudi classroom that contains Arab EFL learners from different countries. Specifically, this paper is divided into four major sections:

a) Literature review: In this section, the author discusses the significance of pronunciation instruction in increasing learners’ awareness towards novel sounds. Also, he suggests best classroom practices such as minimal pairs contrast, using animated visuals, role play, and read aloud to help learners perceive and acquire segmental sounds. Then, he sheds light on studies that discuss different types of pronunciation software, namely, ASR-based and non-ASR. Non-ASR programs can help learners improve their perception of the sounds. One of the best non-ASR software is *Pronunciation Power* which provides specific sound focused exercises. ASR-based programs such as *MyET* provide learners with authentic exposure to the language as well as multi-level feedback, specifically, visual, auditory, and waveform as well as specific and holistic scores. Teachers for the best results should integrate both types and at the same time have an active role in the classroom through providing more exposure to the target sounds.

b) Specific English pronunciation problems for Arab Learners: in this section, the author discusses problematic English sounds for Arab learners from different countries and
Arabic vernacular backgrounds. Then he sheds light on the efficacy of CAPT instruction for Arab learners.

c) Classroom Implications for Arab Learners in Saudi Arabia: In this section, the author discusses the impact of the mere absence of pronunciation instruction on learners’ pronunciation proficiency. Also, he suggests what he believes is the best way to apply CAPT instruction in Saudi Arabia. Then, the author concludes with 13 principles to produce a successful CAPT classroom.

d) Unit Plan: In this section, the author provides a practical demonstration of CAPT instruction by providing detailed lesson plans to teach /p/, /v/, and /tʃ/, three problematic sounds for Arabic learners of English.
1. Introduction

One of the early records of teaching pronunciation dates back 1800 years ago when Greek scholars taught Greek intonation and rhythm to adult learners (Kelly, 1969 as cited in Reed & Levis, 2015). Since then pronunciation instruction stirred debates among scholars who have been discussing whether it should be one of the focus areas in the language classroom. For instance, between the 1600s and 1800s teaching grammar was dominant due to the fact that learners needed to translate literary texts and scripts from Latin into English; thus, spoken language was greatly neglected during that era. It was not until the mid 1800s when Predergast, Marcel, Gouin, and Berlitz noted the importance of incorporating spoken language into language instruction (Celce-Murcia, Brinton, & Goodwin, 2010). Their contributions paved the way for the emergence of methods in the 20th century that focused on improving learners’ spoken language (Reed & Levis, 2015). For instance, the Audio-lingual approach (ALM) mainly emphasized spoken language and drilling of spoken chunks in order to enable soldiers acquire a foreign language in a short time. ALM taught pronunciation explicitly, using IPA, and integrating all possible technological tools that can facilitate learning, it became one of the main language instruction methods (Celce-Murcia, Brinton, & Goodwin, 2010). Nevertheless, the concept of attaining native-like pronunciation which was the main goal of the early teaching methods, including ALM, was one of the main reasons behind the abandonment of pronunciation as native-like pronunciation was seen as an impossible and unreasonable instruction goal.

In fact, by observing the history of language instruction, it becomes evident that instruction goals follow learners’ needs of the language outside the classroom. Thus, when the English language became the medium for communication around the globe, more calls for teaching spoken language again appeared; however, this time the purpose for improving
learners’ ability is to their use of the language for communication. Munro and Derwing (1995) and Derwing, Munro, Wiebe (1997) contributed a shift in the pronunciation instruction goal from achieving accent-free speech to a more realistic goal which is attaining intelligible speech. The difference between these two goals is that learners in accent-free instruction are expected to obtain native-like speech; however, in intelligible speech instruction, the goal is to reduce errors that result in communication breakdowns. For example, if a student pronounces English /r/ as an alveolar trill, he/she will be corrected in the accent-free instruction but not in the intelligible speech instruction as long as he/she does not replace it with another phoneme. Munro and Derwing’ findings made educators reassess pronunciation instruction goals and focus more on aspects that affect learners’ intelligibility. One of the main phonological aspects that could lead to communication breakdowns is segmentals including vowels and consonants (Rogers & Dalby, 2005; Kennedy, 2013). Thus, due to the importance of segmentals, Reed and Levis (2015) suggest that they should be addressed and taught in the pronunciation instruction. Since vowel and consonant teaching have great impact on learners’ intelligibility, educators always attempt to find the best ways to convey these features to learners in order to facilitate their pronunciation and help them acquire novel phonological sounds.

The impetus to teach pronunciation has inspired a drive to work out technological techniques that can take full advantage of the new resources the internet and computer gadgetry make available. As a result, the literature is full of an overwhelming number of reports documenting the value of various technology interventions for developing students’ pronunciation proficiency. Liu and Hung (2016), Seferoglu (2005), and Saito (2007), for example, investigated Automatic Speech Recognition based technology (ASR), non-ASR based program, and sound-wave program, respectively. The abundance of studies on the use of...
technology to support pronunciation instruction offers the field insights about how to test and research the effects of different technology applications, as well as what might be a set of best practices for applying technological tools in the classroom. Therefore, this paper aims to investigate the ramifications of integrating computer software pronunciation instruction and whether it can improve learners’ pronunciation of segmental aspects. I hope to also shed light on the options available to teachers with respect to computer software as well as catalog the best practices that should lead to successful pronunciation computer integrated instruction for EFL Arab learners.

2. Literature Review

2.1. Pronunciation Instruction and Noticing Phonological Forms for Acquisition

In language learning, students come to the classroom with various cultural, linguistic, and content schemata (Ferris & Hedgcock, 2013). In that sense, what teachers think is obvious, may seem vague for second language learners. For instance, /v/ sound does not exist in Arabic language and, thus, Arab learners replace it with the adjacent sound in Arabic which is /f/. So, it is not a surprise if you hear an Arabic learner say /fæɪf/ instead of /farv/ and when they are confronted they usually claim their pronunciation is accurate. In this case, the target language sound has not been registered into their awareness and, as a result, they cannot separate the two sounds from each other. In other words, if a sound, or any aspect of language, is not perceived then learners in most cases will not be able to produce it correctly, or they will not be able to apply it to new linguistic contexts. Second language learners need to create a phoneme category for every sound in the target language. However, they cannot do this until they become aware of the existence of this phoneme.
The importance of raising awareness towards linguistic features in language teaching and learning has long been debated. Awareness or conscious learning was extremely underrated in the 80s as the field was adapting to the concept of natural acquisition of the language or implicit learning (Bergsleithner, Frota, & Yoshioka, 2013). Schmidt (1990, 2001) hypothesized that awareness, or noticing, is essential for learners’ acquisition. In other words, for the input to become intake, learners need to notice the target linguistic feature first (Schmidt, 2010). The origin of this theory came from Schmidt and Frota (1986), a case study in which Schmidt took the role of language learner and recorded observations about his acquisition experience in a daily journal, periodically, meeting with Forta, his co-author, to assess his language learning progress. The researchers report, among other things, that Schmidt’s output was corrected by native speakers often; however, he did not acquire the correct forms due to the lack of noticing (Schmidt & Frota, 1986). Particularly, he was not aware that he was corrected and, hence, he did not “notice the gap” in his language (p.725, Schmidt, 2010).

So, one of the ways to assist learners notice the gap in their language is by explicitly teaching them the linguistic forms. Bergsleithner, Frota, and Yoshioka (2013) constructed a study investigating if the explicit instruction can enhance noticing of novel forms and, possibly, input. They compared participants’ performance before and after the instruction through a pretest, immediate posttest, and delayed posttest. Participants were asked to read passages prior to every test. In the tests, they received statements with/without noun phrase pre-modification and answered yes/no questions. The two options were “yes it was in the text” and “no it was not in the text” (it refers to the sentence) (p.147). The aim of this question was to confirm whether participants had noticed the structure in the passages. Participants showed improvement in the immediate posttest as well as in the delayed posttest and their scores suggest that explicit
instruction indeed helped participant notice the novel form but it does not show whether learners acquired the forms; nevertheless, other studies such as Couper (2006) studied the impact of explicit teaching on learners’ pronunciation improvement and acquisition of phonological forms. Couper (2006) carried out a study on Asian immigrants living in New Zealand investigating the importance of phonetic instruction on raising learners’ awareness towards epenthesis (the addition of a vowel to break consonant clusters) and absence (the deletion of a sound) as well as the instruction effects on learners’ long-term phonological competence. The researcher divided participants into treatment and control groups comprised of 21 and 50 subjects, respectively. Both groups have the same level of proficiency and received pronunciation instruction; however, the experimental group received specific instruction on epenthesis and absence while the control did not. A diagnostic test was given at the beginning of the experiment in order to discover students’ pronunciation weaknesses. For the treatment group, three “Specific tests” focused on the targeted errors were constructed. The first test took place immediately after the diagnostic test. The second test occurred after two weeks teaching sessions. 12 weeks post-experiment, the third test was constructed to evaluate the long-term retention. The control group was given one diagnostic test and two specific tests; the diagnostic and one of the specific tests were given at the beginning of the study while the second specific test was given at the end of the semester (i.e., 12 weeks after the experiment). The main idea of having delayed posttests was to examine the long-term effect of the instruction on learners’ phonological competence.

The researcher found that the treatment group’s error rate mean score decreased from 19.9% on the first specific test to 5.5% on the second test. Although the results from the third test showed a slight increase in the mean (7.5%), the author suggests that students retained most of the information and, consequently, they built phonological competence in the targeted areas.
Nevertheless, the control group showed no improvement as their mean error rate remained almost the same with a slight increase from 14.1% to 15.2%. These results show that the explicit pronunciation instruction on epenthesis and absence helped learners notice the gap in their pronunciation and, consequently, improved their pronunciation. This study also shows the significance of explicitly instructing learners’ on specific forms to increase their awareness and make them notice the gap in their pronunciation. Similarly, Saito (2007) helped Japanese learners notice and acquire English vowels /æ/ and /a/ by means of PRAAT software to explicitly teach learners the target sounds. In Saito’s study, only students who were explicitly instructed on the target sounds showed great improvement in their pronunciation, whereas other students who received implicit pronunciation instruction, only improved slightly. Additionally, Thomson (2011) utilized a computer program that displayed visuals to help learners perceive and acquire ten novel vowels. His study especially focused the perception of novel sounds before asking learners to produce them. He asked learners to only listen to the new sounds, and by the end of the experiment, they were able to perceive and produce them. In this study, perception led to production which suggests that phonological forms, similar to grammatical forms, which were the main focus of the Noticing Hypothesis, phonological aspects should be perceived first in order to be produced.

So, one of the main pronunciation instruction goals should be to enable learners to notice or perceive and, then, produce phonological forms. Thus, teachers should find techniques to promote learners’ perception and production of the sounds. However, to help learners achieve such a goal, teachers, first, should understand some of the challenges that might hinder learners’ perception and noticing of the sounds. Learners, as noted at the beginning of this section, may not be able to hear some of the target language sounds. This could result from two factors,
particularly, first language transfer (L1 transfer) or transfer of training (Celce-Murcia, Brinton, & Goodwin, 2010; Selinker, 1972 as cited in Butler-Tanaka, 2000). For instance, Saito (2007) targeted /ə/ sound due to the lack of this sound in the Japanese language. This absence, according to Isono (2005), results in unconscious replacement of /ə/ with the most adjacent sound Japanese phonological system which is in this case /a/ (as cited in Saito, 2007). The second factor that makes perception challenging for second language learners (L2 learners) is transfer of training which refers to the fossilized errors caused by teachers’ poor pronunciation and/or textbooks. For example, when a teacher pronounces /zɪs/ instead of this /ðɪs/, it is more likely that his/her students will stabilize the incorrect form. Thus, as seen in Saito (2007) and Couper (2006) pronunciation instruction can help learners overcome such challenges and help them attend to the novel forms which, consequently, lead to improving their pronunciation (also see Derwing, Munro, & Wiebe, 1997 for more details on defossilizing pronunciation errors through pronunciation instruction). So, the question here is ‘what type of classroom practices can assist learners to perceive these phonological forms?’

To begin with, teachers in their first introduction of a new sound should explicitly discuss the sound properties with students and avoid overwhelming them by integrating the sound in long stretches of speech such as dialogues or authentic situations before they acquire the sound. In this regard, Lan and Wu (2013) exposed Mandarin EFL learners to two types of pronunciation instructions, namely, form-focused (5 participants) and meaning-focused (5 participants). Both instructions aimed to help learners acquire /r/ sound. The meaning-focused group was exposed to the sound through means of role play activities and real-life-like situations. In the form-focused group, the teacher started with explicitly explaining how the sound is articulated using verbal and visual explanations; then, the teacher provided guided practice for learners. Results
showed that the experimental group, unlike control group, had significantly improved their production of the target sound. This does not mean, however, that focusing on meaning is a bad practice, but it would be more efficient if teachers focused on the sound first and, then, gradually move towards integrating the sound in more authentic speech. To put that into practice, the author, in the proposed unit plan in section 5 of this paper, starts with training students on the target sounds focusing on perception and noticing using techniques such as minimal pairs contrast and sound production visuals as in Lesson 1.1. After that, he gradually increases the length of the utterance by using scripted role play activity and finally exposes learners to a more authentic speech by implementing MyET program.

Another teaching practice that can help learners acquire English sounds is providing corrective feedback. Generally, in the field of language acquisition and education, feedback has been controversial. For instance, Krashen (1982) stated that feedback is a “serious mistake” and explained his position threefold: first, feedback according to him might lead learners to become anxious about using the corrected forms which ultimately drives them to avoid using them; second, correcting learners might raise learners’ affective filter and hinder learning (p.74). Third, such corrections, according to Krashen, may help learners improve their knowledge about the form, however not their acquisition. Nevertheless, other scholars such as Saito and Lyster (2012) perceive feedback as a type of scaffolding or learning facilitator. They believe that feedback is critical as it helps learners notice linguistic forms. Saito and Lyster (2012) compared two form-focused pronunciation instructions, one with corrective feedback and the other instruction without feedback with a regular instruction in which the instructor taught the target form implicitly. A total of 65 students were divided into three groups and practiced /r/ sound, which is a problematic sound for Japanese learners. As for the tests, participants completed three
tasks: a) word-level reading, b) sentence-level reading, and c) picture description task. The researchers recorded participants’ pronunciation and asked five native English speakers who were experts in Japanese-English accent to evaluate students’ pronunciation of /r/. The researchers found that the corrective feedback group improved their pronunciation significantly and surpassed other groups in all three tasks. This indicates that corrective feedback can help learners acquire new forms. Along the same lines, Gordon, Darcy, and Ewert (2013) compared explicit pronunciation instruction where feedback was provided to implicit pronunciation instruction without corrective feedback. The researchers found that there was a significant difference in favor of the explicit feedback group. Thus, they concluded that explicit instruction accompanied by corrective feedback can be effective in helping learners attend to new spoken forms. The studies above show that feedback is critical for students as it can direct their attention to phonological forms and assist them to correct their mistakes before they become stabilized or fossilized. However, providing individual feedback in a crowded classroom can be a difficult task to efficiently and sufficiently achieve. To partially solve this problem, a teacher can assign homework asking learners to record a passage or sentences that contain the target sound (for example see homework in Lesson 1.2). Then, he/she evaluates learners’ pronunciation and provides suggestions and feedback using evaluation logs (Handout 17). Additionally, along with the evaluation logs, they can use computer software that provides instant feedback to help learners immediately pinpoint their errors.

Further, teachers can teach novel sounds using techniques such as materializing sounds and visuals and activities like minimal pairs, scripted role play, and read aloud. As for materializing sounds technique, sounds are abstracts, but there are some sounds where their distinctive feature can be made physically noticeable. For example, the instructor in Lan and
Wu’s study (2013) materialized /h/ sound to the form-focused group by curving his hand to exemplify how students should roll their tongues. Another example, teachers can explain the puff of air that accompanies /p/ sound by holding Kleenex close to their mouth and pronounce /p/ and /b/. As for activities, minimal pairs, defined as a one phoneme difference between two words, has shown effectiveness in helping learners distinguish adjacent sounds and notice the differences between them. Al-Tamimi (2015) found that using minimal pairs to teach /p, v, tʃ, ʒ, η/ to 13 Saudi students is an effective strategy as the majority of learners became able to distinguish these sounds by the end of the experiment.

Once students notice the sounds, teachers can gradually start integrating production practices starting from using the sounds in isolation or individual words and ending with communicative activities. For example, Lesson 1.2 in section 5, the teacher asks students to produce the sounds in isolated words. Then, he moves to a more authentic, yet controlled, practice (Handout 4) to prepare learners for using the sound in a longer authentic utterance at the end of the day. By following such technique, learners first perceive, and then correctly produce the sound before they start using it in long stretches of speech. Also, according to Binturki (2008), students make more mistakes when they produce the sounds in contexts than in isolated words. This could happen because learners are thinking about other linguistic forms or the utterance meaning and so they lose focus on the problematic sound. So, by training them at the beginning on isolated words or short sentences, the teacher makes sure that distractions are reduced and that learners’ focus is narrowed towards the target sound.

All in all, teaching pronunciation explicitly is important to help learners notice the novel sounds and, ultimately, acquire and produce them. There are various classroom practices to help learners notice the gap in their phonological system including sound contrast, using visuals,
materializing sounds, and providing corrective feedback. Once teachers make sure students can hear the new sounds, they should start incorporating production activities such as read aloud, sentence and word minimal pairs contrast, and scripted role play. In perception and production activities, the teacher should guide learners’ practice starting from focusing on the sounds and gradually integrating the sounds in authentic utterance. This section discussed the benefits of pronunciation instruction in general and shed light on some of the best practices but it does not specifically address what integrating computer software can offer to the pronunciation classroom. Hence, the following section will discuss some challenges of the traditional pronunciation instruction and how integrating computer software assist teachers to overcome these challenges in EFL setting.

2.2. Traditional Instruction Challenges in the EFL Setting

As seen in the previous section, the traditional pronunciation instruction is effective in improving learners’ pronunciation (Lan & Wu, 2013; Couper, 2006; Saito & Lyster, 2012). Nevertheless, traditional pronunciation instruction, especially in EFL settings, might not be the most optimum choice due to three possible limitations. First, due to the larger number of students in each class, teachers might not always find time to teach the target forms and provide sufficient individual feedback to all learners at the same time. Thus, they tend to rely more on whole class drilling technique which can be effective but not for all students. For instance, if a student cannot distinguish the target sound from its counterpart (e.g., /p/ vs. /b/) then the teacher might not be able to pinpoint his/her pronunciation error because all students are repeating after the pronunciation model at the same time. A possible solution is to ask each student to pronounce a word or a sentence, but that would be time-consuming. However, if teachers use a read aloud technique to assess learners’ pronunciation and provide feedback, they might not
always get efficient results especially when they have an introverted student. Another issue is related to corrective feedback provided by the teacher. Some learners might avoid participating and practicing their pronunciation because they do not want to be corrected in front of the feedback and, thus, lose face in front of their peers. This point according to Krashen (1982) can provoke learners’ anxiety and lead to raising their affective filter. This issue can be partially solved by apply evaluation logs in which the teacher write comments to learners and suggestions; however, it is difficult to rely on this technique as it does not provide the feedback right at the same moment; however, it can be utilized as an additional feedback technique. Thus, large class sizes are a considerable limitation of traditional pronunciation instruction.

The Second limitation in the traditional pronunciation class is that learners may not have enough time on task. In other words, they may not sufficiently practice the target forms due to the class time constraints and the large number of students. It is very important that learners have enough individual practice and hear and produce the sounds in different positions and contexts so that they acquire and automatize the sounds. For instance, if a teacher teaches five classes and each class has about 20 students or more, which is typical in Saudi Arabia, it is almost impossible for the teacher to provide enough practice and exposure to the target sounds. Finally, in an EFL setting getting enough access to authentic materials and listening to a native pronunciation model could be difficult. Therefore, to have better pronunciation instruction outcomes and help learners improve their pronunciation and attend to novel segmental forms, teachers should attempt to overcome the shortcomings of traditional instruction in EFL settings by integrating computer technology. For example, ASR programs provide individualized feedback which solves two problems. First, in crowded classes, all learners will be able to receive sufficient feedback so that they can remedy their pronunciation problems before they
become stabilized. Second, it solves the “affective filter” issue mentioned above as learners do not have to worry about losing face in front of their peers since they practice forms and receive feedback in private. Along the same lines, learners using ASR or non-ASR programs have the advantage of having more time on task. In other words, they receive more training and practice than learners in the traditional classroom which helps them (i.e., CAPT student) improve their pronunciation more (Baradaran & Davvari, 2010). In the following sections, the author will explore a number of the pedagogical pronunciation software to provide suggestions of the best ways or practices to implement these programs in pronunciation instruction.

2.3. Computer Assisted Pronunciation Teaching (CAPT)

Neri, Cucchiarini, Strik, and Boves (2002) published a review paper of the computer programs that have been used for pedagogical purposes at the time. In general, they divided pronunciation software into two categories, ASR and non-ASR-based software. Generally, the difference between ASR and non-ASR software is that the former receive the incoming speech, analyze it, and give responses while the latter does not. The most common example of ASR technology is Siri with which users can have short conversations and ask it to do simple tasks such as dictating text messages or making calls. In pronunciation software, however, the main differences between ASR and non-ASR software are in the corrective feedback provided and the pedagogical approach each type follows. ASR software generally focuses on providing production activities for the purpose of using the language communicatively. The feedback ASR software provides is based on learners’ production and, thus, varies from one learner to another. However, non-ASR programs generally focus on perception activities that integrate the sounds in isolated words and short sentences. Also the feedback they provide is based on learners’ answers rather than production. In other words, they provide explicit fixed feedback in shape of
correct/incorrect answer. Therefore, to better judge the best way to implement non-ASR and ASR software in the classroom, there is a need to explore each type and figure out what it can offer to teachers and students and what programs they should apply in their classroom in order to take full advantage of these technologies.

2.4. Benefits and Limitations of Non-ASR Software

Non-ASR pronunciation software is a general term that refers to all programs utilized to teach pronunciation that do not integrate ASR technology. Generally, they can be divided into two types, sound-wave programs and visual interactive programs. The former refers to programs such as PRAAT which only provides waveform representation of the incoming speech. In this type, users bear the responsibility of analyzing and reading the waveforms and translating them into comprehensible data or language. In a research paradigm this type of program can be very helpful; however, as a pedagogical tool, acoustic programs have been criticized by scholars such as Neri, Cucchiarini, Strik, and Boves (2002) and Neri, Cucchiarini, Strik (2002), for two main reasons. First, they suggest that these programs compare and analyze speech in isolation of the utterance. In other words, these programs analyze learners’ pronunciation and compare it to a pronunciation model even if the two utterances do not match. For example, a learner who has a problem distinguishing /l/ and /r/ can produce a sentence like I am light intending to say right and compare it to a sentence like the moonlight is bright tonight; then when comparing his/her pronunciation to the model, he/she will end up thinking that his/her pronunciation is accurate. A second issue is related to the accuracy of the waveform representations. The program can lead learners to falsely think that they have a mismatching spectrogram with that of the native speaker model while, in fact, two speakers can have correct pronunciation and yet produce different waveform representations (Neri, Cucchiarini, Strik, 2002). In other words, learners might be
producing the sound correctly and their spectrogram can still be different from the model speaker’s one. Nevertheless, sound-wave programs being used as pedagogical tools to teach segmentals have reflected different results. For example, Saito (2007) used PRAAT and successfully helped Japanese learners improve their pronunciation. In contrast, students who used only the wave-sound feature in Wang and Young’s (2014) study did not improve their pronunciation and they indicated that waveform representations were difficult to interpret. Brett (2004) suggests that the program is employable in the classroom, however, rates it as very complex for learners. Thus, it is better to avoid using sound-wave programs as the main tool to teach segmentals, especially that there are other alternatives found in the second type of non-ASR programs (i.e. visual interactive programs).

The second type of non-ASR programs covers three sound perception best practices, namely, focus on sounds being integrated in isolated words and sentences, teach specific sounds using various scaffolding techniques such as visuals and mini-lessons, and provide sound focused exercises such as minimal pairs and sound identification. With regard to sound perception, many non-ASR programs help learners improve their perception by providing different types of scaffolding techniques and activities. Thomson (2011) applied MATLAB® software to teach /i, ɪ, eɪ, æ, θ, η, oʊ, o, u/ to 22 Mandarin speakers. What distinguishes MATLAB® software from other programs is the way individual sounds are presented. English orthography can easily confuse learners and affect their pronunciation especially when it comes to vowels. For instance, two distinct vowels can be represented by the same letter (e.g., present tense read / riːd/ and past tense read / red/); so this program assigns individual vowels to flags instead of words. In other words, learners, for example, listen to /ʌ/ sound and choose the Argentine flag. This type of visual scaffolding helps learners avoid the pronunciation spelling
problem and direct their focus to the target sounds. Participants received training in one linguistic context which was /p.bV/ (e.g., bee and /bʌ/ which is an artificial word). Judges evaluated students production of this form, as well as two other: /g.kV/, and /z.sV/. By testing learners in new contexts, the researcher wanted to make sure that learners fully acquired the sounds and were able to apply them to new linguistic contexts. The researcher found that focusing on perception by means of using visual aids was an effective scaffolding technique that helped learners improve their acquisition of the target sounds. Also, learners could transfer their knowledge into the new linguistic context, precisely /z.sV/. So, apparently, training learners on sound perceptions using visual representations of sounds can facilitate learners’ perception and noticing, which aids acquisition as mentioned above. Other programs such as Pronunciation Power overcome the orthography problem by highlighting the letters and supplying IPA symbols (e.g., *ch*op /tʃ/).

Another helpful pedagogical software is Pronunciation Power. What makes this program a great asset for the pronunciation instruction is that it applies all the best practices suggested to help learners with perceiving sounds. First, it provides lessons and uses animated pictures of the speech organs as a scaffolding technique to illustrate how each sound is produced. Second, it focuses explicitly on sounds being used in isolated words and sentences. Also, it provides various sound focused exercises including word and sentence levels minimal pairs and sound identification. For the sound identification exercise, learners listen to words and match them with sounds. As for the minimal pairs exercises, the program contrasts sounds in isolated words and sentences and ask learners to listen and choose the correct answers. Various studies investigated the effectiveness of this program on improving learners’ pronunciation. For example, Baradaran and Davvari (2010) studied the impact of using Pronunciation Power on
improving Iranian EFL learners’ overall production of segmentals and suprasegmentals and compared it to traditional instruction in which printed materials, and the teacher are the main sources. 62 female students were divided equally into two groups, experimental and control. The former received CAPT instruction in which students practiced pronunciation through utilizing Pronunciation Power as well as online sessions working on Skype and other chatting websites. Students in this group had the privilege of taking the program home and working at their own pace, whereas the control group received traditional instruction. As for the data collection, the researcher asked learners to perform perception and production tasks including listing and responding to visual stimulus, reading aloud and having conversations with the researchers. The tests showed that there was a significant difference between the two groups in favor of the experimental group. Since both groups had the same amount of instruction time (i.e., nine weeks) as well as practiced the same features, the researchers related the significant difference to use of pronunciation power and the amount of time spent on exercises. Students who used Pronunciation Power had individual practice inside and outside the classroom at their own pace, and they had the privilege of having access to the mini-lessons the program provides at any time (see unit plan section 5 for further information about the program). Seferoglu (2005) also found that using Pronunciation power helped learners improve their pronunciation as they significantly surpassed traditional pronunciation instruction group. Therefore, since this program applies various best practices such as focusing on sounds, providing scaffolding techniques such as animated visuals, and sound focused exercises, teachers are advised to integrate it to introduce new sounds to learners in order to help them perceive the sounds.

Additionally, non-ASR programs provide more time on task as learners practice specific phonological forms individually in class and outside the classroom as seen in Baradaran and
Davvari (2010). With this regard, Arashnia and Shahrohi (2016) reached a similar conclusion after applying *English Pronunciation File*, a pronunciation mobile-phone application that relies heavily on contrasting forms using word level minimal pair technique and connecting sounds and words to pictures. Also, it provides practice games in the shape of multiple choice short quizzes. In their study, the experimental group which had access to the program at all time significantly surpassed the control group which received traditional pronunciation instruction.

To sum up, non-ASR programs are beneficial supplemental tools for teachers seeking to direct learners’ attention to novel segmental forms. Their main strength is that they provide various sound focused exercises and provide different scaffolding techniques and exercises to improve learners’ perception of vowels and consonants. For instance, Thomson (2011) used MATLAB® which relies on visuals to reduce the English opaque orthography and, hence, help learners focus on the sounds. Baradaran and Davvari (2010) and Seferoglu (2005) utilized *Pronunciation Power* which, to the extent of the author’s knowledge is, the only available non-ASR that applies all the perception best practices, including animated pictures, IPA, sentence and word levels minimal pairs contrasts, at the same time. Nevertheless, what seems lacking from non-ASR programs is the instant corrective feedback and the integration of forms in authentic speech. For Example, all of the programs mentioned above present forms in either isolation or integrated into isolated words and/or sentences; however, none of them help learn the forms authentically. Additionally and more importantly, due to the lack of the ability to recognize the incoming speech, non-ASR programs fail to train users on sound production. In fact, a program like *Pronunciation Power* allows learners record their pronunciation which can be helpful as a short transitioning practice to give learners sense of sound production (as in Lesson 3.2 in section 5); nonetheless, learners will not receive any feedback on their production. Thus, the teacher
should provide in-class activities such as ‘Give Command’ or ‘Create Group Story’ as well as production assignments to be able to evaluate learners pronunciation of the target sounds on the sentence level. However, after focusing on specific sound training, learners need to practice producing the sounds in authentic speech and receive sufficient individual feedback on their authentic speech production, a teaching challenge that can be overcome by implementing ASR-based software.

2.5. ASR Software and the Teacher’s role in CAPT Instruction

ASR-based software offers at least two strengths for the pronunciation instruction, namely, the individual instant scoring and feedback of the incoming speech and the capability to integrate the sounds in authentic contexts. With regard to feedback, there are two types of ASR software, programs that only provide single-level feedback accompanied by holistic scores and programs that provide multi-level feedback with specific scores. In the TESOL field literature, to the extent of the author’s knowledge, there is only one study that explicitly compares the two ASR feedback types. Wang and Young (2014) compared the two types by using iCASL software which provides three levels of feedback, including: a) holistic feedback, which provides scores and waveform representations of the incoming speech, b) word-level feedback, which supplies scores, comments, and audio correction of all the words mispronounced, and c) contextualized feedback, which provides pronunciation of mispronounced words in contexts, as well as in isolation along, with comments and scores. In their study, they divided 38 learners into a control group which received only scores and waveform representation, and an experimental group, which received all three levels of feedback. Tests were administrated throughout the program. Participants listened to sentences and immediately repeated them. The authors found that there was a significant difference between the two groups in favor of the experimental group. That is,
the more feedback means provided, and the more specific the feedback is, the better the outcomes of the CAPT instruction. However, it could be the use of waveform feedback that led to such a great difference between the two groups, especially that the control group, as noted in a previous section, complained about the difficulty of interpreting the spectrogram. In fact, in another study conducted by Maghrebi, Heydarpour, and Shalmani (2016), the single level auditory feedback provided by *Rosetta Stone* improved learners pronunciation. Nevertheless, since the researchers did not report whether the majority of their participants were visual or auditory learners, it is difficult to generalize their results. In other words, their result could be affected by the possibility that the majority of their learners are auditory learners.

However, to guarantee the best results teachers should choose a program that provides various types of feedback including visual, audio, waveform, and pronunciation score due to the fact that learners have different learning styles. For instance, visual learners might benefit more from visual feedback such as mouth movements while audio feedback would be more effective with auditory learners. One of the programs that meet the feedback needs of auditory and visual learners is *MyET*. In this program, learners record real-life-like dialogues suggested by the program and receive all levels of feedback mentioned above. What makes this program distinguished from other programs is that on top of the feedback levels mentioned it provides specific feedback and scores for each mispronounced phoneme. This program, to the extent of the author’s knowledge, is the only one that provides this feature. This feature is very important because it indicates if learners still have problems with the studied phonemes when it is integrated into long utterance.

Another feature ASR programs, especially *MyET*, provides is the authentic exposure to the target sounds. Binturki (2008) suggests that learners commit more mistakes when
problematic sounds are integrated into context. This means that after providing sound focused exercises to help learners notice and produce the sounds in isolated utterances, teachers should train learners on producing the sounds on authentic utterances. *MyET* applies aspects of communicative language approach, including the use of authentic speech such as dialogues about real life situations and also includes role play activities. In a sense, learners select a topic such as ‘On an Airplane’ and complete scripted conversation interacting with the program and choosing different roles such as being the interviewer or the interviewee. However, *MyET* is best applied as a practice tool after introducing and discussing the sounds with learners due to the fact does not provide explicit focus on specific sounds; instead, it integrates the sounds in authentic speech. For example, learners will not choose /p/ sound to practice it specifically as in *Pronunciation Power*; nonetheless, they will choose a topic such as ‘Shopping’ to practice pronunciation in general. Liu and Hung (2016) integrated *MyET* as a practice tool to teach pronunciation to 35 beginning level Taiwanese learners. The main aim of the instruction was to improve learners’ pronunciation at the sentence level. At the beginning of each session, the instructor discussed the target sentences focusing on segmental and suprasegmental aspects. Then, after the discussion, students worked individually on the program and practiced the target sentences. The researchers applied the Elementary Speaking Test, derived from the General English Proficiency Test (GEPT), which is installed in the program. For the test, learners performed three tasks: a) listen to a sentence and repeat, b) read aloud a sentence without listening to a native speaker model, and c) listen to questions and answers and repeat them. The researchers reported that learners’ overall pronunciation improved significantly from pretest to posttest.
On the contrary, Tsai (2015) applied the same program to teach pronunciation to Taiwanese learners; however, since Tsai’s goal was to compare collaborative learning to individual learning, she let learners use the program without prior discussion of any phonological aspects. Tsai found that participants did not significantly improve their pronunciation; also, she reported that learners showed signs of frustration by week four and complained about the lack of understanding some phonological concepts. Therefore, since the only difference between Liu and Hung’s study and Tsai’s study was the prior explicit exposure and explanation of the phonological forms before using MyET, it could be inferred that teachers should discuss phonological forms before asking learners to use them communicatively in MyET. For example, in the proposed unit plan (section 5), the author avoids Tsia’s problem by providing enough exposure to the sounds throughout in class discussion and sound focused exercises such as minimal pairs.

The difference in classroom outcomes between Tsia’s study and Liu and Hung’s study, also, indicates that regardless of how advanced these programs are, they should be integrated as aiding tools instead of tools to replace the teacher. For example, these programs do not address kinesthetic learners or learners who learn through physical activities. The teacher, in this case, can provide activities that include this type of learning style. For instance, he/she can prompt learners with words or sentences that contain the target sound. Then divide learners into groups, assign them with different tasks, and, then ask them to interact (Handout 10). Also, in these classes, it is the teacher’s responsibility to provide specific sound focused production exercises and evaluate learners’ production in isolated utterances as in Lesson 2.1 homework and ‘Give Commands’ activity. In addition, the teacher in a class that integrates ASR and non-ASR programs, such as the one proposed in the Demo Lesson section, works as a bridge between
perception and production training as he/she guarantees a smooth transition from perceiving and producing the sounds in isolated utterances to using them communicatively. In other words, non-ASR programs provide great perception training on specific phonological sounds, but they do not offer sufficient production training. On the other hand, ASR programs only provide communicative production training. Thus, the teacher, in this case, can provide sound focused production and fill the gap.

All in all, ASR programs mainly help learners improve their sound production because they provide individualized instant feedback and scores and they train learners on pronouncing sounds in authentic speech. Teachers who wish to take full advantage of this technology should apply a program such as MyET which provides multi levels feedback and integrates the sounds communicatively. However, teachers should have an active role CAPT classes as they provide activities that address kinesthetic learners who are neglected by computer programs. Also, they should provide enough production exposure to the target sounds on sentence and word level to guarantee smooth transition between activities.

3. Arab Learners’ Pronunciation Errors and CAPT for Arab Learners

3.1. Arab Learners’ Pronunciation Errors

In homogeneous L1 EFL classes, teachers should familiarize themselves and have at least the basic knowledge of learners’ L1 transfer errors. Such knowledge can facilitate the teachers’ job in finding common pronunciation mistakes between learners and, hence, assist in prioritizing instruction goals. According to the Error Analysis Hypothesis, there are three main sources of errors in the second language: a) intralingual errors which include errors that resulted from learners’ native language interference; b) interlingual errors which are caused by the complexity
of target language structure; and c) developmental errors, which refers to the errors shared by second language learners and children whose language have not fully developed yet (Celce-Murcia et al., 2010). The first source (i.e., intarlingual) or L1 transfer could be the easiest to predict especially if the instructor is teaching an homogenous class and he/she shares the same mother tongue as the learners. In the case of Arabic learners, regardless of the fact that they can communicate smoothly in their first language, students from different vernaculars face different difficulties while learning English pronunciation; this is caused by the fact that different vernaculars have different specific phonological properties that can interfere with learners’ second language pronunciation. Thus, knowledge about these properties and how learners transfer them into their second language should facilitate the teachers’ job in prioritizing their pronunciation instruction goals and choosing which sounds to teach and what sounds are more likely to result in communication breakdowns. Additionally, teachers teaching in mixed Arabic vernacular class can also target the sounds that are shared by learners. Therefore, with the aim of facilitating this prioritizing process, this section will shed light on the most shared segmental problems for Arabic learners as well as the programs that have been utilized to remedy such errors and improve Arabic learners’ pronunciation of English sounds.

In a comprehensive study, Zarka and El-Said (2013) investigated the transfer errors of different Arabic vernaculars. The researchers asked participants from Palestinian (3 participants), Egypt (2 participants), Syria, Jordan, Tunisia, Morocco, and Emirati to read aloud 43 stimuli. Table 1 displays problematic sounds and their common replacement sounds.
Table 1: Errors resulting from L1 Arabic transfer

<table>
<thead>
<tr>
<th>Consonant replacement</th>
<th>Examples</th>
<th>Vernacular</th>
</tr>
</thead>
<tbody>
<tr>
<td>/dʒ/ → /ʒ/ or /g/</td>
<td>/ʒɪm/ or /gɪm/ (gym)</td>
<td>Lebanese, Syrians, and North Egyptians</td>
</tr>
<tr>
<td>/ɒ/ → /z/ &amp; /ɔ/ → /s/</td>
<td>/zə sʌn/ (the sun)</td>
<td>Egyptians</td>
</tr>
<tr>
<td></td>
<td>/sɪŋk/ (think)</td>
<td>All Participants</td>
</tr>
</tbody>
</table>

Source: Zarka and El-Said (2013)

The table also shows how complicated it might be to teach a class that has different vernaculars, given the likelihood of complexity different challenges depending on the vernacular. For instance, despite the fact that the two Egyptian participants are living in the same country and they speak the same L1, they pronounced /dʒ/ in ‘gym’ differently based on their region.

Looking at learners from just one Arabic vernacular, Hassan (2014) investigated common vowels and consonants errors made by EFL Sudanese learners and found that /ɒ/, /tʃ/, /ð/, /u:/ were the sounds which more than 88% of learners mispronounced. However, in his study he only gave learners ten sentences to read which might not have reflected all errors; also some sounds such as /p/ were presented only in one position. Binturki (2008) examined Saudi Najdi dialect speakers’ production of, /p/, /v/, and /t/ being pronounced in onset and coda positions and integrated into isolated words and context. By looking at the results in Table 2, it seems that the sounds are indeed problematic for learners; however, they are even more challenging when they are integrated into context.
Table 2: sounds produced in isolation vs. in context by learners

<table>
<thead>
<tr>
<th></th>
<th>Isolation</th>
<th>Context</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>/p/</td>
<td>/v/</td>
</tr>
<tr>
<td>Onset</td>
<td>20/20</td>
<td>11/20</td>
</tr>
<tr>
<td>Correct</td>
<td>33/40</td>
<td>23/40</td>
</tr>
</tbody>
</table>

Source: Binturki (2008)

The table suggests that teachers should train learners on the challenging sounds in isolation and contexts. For instance, teachers can start by exposing learners to the novel sound in isolation; then, once learners become able to hear it and produce it, teachers should integrate it in authentic utterances. Nevertheless, this study is limited to the number of participants (only five) as well as their length of stay in an English speaking country. Since learners stayed for two years in the U.S and studied English they are expected to have fewer pronunciation problems than those who study English in Saudi Arabia; thus, maybe they did not reflect exactly the real percentage of error learners from Najdi dialect background would commit when pronouncing the studied sounds. Elmahdi and Khan (2015) used a larger sample of EFL Saudi learners to investigate pronunciation errors they commonly committed. 60 students from mixed grades (10th, 11th, and 12th) and different vernaculars comprised the study’s sample. The researchers created a list of 31 words, four of which were clusters in different positions whereas the rest of the words presented what the researchers assumed to be problematic sounds. Results showed that the /p/, /ʒ/, /r/, and /tʃ/ were the most problematic sounds and, according to the researcher, participants had low scores when pronouncing these sounds in all positions. This study although has a large number of participants, it might not have revealed all pronunciation problems due to the limited number of stimuli. However, it agrees with other studies that /p/ and /tʃ/ are common challenging sounds for learners. Also, Altaha (1995) and Hago and Khan (2015) added /v/ as one of the challenging sounds for Saudi English learners. Along the same line, Atika, Dana, and
Amaal (2015) found that Jordanian learners have problems with sounds like /p/, /ʒ/, /dʒ/, and /v/, however not /tʃ/ due to its existence in many Jordanian dialects. In the Yamani context, Shormani and Alsohbani (2015) found that learners commonly mispronounce /p/, v, tʃ, e, eɪ, æ, oo/ whereas in Iraq Ammar, Yap, and Che (2016) found that /ɔ, ʌ, æ, oo/. These studies suggest that Arab learners from different vernaculars have different challenging consonants and vowels (Table 3) which may lead teachers who are not aware of these differences to exclude some learners from their lessons. For instance, in a class that has a mix of Sudanese, Egyptians, and Saudis, the teacher could, unintentionally, exclude Saudi learners by focusing on a sound like /ə/ which is only problematic for the non Saudi learners. Therefore, teachers should either conduct a diagnostic test at the beginning of the first class or they can start teaching likely shared challenging sounds.

Table 3: Challenging English sounds for different Arabic vernaculars

<table>
<thead>
<tr>
<th>Vernaculars in general</th>
<th>Challenging sounds</th>
</tr>
</thead>
</table>
| Sudanese and Egyptian vernacular | Consonants /p/ /v/ /ʊ/ /tʃ/ /dʒ/  
Vowels /u:/ /ʊ/ /ʊ/ (in medial position) |
| Saudi Vernacular       | Consonants /p/ /v/ /r/ /ʒ/ /tʃ/ /ʊ/                                               |
| Yemeni vernacular      | Consonants /v/ /p/ /tʃ/  
Vowels /e/ /ʊ/ /æ/ /ɛ/ /ɑ/ /ɔ/ /u/ |
| Iraqi vernacular       | Vowels /ɔː/ /ʌ/ /æ/ /ʊ/ /ʊ/                                                       |
| Jordanian Vernacular   | /p/ /ʃ/ /v/ /tʃ/                                                                |
| Lebanese and Syrian vernacular | /p/ /ð/ /ʊ/ /dʒ/                                               |

Another point that teachers need to be aware of is that they should target sounds with high functional load. For instance, Arab learners find difficulties pronouncing /r/ sound, as suggested by Binturki (2008) and Elmahdi and Khan (2015); however, a word meaning is not dependant on the mispronunciation of /r/ sound. Arab learners pronounce trill /ɾ/ instead of curling their tongues as in the English /ɾ/. Such transfer should not affect their intelligibly much.
In other words, a native speaker should still understand a word *red* even if the speaker pronounces the first sound as alveolar trill. In contrast, if learners replace a sound like /v/ with /f/ as in /hæfl/ (half) instead of /hænv/ (have) their intelligibility should be greatly affected. However the question here is ‘would CAPT instruction improve Arab learners’ pronunciation, given that there is not any program developed specifically for Arab learners?

3.2. CAPT Instruction to Support Arab Learners

Unfortunately, there are few studies that investigated the case of using technology in pronunciation instruction to support Arab learners of English. The near absence of pronunciation instruction in schools and universities may explain the lack of research attention. For instance, in Saudi Arabia schools, students start studying English in grade four and continue to grade twelve. Nonetheless, the curriculum does not introduce pronunciation issues to learners; instead, most of the English curriculum is allotted to teaching grammar, reading, and writing. Regardless, studies investigated the use of technology for teaching pronunciation in different Arab countries showed promising results.

Elimat and AbuSeileek (2014), For instance, compared the effectiveness of *Tell Me More English, ASR*-based software developed by *Rosetta Stone (1999)*, in CAPT classrooms to that of a regular pronunciation instruction for improving learners’ pronunciation as well as to test the best way to conduct CAPT instruction. They divided 64 third grade Jordanian EFL students into four groups, three experimental groups, and one control group. The experimental groups were divided into three groups as well: a) individual work, b) pair work and c) collaborative work. By dividing CAPT students into three experimental groups based on the teaching technique, the researcher tried to find out which technique is more effective in teaching pronunciation in CAPT instruction. All groups (i.e., experimental and control) contained 16 students and studied the
same material; however, the control group received traditional pronunciation instruction via textbooks and cassettes. Tests focused on learners’ perception and production, and they were scored out of 36 points.

The researchers found that there was a significant difference between the control and experimental groups in favor of the experimental groups. This suggests that the utilization of ASR-based CAPT can be more beneficial than traditional pronunciation teaching. As for the most effective grouping technique, the results suggested that there was a significant difference in favor of individual work group, highlighting the importance of individual practice with CAPT instruction.

A possible explanation for the success of the individual group is that learners working individually might be more relaxed than others as they do not feel judged by their peers as well as they do not get into unnecessary competition with their group members or with other groups.

To sum up, one of the major problems facing instructors teaching in Arab countries due to the variety of Arabic vernaculars is the resulting different pronunciation errors. However, a possible solution for such difficulty is to focus on learners’ shared errors and target sounds that have high functional load (Sidgi & Shaari, 2017). Finally, it seems CAPT instruction is a great aid for teachers and EFL Arab learners because it can provide them with more exposure to authentic target language as well as help the teachers monitor learners’ improvement and observe them closely. Although studies scrutinizing the case of CAPT for Arab learners are few, the available literature supports the integration of CAPT-system into pronunciation instruction, especially when learners work individually. In fact, the integration of a CAPT-system could be a great asset for English pronunciation instruction, especially in Arab countries because of its
ability to individualize instruction to meet the needs individual learners from different vernaculars and due to the increase of feedback and practice, they offer to the student.

4. Classroom Implications and Principles for Teaching Pronunciation in Saudi Arabia

This section connects the best practices of CAPT instruction discussed above to Saudi school setting and discusses how CAPT software should be integrated into EFL Saudi pronunciation classroom to teach Arab learners. To begin with, Saudi Arabia English classes usually contain, not only Saudi, but different Arabic vernaculars. This might cause a problem to teachers as they could, possibly, set pronunciation objectives that do not address all vernaculars. In other words, they could select a sound that is problematic for one group of learners but not for the others. So, to avoid such mistake teachers in Saudi Arabia should, first, target sounds that affect learners’ intelligibility instead of accentedness. By doing so, they will narrow their choices; especially that Munro and Derwing (1995) suggest that intelligibility affects L2 speakers’ speech more than accentedness. After that, teachers should select sounds that are problematic for all learners. In the light of the discussion in the previous section, there are three common problematic consonants that teachers should prioritize in the pronunciation instruction in Saudi Arabia, namely, /p/, /v/, and /ʃ/ which are replace by /b/, /f/, and /ʃ/, respectively.

Another point teachers in Saudi Arabia should keep in mind is that before they tailor their lessons and choose the programs, they should consider learners’ pronunciation level. Teachers unfamiliar with the Saudi school setting might be impressed by the grammatical knowledge learners have and falsely rush to a conclusion that learners are proficient in pronunciation as well. However, due to the lack of pronunciation teaching in the school curriculum and the mere absence of the instruction in most universities, the majority of learners have major pronunciation problems on the segmental level (Ahmad & Nazim, 2014). Therefore, teachers should gradually
guide learners’ exposure to the target sounds and avoid overwhelming them by immediately integrating the sounds in long authentic utterances before they make sure they can pronounce them in short ones.

In details, the first day should be directed to raise learners’ awareness towards the target sounds and provide sufficient perception practice. Teachers in this day (i.e., perception day as in Lessons 1.1, 2.1, & 3.1) should implement a program like pronunciation Power due to the fact that it provides plenty of sound perception training best practices including animated visuals, IPA symbols, and word and sentence level minimal pairs contrasts. Then, after making sure that learners notice the sound, the teacher should specify another day for sound production (e.g., Lessons 1.2, 2.2, & 3.2). Similar to the previous day, the teacher will gradually start from short isolated utterances which should increase learners’ focus on the sound and end the day with integrating the sound in authentic speech. Exposing learners to short isolated utterances before authentic ones is two-fold reasons: first, reduce the linguistic distractions and help learners focus on the target sounds and, second, guarantee enough exposure to the sounds and avoid overwhelming learners by the long authentic utterances. After that, learners should practice the sounds in authentic utterance using ASR-based programs such as MyET, which provides role play exercises and scenarios that mimic real-life situations. This should increase the production automaticity as learners are focusing on the topic and producing utterances rather than focusing only on the target sounds in isolated utterances. However, since the program focuses on training learners to speak about topics and does not explicitly emphasize certain sounds, the teacher should create activities that integrate enough exposure to the target sounds.

In fact, what makes computer pronunciation software integration very important in Saudi Arabia is the large number of students in each class. Language classes in Saudi Arabia usually
have 20 or more students which make it difficult for the teacher to provide enough practice and feedback. Therefore, by applying CAPT software, they can help learners have more time on task and receive individual feedback. However, some teachers might lose these two features when they ask learners to work collaboratively on these programs. Therefore, Elimat and AbuSelieek (2014) suggest that learners should work individually on these programs so that they can benefit the most from these programs.

Finally, based on the discussion in this section as well as throughout this paper, the author believes that the following principles should guide one’s use of CAPT in an integrated classroom. These principles are illustrated in the following lesson unit:

I. General Principles for CAPT instruction

1. Teachers should target sounds with high functional load, and that can affect learners’ intelligibility. For example, in an EFL class where all learners’ L1 is Arabic, teachers should target /p/, /v/, and /tʃ/.

2. Teachers should start with perception training to help learners notice the target sound then provide production training.

3. Teachers should start with contrasting the properties of the target sound with that of the replacement sounds such as /p/-/b/, /v/-/f/, and /tʃ/-/ʃ/.

4. Teachers, in the beginning, should provide controlled activities in which learners practice the target sounds in isolated words and sentences. Then, gradually guide learners to practice the target sounds in authentic speech.

5. Learners should work individually on their PCs.

6. Teachers should have an active role in the class and provide in-class exercises that, first, guarantee extra exposure to the sounds and, second, include kinesthetic learners.
II. Perception Principles

1. Teachers should select a non-ASR program such as *Pronunciation Power* which provides scaffolding techniques such as animated visuals, IPA symbols, and written explanations of sound production.

2. The program should provide exercises such as sound identification and sentence and word level minimal pairs which contrast the target sounds with the replacement sounds.

3. Teachers should make sounds visual and tangible, where possible by providing techniques that help learners distinguish the target sounds from the replacement sounds. For example, in /p/-/b/ they can use Kleenex to highlight the aspiration feature of /p/ sound.

III. Production Principles

1. Teachers should start training learners on producing the sounds in isolated words and sentences; then, gradually move to the sounds in authentic speech.

2. Teachers should create activities such as scripted role play and create short group stories to guarantee enough exposure to the sounds in short utterances.

3. Teachers should use evaluation logs to track learners’ improvement, discover their pronunciation weaknesses, and provide feedback and suggestions.

4. Teachers for the authentic exposure should choose a program like *MyET* which provides real life like dialogues as well as multi-level specific feedback and pronunciation scores.

The following section demonstrates employing these principles in a unit plan consists of three lesson units to teach three consonant phonemes for Arabic learners of English in Saudi Arabia. Each phoneme is taught in two days. The purpose of this demonstration is to illustrate specifically the way teachers might best employ CAPT to cultivate learners’ pronunciation skill. The following table offers an overview of the organization and relationships of these lessons.
<table>
<thead>
<tr>
<th>Phoneme</th>
<th>/p/</th>
<th>/v/</th>
<th>/tʃ/</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesson Plan 1</td>
<td>Introduction and perception</td>
<td>Introduction and perception</td>
<td>Introduction and perception</td>
</tr>
<tr>
<td>Lesson Plan 2</td>
<td>Production and authentic speech practice</td>
<td>Production and authentic speech practice</td>
<td>Production and authentic speech practice</td>
</tr>
</tbody>
</table>

5. Unit Plan: Problematic English Consonant Sounds for Arab Learners

**Unit Objective**

- By the end of this unit, learners will be able to perceive /p/, /v/, and /tʃ/ and distinguish them from /b/, /f/, and /ʃ/, respectively.
- By the end of this unit, learners will be able to produce /p/, /v/, and /tʃ/ intelligibly.

**Class Description**

In this class, there are 20 college EFL learners whose first language is Arabic, and their pronunciation level is Developing. Learners are from different countries including Saudi Arabia, Egypt, and Iraq; hence, they speak different Arabic vernaculars. The classroom is equipped with overhead projector and PCs for learners. The PCs are equipped with cameras and headsets, and learners have access to the internet. Learners during this class will work on two programs described below under the instruments section. Each class is a 50 minute period (2 meetings a week) in which learners will learn and practice a specific sound.

**Instruments**

**Pronunciation power** (sound introduction and perception)
This is a Computerized Learning Inc. non-ASR product that targets English second language learner audience and, specifically, learners who wish to improve their phoneme level pronunciation. The program is very simple to use, and it supplements learners with short lessons about the sounds. These lessons have visual and audio support which enables learners to observe how each sound is produced. Also, it provides word-level and sentence-level practices and exercises. The program uses a simple direct feedback method where it only informs learners whether their answers are correct or incorrect. Overall, this program is helpful to introduce sounds to learners and improve their perception.

**MyET** (authentic conversation)

This program by Labs Inc. adopts a combination of audio-lingual and communicative language approaches where learners are exposed to authentic conversations and activities about real-life situations. For each conversation learners will complete the following tasks:

- Sentences: read aloud exercise where learners select any sentence from the conversation and practice with the pronunciation model in the program.

- Role Play: learners will select which role they want to play in the conversation, such as interviewer or interviewee.

Imitation: in this exercise learners will listen to the model and repeat after it; however, they will not have a caption as in the previous exercises.

Repeat: this is a timed drilling exercise in which learners have to finish the conversation in less than four minutes.

In fact, the program is a good tool for both learners and instructors. As for the former, after practicing conversations, they receive waveform, audio, and visual feedback as well as specific and holistic scores on different pronunciation traits including individual sounds,
intonation, and stress. After each conversation Students can click on the overall pronunciation score and receive specific score and feedback for each sound they utter. Also, they can listen to their pronunciation and compare to the pronunciation model. Additionally, since this is an online program, students are connected to other users with whom they create contests to encourage extra practice. The program also helps teachers monitor learners’ progress as it allows them to create groups and send assignment directly to their students. At the same time, it sends detailed reports and scores of learners’ pronunciation to teachers. This program can be helpful for learners who have been already introduced to the target sounds, and they only need multiple exposures in authentic contexts.

**TESOL Standard**

Standard 1: English language learners communicate for social, intercultural, and instructional purposes within the school setting.

Standard 2: English language learners communicate information, ideas, and concepts necessary for academic success in the area of language arts.
Lesson 1.1 Day One: /p/ Sound Introduction and Listening Discrimination

Objectives
- By the end of this lesson students will be able to discriminate /p/ sound from /b/.

Activities

<table>
<thead>
<tr>
<th>Time</th>
<th>Type of Work</th>
<th>Activity</th>
<th>Purpose</th>
<th>Instrument/s</th>
</tr>
</thead>
</table>
| 10 mins| Whole class   | - Write speech organs.  
- Define the following terms | Warm-up activity and review speech organs names and basic concepts as preparation for today’s lesson                                      | Handout 1             |
| 10 mins| Teacher to students | Display an animated speech organ chart and discuss /p/ sound properties with learners. | Provide basic information about target sound help learners distinguish it.                                                                | Pronunciation Power   |
| 5 mins | Whole class   | Distribute Kleenex to learners to practice aspiration that accompanies /p/ sound and contrast it with /b/.  
- Provide a technique to observe sounds physically.  
- Highlight a major difference between aspirated /p/ and /b/. | - Provide a technique to observe sounds physically.  
- Highlight a major difference between aspirated /p/ and /b/. | Kleenex               |
| 5 mins | Individual work | Listen to /p/ contrasted with /b/ in isolated words context and choose the correct answer. | - Minimal pairs contrast helps learners notice the difference between /p/ and /b/.                                                        | pronunciation power   |
| 10 mins| Individual work | Sentence level listening discrimination exercise.  
In this exercise, /p/ sound is contrasted with other sounds in minimal pairs. Learners listen and provide the correct answers. | Prepare learners to notice the sound in longer than word level sentence.                                                                   | pronunciation power   |

Assessment
- Cloze exercise: learners provide the missing sound /p/ vs /b/ (Handout 2).

Homework
On a website created by the teacher, learners and provide the missing words in the text (Handout 3).
Lesson 1.2. Day Two: /p/ Production: ‘Job Interview’

Objective: By the end of this lesson, learners will be able to produce /p/ intelligibly.

<table>
<thead>
<tr>
<th>Time</th>
<th>Type of Work</th>
<th>Activity</th>
<th>Purpose</th>
<th>Instrument/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 mins</td>
<td>Whole class</td>
<td>Learners will complete the phonics game.</td>
<td>- warm-up activity and quick perception practice</td>
<td>Pronunciation Power</td>
</tr>
<tr>
<td>10 mins</td>
<td>Individual practice</td>
<td>Learners will listen to minimal pairs, record their production, and compare to the pronunciation model.</td>
<td>- Sound contrast exercise helps learners focus on the sound and compare it with the replacement sound.</td>
<td>Pronunciation Power</td>
</tr>
<tr>
<td>15 mins</td>
<td>Whole Class</td>
<td>‘Give Commands Activity’: Learners will be divided into 4 groups. Group members will utter sentences and command other groups based on the teacher’s prompts.</td>
<td>- Prepare learners to pronounce the sound in long utterance. - It targets kinesthetic learners. -Provide more sound focused exposure to the target sound.</td>
<td>Handout 4 Evaluation logs</td>
</tr>
<tr>
<td>20 mins</td>
<td>Individual Practice</td>
<td>Learners will practice authentic speech conversations about “Job Interview” conversations 1 and 2</td>
<td>- This will give them the opportunity to receive multi levels feedback and practice the sound in authentic speech.</td>
<td>MyET</td>
</tr>
</tbody>
</table>

Homework

1- Learners will finish Job interview conversations 3, 4, and 5.

2- Learners will record sentences and send it to the teacher (Handout5).

Assessment

- Learners’ /p/ pronunciation on sentence level will be evaluated throughout ‘Give Commands’ activity and homework 2.

- Learners’ pronunciation of /p/ on authentic speech will be evaluated based on the reports MyET sends.
Lesson 2.1 Day Three: /v/ Sound Introduction and Perception

Objectives

By the end of this lesson, students will be able to recognize /v/ and distinguish it from /f/.

Activities

<table>
<thead>
<tr>
<th>Time</th>
<th>Type of Work</th>
<th>Activity</th>
<th>Purpose</th>
<th>Instrument/s</th>
</tr>
</thead>
</table>
| 10 mins | Whole class | - Revise voiced and unvoiced sounds.  
- Explain how /v/ sound differs from Arabic /f/.  
- Show an animated side and front view of the mouth.  
- Place hands on larynx to feel the vibration in /v/ compared to /f/ | - Contrast features /v/-/f/ and use animated visuals to help learners notice the sound.  
- Provide physical ways to contrast the two sounds. | Pronunciation Power (animated picture) |
| 10 mins | Individual work | - Listen to /v/ or /f/ contrasted and choose the correct sound | Students can hear the sound and distinguish it from the replacement sound. | Handout 6 |
| 10 mins | Individual work | Word level listening discrimination: in this exercise students will listen to minimal pairs and choose the correct word. | - Highlights the difference between /v/ and /f/  
- Help students focus on the two sounds only. | Pronunciation Power |
| 20 mins | Individual work | - Watch video of the teacher reading sentences and complete the missing words.  
- Prepare learners for long utterance  
- Using video should help visual learners see how the sound is produced | Video  
- Handout 7 |

Homework

- Students will listen to words and asked to write them down (Handout 8)

Assessment

- Students will be assessed through their homework and exercises on handouts 6 and 7.
Lesson 2.2. Day Four: /v/ Production: ‘Basic English for Travelers’

**Objective:** By the end of this lesson, learners will be able to produce /v/ intelligibly.

<table>
<thead>
<tr>
<th>Time</th>
<th>Type of Work</th>
<th>Activity</th>
<th>Purpose</th>
<th>Instrument/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 mins</td>
<td>Individual Practice</td>
<td>Teacher will read a passage and ask learners to provide the missing words</td>
<td>- Warm-up activity and perception practice</td>
<td>Handout 9</td>
</tr>
<tr>
<td>10 mins</td>
<td>Individual practice</td>
<td>Learners will listen to minimal pairs, record production, and compare it to the pronunciation model.</td>
<td>- Sound contrast exercise helps learners focus on the sound and compare it with the replacement sound.</td>
<td>Pronunciation Power</td>
</tr>
<tr>
<td>15 mins</td>
<td>Whole Class</td>
<td>‘Scripted Role Play Activity’: Learners will be divided into 4 groups. Groups will interact with each other and follow the script provided by the teacher.</td>
<td>- Gives learner’ a sense of how the sound is integrated into real-life speech. - Prepares learners for longer utterance and works as a transition from word level practice to authentic speech practice. - It targets kinesthetic learners. Provide more exposure to the sound</td>
<td>Handout 10 Evaluation Logs</td>
</tr>
<tr>
<td>20 mins</td>
<td>Individual Practice</td>
<td>Learners will practice authentic speech conversations about ‘Basic English for Travelers 1’- conversations 1 and 2</td>
<td>- This will give them the opportunity to receive multi levels feedback and practice the sound in authentic speech.</td>
<td>MyET</td>
</tr>
</tbody>
</table>

**Homework**

1- Students will record sentences send them to the teacher (Handout 11).

2- Students will complete ‘Basic English for Travelers 1’ conversations 3, 4, and 5.

**Assessment**

- Learners /v/ Sentence level production will be evaluated throughout ‘Scripted Role Play’ activity and homework 1. The teacher will use observation logs to provide feedback (Handout 17).

- Learners’ /v/ production in authentic context will be evaluated throughout the reports MyET sends.
Lesson 3.1 Day Five: /tʃ/ Introduction and Perception

Objective

Students will be able to perceive /tʃ/ and distinguish it from /ʃ/.

Activities

<table>
<thead>
<tr>
<th>Estimated Time</th>
<th>Type of Work</th>
<th>Activity</th>
<th>Purpose</th>
<th>Instrument/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 mins</td>
<td>Teacher to Students</td>
<td>- Discuss /tʃ/ properties and compare it to /ʃ/                           - Highlighting /tʃ/ features.</td>
<td>Pronunciation Power</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Show animated pictures of side and front of the mouth while producing the sound.</td>
<td>- Display visuals of sound produced help learners notice the novel sound and distinguish it from /ʃ/.</td>
<td></td>
</tr>
<tr>
<td>10 mins</td>
<td>Whole Class</td>
<td>- Watch a video of /tʃ/ contrasted with /ʃ/ in isolation and choose the correct answer</td>
<td>- Visuals notice the main differences between /tʃ/ and /ʃ/.</td>
<td>Video Handout 12</td>
</tr>
<tr>
<td>15 mins</td>
<td>Individual work</td>
<td>- Complete comparative words task on Pronunciation power.</td>
<td>Help learners focus on /tʃ/ and /ʃ/ qualities and notice the differences.</td>
<td>Pronunciation Power Handout 13</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Contrasts the two sounds in isolated words.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 mins</td>
<td>Students Only</td>
<td>Complete sentence listening discrimination task in which they will choose the word they hear (e.g., after the rain, the ditch/dish was filled with water).</td>
<td>This will help them notice the sound in longer than isolated word context</td>
<td>Pronunciation Power</td>
</tr>
<tr>
<td>5 mins</td>
<td>Students Only</td>
<td>Students will play a phonics game on pronunciation power.</td>
<td>This game should break the class routine and increase exposure to /tʃ/.</td>
<td>Pronunciation Power</td>
</tr>
</tbody>
</table>

Homework

The teacher will create a video recording of himself while reading a passage that contains /tʃ/.

Students are asked to choose the correct sound (Handout 14).

Assessment

The teacher will assess students based on their homework and in-class activities.
Lesson 3.2 Day six: /tf/ Production: ‘Survival English 1’

By the end of this lesson, learners will be able to produce /tf/ intelligibly.

<table>
<thead>
<tr>
<th>Time</th>
<th>Type of Work</th>
<th>Activity</th>
<th>Purpose</th>
<th>Instrument/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 mins</td>
<td>Individual practice</td>
<td>- Revision /tf/ properties.</td>
<td>- Sound contrast exercise help learners focus on the sound and compare it with the replacement sound.</td>
<td>Pronunciation Power</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Learners will listen to minimal pairs and sentences, record their production, and compare it to the pronunciation model.</td>
<td>- Sentence level exercise will prepare them to integrate the sound in longer utterance, and at the same time they are still focusing on the target sound.</td>
<td></td>
</tr>
<tr>
<td>15 mins</td>
<td>Whole Class</td>
<td>- Divide learners into 4 groups. Each group will create a short story using teacher’s prompts. (note: these words were provided prior this lesson for practice and meaning)</td>
<td>- this exercise will gradually prepare them to produce the sound in longer than word level utterance</td>
<td>Handout 15 Evaluation Logs</td>
</tr>
<tr>
<td>20 mins</td>
<td>Individual Practice</td>
<td>Learners will practice authentic speech conversations about ‘Survival English 1’- conversations 1, 2, and 3</td>
<td>- This will give them the opportunity to receive multi levels feedback and practice the sound in authentic speech.</td>
<td>MyET</td>
</tr>
</tbody>
</table>

**Homework**

1- Learners will listen and record sentences (Handout 16).

2- Learners will complete ‘Survival English 1’ conversations 4, 5, and 6.

**Assessment**

- The teacher will evaluate learners’ sentence level production of /tf/ using homework 1. The teacher will use the evaluation logs to provide feedback (Handout 15).

- The teacher will evaluate learners’ production of /tf/ in context using MyET reports.
6. Conclusion

Many studies comparing CAPT instruction to traditional pronunciation instruction came in favor of the former. This suggests that the integration of computer software assists teachers build a successful classroom and help Arab learners, as well as other EFL learners, improve their pronunciation (Baradaran & Davvari 2010; Seferoglu, 2005; Mehrpour et al., 2016; Al-Qudah, 2012; Elimat & AbuSeileek, 2014). However, this should not imply that teachers can integrate any program and expect learners to improve. Teachers before selecting any program should set reasonable course objectives such as increasing learners’ pronunciation intelligibility. Then, tailor lesson objectives and select programs based on learners’ needs. In an EFL classroom where all students speak Arabic as L1 such as classes in Saudi Arabia, teachers should target phonological sounds that are problematic for all learners. For EFL Arab learners, there are three consonant sounds that can affect their intelligibility, particularly, /p/, /v/, and /tʃ/. Thus, teachers should improve learners’ perception and production of these problematic sounds.

Teachers should select pronunciation computer programs that provide efficient perception and production training. There are two types of CAPT software, namely, ASR-based software and non-ASR. Non-ASR programs are best utilized to raise learners’ attention towards target sounds because they mainly focus on perception training. Teachers should integrate a program like Pronunciation Power which applies plenty of best practices for teaching sound perception including sentence and word minimal pairs listening contrast, animated visuals that show how sounds are articulated, and IPA symbols to avoid English opaque orthography. Concerning ASR-based software, teachers should select a program such as MyET which provides various levels of holistic and specific feedback as well as it integrates the sounds in authentic speech using real-life-like situations. Nonetheless, applying technology does not reduce the
teachers’ roles in the classroom. Technologies should be used as supplement tools rather than teacher replacement tools. An ideal CAPT instruction should make a balance between what computers can offer to students and what teachers can offer as well. Teachers in CAPT instruction should bear the responsibility of assuring that learners are receiving enough practice through creating in-class activities that appeal to different learning styles such as kinesthetic learners who are neglected by CAPT programs. Also, they tailor their lessons based on their learners’ needs. For instance, in Saudi Arabia students usually due to lack of pronunciation training have poor pronunciation skills and knowledge. Thus, teachers, in this case, should guarantee that learners acquire the target sounds in isolated utterances before they train them on authentic long utterances.

A final thought, these technologies are important to implement in classrooms that has a large number of learners as in most educational institutions in Saudi Arabia due to the fact that these programs guarantee enough private training and sufficient feedback for all learners. However, teachers in Saudi or any other country should always keep an open eye on these programs and test them enough before applying them in the classroom. Also, they should be cautious that it is possible that an efficient program today becomes less efficient tomorrow due to factors such as lack of software funding or even bad software update.
References


Appendix A: Lesson Worksheets

Handout 1

Question 1: Provide the speech organs names

Question 2: define the following terms

Aspiration

........................................................................................................................................

Consonants

........................................................................................................................................

Vowels

........................................................................................................................................
Handout 2

Listen and complete the missing sound

I have just …arked my car.

This is the biggest …at I have seen in my life.

….eru is located in South America.

Ham…ger is named after Hamburg, a city in Germany.

This is a very sim…le task.

It is a ro…e not a snake!

Handout 3

Listen to the recording and fill in the blanks with the correct word

Cooking Catastrophe

The entire room was ................with syrup. ................had just wanted

................for breakfast, but nothing had gone right.

First, she accidentally put ................ instead of sugar in the pancake ................ . Next, she cooked the pancakes in a ................ instead of a pan. Then, she ................ pancake ................ all over her ................ . Finally, she put the syrup in the microwave for so long it ................ .

"I am a ................ cook," she thought. She grabbed a mop, some soap, ................ towels, and dustpan and began to clean and sweep everything up.

Source: (http://www.home-speech-home.com/p-words.html)
Handout 4

Use the following words to give command to the other group members using at least two words from the list below (for example, Take the dog to the park)

**Places:** Park - Palestine Street - Public bathroom - barbershop - Pet Shop - computer repair shop - bank

**Animals and objects:** Dog - Pat - Bag - Apple - shampoo - Police car - Boy - People - Backpack - Panda

**Actions:** Pick - Repair - bark - Buy - pick - shoplift - Pet - Park

Handout 5

Read aloud and record the following sentences

I can pronounce P sound.

The bakery store will close soon.

Please fill in application B-74.

Can I eat your pear?

Black bears are the most dangerous.

Banda is an endangered species.

“To be or not to be” is a famous Shakespeare quote.

This rope is long enough.

What is your future plan?
Handout 6

Listen and choose the correct sound

/v/ /f/
/v/ /f/
/v/ /f/
/v/ /f/
/v/ /f/
/v/ /f/
/v/ /f/
/v/ /f/
/v/ /f/
/v/ /f/

Handout 7

Provide the missing words

........................ was convinced that she wasn’t brave enough to work as a ................. .

He needs some ................. .

She was working on the ................. .

........................ and working on her own land gave her a strong sense of ................. .

He believes in saving the .................

She grows the freshest ................. in the ................. .

His land is a piece of ................. .

........................ what you do and work hard.
Handout 8 (note: the words between brackets will not be provided in the actual activity)

Listen and write down the words

1. ....................................  (Heavy)
2..........................................  (Live)
3..........................................  (Movie)
4..........................................  (Save)
5..........................................  (Drive)
6 .......................................  (Cave)
7..........................................  (Van)

Handout 9

Listen and provide the missing words

A Little Rainbow of Her Own

.............. come in a large variety of shapes, sizes, and colors. My neighbor, .............., owns a .......... farm. The farm belonged to her parents until they became too old to work on it. .............. started farming when she was .......... She didn't know how much she loved her .............. farm until she tried something else. For a .......... years, she saved her money to become a ....et. She liked animals and thought she would enjoy helping them. She .......... at a veterinary clinic. During her visit, she observed mostly nice animals, but some were .......... mean.
Handout 10

Use the following sentences in your conversation with the other groups

<table>
<thead>
<tr>
<th>Other Groups’ Responses and Sentences</th>
<th>Travelers’ Responses and Sentences</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Custom and Immigration Group:</strong></td>
<td></td>
</tr>
<tr>
<td>- Can I see your Visa please?</td>
<td>- My Visa, sure just a second, it is in my backpack</td>
</tr>
<tr>
<td>- Where are you planning to live?</td>
<td>- I will live with my friend for the first five days then I will move to the dormitories</td>
</tr>
<tr>
<td>- Place all five fingers on the scanner please</td>
<td>- Five fingers ok</td>
</tr>
<tr>
<td>- Are you traveling for pleasure?</td>
<td>- No I am actually traveling for school</td>
</tr>
<tr>
<td><strong>Information Desk</strong></td>
<td></td>
</tr>
<tr>
<td>- Flight number SV5474 will arrive at 7:45 pm</td>
<td>- When does flight number SV5474 arrive?</td>
</tr>
<tr>
<td>- There is a bookstore just over there and they sell novels</td>
<td>- I want to buy The DaVinci Code novel, is there any bookstore around here?</td>
</tr>
<tr>
<td>- Yes if you buy a beverage from that store then you can take it with you on board</td>
<td>- Hmm I have a question, Am I allowed to bring beverages on board?</td>
</tr>
<tr>
<td>- They should be available in five minutes</td>
<td>- I have been waiting in front of the check-in counter for 30 minutes and no one is there!</td>
</tr>
<tr>
<td><strong>Check-in Counter</strong></td>
<td></td>
</tr>
<tr>
<td>Are you traveling to Vancouver?</td>
<td>- Yes I am traveling to Vancouver</td>
</tr>
<tr>
<td>Could you place your bags on the scale, please? Hmm this bag is over 50lbs and you know we charge 200$ for overweight baggage</td>
<td>- sure, I hope none of this is overweight</td>
</tr>
<tr>
<td></td>
<td>- ok, then I will take out the vest and all the video games and put them in the other bag.</td>
</tr>
</tbody>
</table>

Handout 11

Listen to following sentences and record them

1. I will Travel Finland.
2. I do not have my VISA now.
3. Bananas and pineapples are fruits not vegetables.
4. Steve saved my life.
5. I found the vault empty when I arrived.
6. There are seven flights going to Vienna tonight.
Handout 12

Watch the video and choose the correct sound

/tʃ/ /ʃ/
/tʃ/ /ʃ/
/tʃ/ /ʃ/
/tʃ/ /ʃ/

Handout 13

Listen and choose the correct word

Chair Share
Chip Ship
Cheap Sheep
Chore Shore
Chew Shoe
Which Wish
Watch Wash

Handout 14

Listen and choose the correct sound between the brackets.

Lunch Interruption

It was time for lunch (tʃ - ʃ). Chip (tʃ - ʃ) wanted to eat lunch on the beach (tʃ - ʃ) today. He walked to the beach. There were no benches (tʃ - ʃ), so he sat in the sand. He opened his lunch box and found chili (tʃ - ʃ), cheese (tʃ - ʃ), a sandwich (tʃ - ʃ), a cherry (tʃ - ʃ), and some peaches (tʃ - ʃ). He took a bite of his sandwich and began to chew when all of a sudden his chin started itching (tʃ - ʃ). He was getting sand flea bites. He grabbed his lunch and took off like a cheetah (tʃ - ʃ). (http://www.home-speech-home.com/ch-words.html)
Handout 15

Create a story using at least a word from the list below in all of the sentences you create

Cheetah - Check-in - China - adventure - Chimpanzee - Leech - Hitch a lift - Uncharted place - Cockroach - Kitchen - Witches - Punch - Switch - Match - Sandwich - peaches
Beach - Eyepatch - Crutches

Handout 16

Listen and record the following sentences

He is an adventurous person.
The three witches did not catch the rabbit
The fans were cheering for their team
You need to check-in your luggage
Cheetah is one of fastest animals.
He built a Statue
Handout 17

Observation Log

Student  ……………………………………………………………

Class  …………………………………………………………….

<table>
<thead>
<tr>
<th>Sound</th>
<th>Initial Position</th>
<th>Middle Position</th>
<th>Final Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>/p/</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Examples of some errors

Comments and Feedback

.................................................................
.................................................................
.................................................................
.................................................................
.................................................................
.................................................................
.................................................................