Assessing Omani EFL College Students' Production of Consonant Clusters in Inflectional Suffixes

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Abstract

Current empirical studies indicate that Omani EFL learners encounter crucial challenges when pronouncing consonant clusters in the final position. To further seek in this line of research, the current study set out to develop a test to assess Omani EFL college students' production of consonant clusters found in the four types of inflectional suffixes, including plural 's', 'third person singular 's', possessive 's', and verbs in the past or participle formation of 'd' or 'ed'. Twenty-five EFL college students from Oman consented to read words and sentences aloud with the different kinds of inflectional suffixes containing consonant clusters while audio-recorded. Results showed that the atomistic evaluation method offers an objective and particularly thorough assessment of the phonetic components involved. However, it takes a lot of time and requires repeated listening to samples for many students. Results also revealed that Omani EFL college students struggle to pronounce consonant clusters in inflectional suffixes. Differences in how participants pronounced (insertion of an additional vowel), as a repair method, in word ending position to make the difficult clusters easier to pronounce were revealed. This can be linked to the mother tongue's impact because Arabic phonotactics forbid consonant clusters from appearing in the word-final position.

Keywords: inflectional suffixes; consonant clusters; atomistic testing method; phonemic production.

Introduction

Most studies acknowledge that languages have very solid limitations on what and not a real syllable of the language contains (Gashaw,2016; Roach, 2001). Choosing which consonants and vowels can occur in syllables is a crucial component of phonology (Roach, 2001). In English, consonants occur in sequences or clusters in one syllable or between the syllables without any vowel insertion (Al-Yami et al.,2021). However, mastering the pronunciation of consonant clusters is one of the difficulties in learning English as a foreign language. A major difficulty in learning the production of English consonant clusters might be caused by the way words are formed and how the main word classes take inflections as prefixes and suffixes (Fudeman,2011; Lardiere, 2006).

Looking at the Omani EFL context, it is clear that Omani English learners experience pronunciation difficulties when adding inflectional suffixes to words to create new words (Thakur,2020). For this group of learners, the phonological feature of English suffix ability is the most challenging and perplexing to learn, and this is reflected in their inability to pronounce English consonant clusters correctly and usually tend to insert vowels into these clusters (Ibid.). The inflectional suffix is typically appended with English nouns to denote the plural, third-person singular, and possession subclass. Inflection also distinguishes between the grammatical forms of a verb's past and present tense by adding the suffix "-ed" to indicate the past tense (Carstairs-McCarthy, 2002).

However, developing a valid assessment instrument following a specific testing method is important to obtain reliable results. Concerning EFL pronunciation assessment, two methods are described: atomistic and holistic, depending on the assessment's goal. Hence, since the current study entails speaking out loud phonemic opposition word lists and provides a detailed marking scheme of a specific aspect of pronunciation, i.e., the pronunciation of consonant clusters in inflectional suffixes, the atomistic testing method was found appropriate to be used for the pronunciation assessment of this study.

Thus, this study aims to:

- Develop a test (CCPT consonant clusters pronunciation test), following the atomistic testing method of pronunciation assessment, to assess Omani EFL college students' phonemic production of the four types of inflectional suffixes, including plural 's', 'third person singular 's', possessive 's', and verbs in the past or participle formation of 'd' or 'ed'.
- Identify and address Omani EFL college students' pronunciation issues with English consonant clusters of inflectional suffixes.

Research Questions

Q1: To what extent does the employment of the atomistic testing method of pronunciation assessment effective in assessing Omani EFL college students' phonemic production of the four types of inflectional suffixes, including plural 's', 'third person singular 's', possessive 's', and verbs in the past or participle formation of 'd' or 'ed'.?

Q2: What pronunciation issues do Omani EFL college students encounter with English consonant clusters of inflectional suffixes?

Significance of the Study

No initiative attempting to develop a pronunciation test to assess Omani EFL college students' phonemic production of the four types of inflectional suffixes, including plural 's', 'third person singular 's', possessive 's', and verbs in the past or participle formation of 'd' or 'ed' was found in the extant literature. However, some similar studies have been conducted on the intelligibility of Omani EFL learners have probed this issue (Al-Humaidi & Al-Belushi, 2014; Al Yaqoobi et al., 2016; As-Sammer, 2010; Thakur, 2020 AL-Kinany,2022).

This action research was started based on the assumptions that the phonological system of the English language, unlike the Arabic language, does not allow for a one-to-one correspondence between the spelling and pronunciation of those spellings and that different languages exhibit syllable structure patterns differently as presented in the conceptual framework of this study, as shown in figure 1.
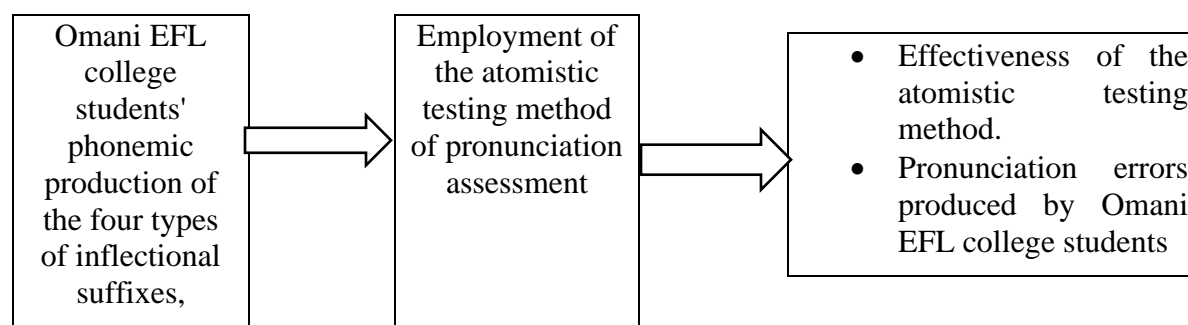

Figure 1: The Conceptual Framework

Literature Review

Pronunciation Assessment

Pronunciation tests are based on both production and reception. Reception may be examined and measured by counting the correct answers on a test. However, production is more difficult to assess because it entails assessing speaking or reading, which, from the listener's point of view, comprise many other aspects of communication and not just pure sounds. Determining the dependability of pronunciation production assessment is a tough undertaking because it is virtually always subjective. It has no choice except to rely on the assessor's opinion. As a result, it's crucial to be precise when outlining the process and the evaluation. Depending on the objective of the assessment, two techniques for evaluating pronunciation are described: atomistic and holistic (Nguyen,2018).

a- Pronunciation Atomistic Testing

According to Sebestova (2007, p. 19), an atomistic approach necessitates "a detailed marking scheme in which specific aspects of pronunciation are evaluated separately." It entails reading aloud word lists based on phonemic oppositions brief phrases with few pairs, or it also allows assessing sentences' proper accentuation, emphasis, and intonation. This method is very objective as it exclusively evaluates certain speech segments, such as vowels, consonants, stress, rhythm,

intonation, etc. The demands on the assessor are this approach's disadvantages, though. It takes a lot of time because the learners' speech samples must be recorded and listened to repeatedly.

b-Pronunciation Holistic Testing

The "intelligibility and acceptability of the learner's performance" are tested at a higher level of attainment (Sebestova, 2007, p. 21). Examiners are required not to pay too much attention to a specific pronunciation aspect of a candidate's performance but rather to judge its overall effectiveness. The benefit of this method is that it can be applied to big groups and takes less time than the atomistic method. This approach is applied in many international exams in English, where pronunciation is included in the so-called intelligibility and acceptability of the candidate's speaking performance(Nguyen,2018). Holistic assessment may include re-telling a story, description of a picture, or using maps. These speaking activities require the students to generate sentences depending on the clues provided in each activity. At a higher attainment level, the learner's performance is phonetically assessed. (Ibid.).

Consonant Clusters

Bouchhioua (2019) stated that English has a complicated syllable structure because it permits complex codas and onsets. In English, a syllable's onset (consonants preceding the vowel) can have up to three consonants, while the coda can have up to four codas (consonants after the vowel). For example, three consonants [skj] come before the vowel /u/ in the monosyllabic word skew [skju:], whereas four consonants [skss] come after the vowel /i/in the word sixths [skss]. Yaslam (2019), on the other hand, studied the phonological structure of Arabic and mentioned that Arabic has a straightforward syllable structure that primarily consists of CV (consonant-vowel) or CVC (consonant-vowel-consonant) syllables in both standard and dialectal forms.

However, learners whose native languages do not allow the consonant clusters' structures and have simpler syllable structures frequently struggle with these complicated onsets and codas (Avery & Ehrlich, 1992). Egyptian Arabic speakers are known to break up consonant clusters and make articulation easier by adding an epenthetic non-phonemic vowel to the difficult onsets and codas of English words (Broselow, 1980, 1983, 1984; Galal, 2004). For instance, they pronounce words like break and place as /brek/ and /ples/, respectively. This type of sound changing is known as epenthesis, and it typically depends on the allowable sound sequences and syllable structures in the user's native language. To break a two-consonant cluster (CC), a vowel is frequently inserted between consonants in this sort of error by making words like "plight" sound polite. Yemeni EFL learners usually pronounce English consonant clusters wrongly. According to Kharma and Hajjaj (1989), they add a vowel before or between the start and final clusters to make it easier to produce disyllabic and polysyllabic English words. They produce wrong consonant cluster pronunciation. Watson (2008) outlined the distinctions between English and the Yemeni dialect's syllable structure. He (Ibid.) stated that Yemeni learners find pronouncing English words with initial and ending consonant clusters challenging. To pronounce English more easily and produce consonant clusters, Yemeni learners adopt the syllable structure patterns of their first language. Vowel insertion reduces the effectiveness of precise English pronunciation (Al-Shuaibi, 2006; Broselow, 1983; Kharma & Hajjaj, 1989). Arnold (2010) helped four Kuwaiti students overcome their challenges with English consonant clusters by having them practice speaking, listening, and imitating native speakers for six months. They also recorded their pronunciation for self-evaluations. Arnold (2010) observed that English consonant cluster generation has gotten closer to the pronunciation of native speakers. He (Ibid.) mentioned that learning proper English

pronunciation is difficult. Knowledge limits and training activities must come before it. EL-Halees (1986) researched the phonological knowledge of EFL Arab teachers. They discovered that these teachers had very limited knowledge of the English and Arabic sound systems, which harms the students they teach. The Arab English curricula rarely include phonological teachings and exercises, crucial for helping English language learners pronounce words more clearly (El-Halees, 1986; Al-Shuaibi, 2006). As a result, Arab students encounter numerous challenges while effectively communicating with others (Al-Shuaibi, 2006).

However, EFL learners whose mother tongue is not Arabic also encounter serious problems pronouncing the various consonant clusters. Spanish EFL speakers frequently add a vowel to the start of a consonant cluster that begins with the letter /s/. Thus, the pronunciation of the word school is /esku:l/ (Avery & Ehrlich, 1992). In contrast, Korean EFL learners add the vowel /i/ to the end of the syllable (Jenkins, 2000). Italian English speakers frequently add a final vowel to English words ending in consonants and exhibit a similar pattern of behavior. Since Italian does not allow any word-final consonants, this form of output is frequently explained by the effect of the speakers' native tongue (Avery &Ehrlich, 1992).

Suffixes

A suffix, such as -ly, -er, -ist, -s, -ed, -dom, -size, and so forth, is an element that is appended to the end of a base (Carstairs-McCarthy, 2002; Robinson, 2003). English has both derivational and inflectional suffixes (Bauer, 1983). Suffixes can be added cumulatively to form more complicated words. This is concatenative morphology in which different morphemes are strung together like beads (Plag, 2002; Lardiere, 2006). Suffixes belong to a certain word class; they are, therefore, referred to as Sffs for nouns, verbs, and adjectives. (Quirk et al.,1985) Often, an Sff is a basic addition that is not highlighted.

Grammatical contrasts exist in all languages, such as singular against plural and past versus non-past. The grammatical subclass to which this contrast belongs is frequently marked by inflection: the base to which an inflectional affix is appended is occasionally referred to as a stem. With English nouns, the inflectional suffix "-s," as in "chair-chairs," "find-finds," and "the bedsheets," is typically appended to denote the plural, third person singular, and possession subclass. On the other hand, inflection distinguishes between the grammatical forms of a verb's past and present tense by adding the suffix "-ed" to indicate the past tense, as in "talk-talked," or it can be claimed that inflections are just grammatical variants of a single lexis (Carstairs-McCarthy, 2002).

Methodology

The study aims to develop a test (CCPT), following the atomistic testing method of pronunciation assessment, to assess Omani EFL college students' phonemic production of the four types of inflectional suffixes, including plural 's', 'third person singular 's', possessive 's', and verbs in the past or participle formation of 'd' or 'ed'. And to identify and address the pronunciation issues Omani EFL college students have with English consonant clusters of inflectional suffixes.

This study employed qualitative research. Qualitative research is distinguished by its objectives, which involve comprehending a particular aspect of social life, and its methodologies, which produce words rather than numerical data for analysis (Riadil & Yosintha,2021).

The population is Omani EFL students at the University of Technology and Applied Sciences/Nizwa College of Technology/level foundation program. The researchers chose 25 students based on the following criteria:

1) EFL students' willingness to take part in the research;
2) being concerned with the learning of English pronunciation.

The participants were male and female adult students, ranging in age between 20 and 22, who had learned English solely in a classroom EFL context. None of the participants had the opportunity to travel to English-speaking countries. Therefore, they represent typical Omani Arab EFL learners whose exposure to English is restricted to limited classroom instruction.

During the planning and implementation of the study, the researchers had a face-to-face meeting. Informal interviews with students, classroom observations, and teachers' reflections before the implementation suggested that students' low pronunciation competency might be related to the impact of their mother tongue, as they did not consider communication through English a real or useful possibility in their future lives. In this study, the researchers acted as participant-observers, which involved their performance of various functions, specifically the following: instructing participants, developing instructional materials, and implementing the (CCPT).

Instrumentation

This study aims to follow the atomistic method of pronunciation assessment to develop a test (CCPT) that assesses Omani EFL college students' phonemic production of the four types of inflectional suffixes that form consonant clusters, i.e., including plural 's', 'third person singular 's', possessive 's', and verbs in the past or participle formation of 'd' or 'ed'.

The purpose of developing the (CCPT) is to evaluate how well Omani EFL college students can pronounce the fundamental kinds of consonant clusters in the final position, i.e., when forming inflectional suffixes, and to determine if they can pronounce all of the included inflectional suffix types with the same level of intelligibility.

The researchers developed the (CCPT) in which 156 tokens were selected carefully to include all types of syllables that may occur in consonant clusters of inflectional suffixes, i.e., monosyllabic (words of one syllable), disyllabic (words of two syllables) and polysyllabic (words of more than two syllables) and all 24 English consonant phonemes were incorporated. Tokens were designed according to the manners of articulation of English phonemes, such as stops, fricatives, nasals, gliding, and lateral. The design of the (CCPT) and the phonemes used are displayed in appendices 3, 4,5, and 6.

To avoid reading deficiencies, the researchers used tokens within the sample's language competency (as approved in the experts' validity). However, to achieve the phonetic validity of the (CCPT) and make sure that they are all within the scope of the study, the researchers phonetically transcribed all tokens according to PR. English. Initially, Omani EFL college students' difficulties pronouncing English consonant clusters of inflectional suffixes were identified through their oral performance in the (CCPT).

Validity of the Instrument

To achieve the first objective of the current work, it is significant to obtain the content validity of the (CCPT); the (CCPT) was given to a group of specialists in Linguistics, Phonetics, Testing, and ELT who work as lecturers teaching at the University of Technology and Applied Sciences/Nizwa College of Technology/level four-foundation program. The experts are either native or semi-native speakers of English with more than 7 years of teaching experience in the Omani context. The (CCPT) was given to this group of experts to examine and comment on its validity to be used as an instrument. The researchers developed an assessment rubric of the Likert scale for the experts to rate their perceptions of the validity of the (CCPT). The (CCPT) was judged valid by the experts using the percentage of agreement, which means 100% agreement. The researchers modified the (CCPT) according to the experts' comments.

Procedures

The researchers first created a friendly rapport with the participants to reduce the students' anxiety. Students were assured that their participation in the (CCPT) would not affect their grades, and their performance would not be shared with anybody else except for research purposes, with the participants' identities remaining anonymous. Next, they were asked to look at the tokens of the (CCPT) and read them aloud while audio-recorded. The recordings were done individually in a friendly atmosphere. After the data were collected, the researchers listened to each recording carefully a few times and transcribed the problematic consonant clusters based on their phonetic training and teaching experience. However, to ensure more reliability, an educated native speaker of English was also asked to listen to the recordings and rate the students' mispronunciation of inflectional suffixes. The participants were given an equivalent amount of time to produce tokens. Both groups spent 180 minutes in one week organized into three sessions. They received no verbal corrective feedback or clarification from the instructor regarding their target consonant cluster pronunciation production of inflectional suffixes.

Each student read all the tokens found in the (CCPT). Therefore, each of the 25 participants produced all of the target test's items. There were 109 words and 23 phrases in all that were examined. All (CCPT's) tokens were examined to interpret the data. Therefore, the recordings were subject to a double-blind error analysis based on auditory analysis. The study involved paying close attention to the recordings to identify how the target tokens were produced and determine if epenthesis was present (Bouchhioua, 2017; Derwing & Munro, 1997; Gordon et al., 2013). Figure 2 presents the steps followed in the methodology of this study.
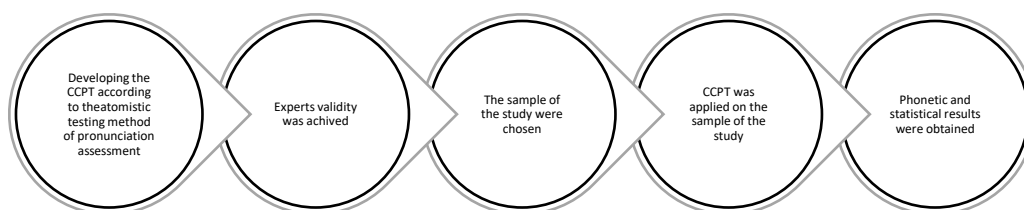

Figure 2: Steps in the methodology of this study.

In this section, the three assessors (the two researchers and the native speaker were to listen and phonemically transcribe the recorded data. They were also to rate the production of every token based on their phonemic accuracy, i.e., very weak, weak, acceptable, good, very good, as follows: B, D, A, C, and E.

Findings and Discussion

The current research found that the atomistic testing method is suitable for the pronunciation assessment of students' performance. Regarding reliability, the atomistic tests were very reliable for diagnostic purposes when two assessors carried out the scoring. This method of testing pronunciation provided the researchers with a detailed evaluation that was = objective and specific to the phonetic components involved. However, it was time-consuming and required repeated listening to samples for many students. Thus, the researchers assume that it would be very difficult to apply it to big samples.

Reading aloud is a frequently utilized method of pronunciation testing. A point considered when the (CCPT) was applied is that students were instructed to use natural language. Recording the students' performances allowed them to listen to them again and compare. Before reading aloud for assessment, students had enough time to read the words silently. The (CCPT) instructions allowed for natural sounding. It also provided excellent control and the measurement of nearly every speech signal, including vowels, consonants, and consonant clusters. The sample students tried their best to read the words as they did in natural contexts.

From the data collected, it is obvious that Omani EFL college students face major difficulties in pronouncing English consonant clusters of suffixes. The patterns of phonological phonotactics of two and three-consonant clusters occur when adding the plural 's', possessive 's', and third-person singular' s'.The sequence is off (CC), according to Roach (2001). Omani EFL college students tend to insert vowel sounds in consonant clusters, resulting in incorrect consonant sequences in English syllables of the pattern (CVC).

However, when it comes to the past tense of adding /d/ to the verbs, analysis of students' results showed that the majority of sample students mostly produced the final /d/ sound as /id/ as in 'proved 'and sneezed', they pronounced them as /pru:vid/ and/sini:zid/.Moreover, they replaced the final /t/ phoneme in the inflectional suffix in 'laughed' and 'missed' and pronounced them as /lɑːfid/ and /misid/. What makes their pronunciation worse is that they tend to use the syllable structure of their first language with that of English, which breaks consonant sequences in English syllables. In that case, a large number of the tested sample made two pronunciation mistakes when pronouncing the consonant clusters of suffixes of the past tense formation of verbs as they frequently produced the final phoneme/d/ either as /id/ or/d/, they could not pronounce it as /t/ at all. In addition to that, they inserted a vowel in the formation of the consonant clusters of suffixes, for example:

They pronounced the verb 'liked' as /laik<u>id</u>/ and the verb' blessed' as /bless<u>ed</u>/

Another major obstacle that Omani EFL college students encountered when producing suffixes is when producing words that contain problematic final phonemes in their base forms, i.e., a phoneme that does not exist in Omani Arabic, for instance:

They tended to pronounce the word 'caves' as /kefis/,

They replaced the/v/ sound with /f/ and inserted a vowel in the consonant cluster.

And 'pip's' as /bibiz/,

They replaced /p/ sound with /b/ and inserted a vowel in the consonant cluster.

Sample students also pronounced 'escaped' as/iskabid/ and 'judged' as/ gugid/, and this is due to the effect of the phonemic structure of their mother tongue.

The samples' pronunciation got even worse regarding the suffixes of three consonant clusters. Clear syllabification problems were found in their recorded production. Omani students produced the given tokens with wrong syllabification, for example:

They pronounced 'the tent's pin' as / ðƏ *ten tiz bin/.*

Table 1: Mispronunciation of consonant clusters in inflectional suffixes

Types of problems	Number of students who pronounce them correctly	Number of students who mispronounce them
Difficulties related to phonemes that are not found in students' mother tongue.	5	20
Difficulties related to the production of wrong stress placement.	2	23
Difficulties inserting the short vowel phoneme/i/ in all consonant clusters included.	1	24

As shown in Table 1, it is clear that three major issues are observed in Omani EFL college students' mispronunciation of consonant clusters of suffixes; first, they had difficulty pronouncing the phonemes that are not found in their mother tongue, specifically, when found in consonant clusters of suffixes. Second, they tended to produce stress placement wrongly in words, consequently having the wrong syllabification for the given words. Finally, students inserted the short vowel phoneme/i/ in all consonant clusters included in the (CCPT). Hence, they did not produce any consonant sequences.

Mother tongue impact is great on Omani EFL college students' pronunciation of inflectional suffixes. The findings of this study demonstrated that the sample had difficulty pronouncing some English consonant and vowel sounds. As shown in table 2:

Table 2: Problematic phonemes for sample student

consonants: /tʃ/, /ŋ/, /p/, /ʒ/, /v/ &/dʒ/
vowels: /o/, /e/, /ɔɪ/, /eə/, /3:/ ,/ʌ/& /ʊə/
Problematic minimal pairings that Omani EFL college students struggle with the most: i. /f/ and /v/   ii. /p/ and /b/   iii. /g/ and /dʒ/   iv. /dʒ/ and /ʒ/   v. /ʃ/, /ʒ /, /tʃ/ and /dʒ/   vi. /e/ and /i/   vii. /o/and/u/

Conclusions

One common technique for checking pronunciation is reading aloud. The fact that students use natural language is a basic factor to be considered in this regard. Since reading involves more areas that need to be examined simultaneously, recording the sample's performances enables you to listen to and compare them again. The atomistic testing method works well for diagnosing pronunciation problems of EFL learners, especially when multiple assessors are involved in the scoring process. The atomistic evaluation method can thoroughly and objectively assess the phonetic components involved. However, it is time-consuming and needs listening to samples several times.

Omani English learners face challenges pronouncing consonants, consonant clusters, vowels, diphthongs, and words in connected speech. Significant mother tongue interferences with English phonation are revealed (Thakur, 2020). English and Arabic are two languages that differ specifically in terms of their phonetic systems. Both languages have phonological traits, some of which are similar and some of which are different. The distinctive features come from their segmental alphabet or phonotactic principles (Al Kinany, 2021; Al Hosni, 2014). A survey of the literature on Omani Arabic (OA) dialects revealed that there aren't many studies on Omani EFL learners' pronunciation (AL-Kinany, 2021,2022; As-Sammer (2010), Holes (1989, 1991,1996, 2004, 2007, 2011, 2013, 2014), and other researchers have looked into specific aspects of the phonology, morphology, and grammar of the (OA) dialects. The phonetics, phonology, and morphology of the Omani dialects differed greatly in contrast to their essentially identical grammar. These studies show that Omani college students learning English as a foreign language (EFL) have substantial pronunciation problems, both in the segmental and suprasegmental aspects. Several English orthographic systems, irregular spelling and pronunciation correspondences, and

differences between the Arabic and English sound systems are attributed as the main causes of these difficulties (AL-Kinany,2022).

Mother tongue impact is great on Omani EFL college students' pronunciation of inflectional suffixes. The findings of this study demonstrated that the sample had difficulty pronouncing some English consonant and vowel sounds. This indicates that Omani EFL college students encounter serious pronunciation problems when pronouncing the base of the words that contain the mentioned phonemes. Undoubtedly, the problems get bigger when pronouncing these words with syllables of consonant clusters in suffixes.

These results are consistent with the conclusions and explanations made by AL-Kinany et al. (2021, 2022) because there are no such oppositions in Arabic. Zabia (2017) also connected Libyan EFL students' mispronunciation of consonant clusters to inter-lingual phonemic qualities or interference from the learner's first language, i.e., Arabic.

In the end, the vowels that Omani EFL college students inserted to separate the consonant clusters positions of syllables led to pronunciation errors. The sample students tended to produce stress placement wrongly on words, consequently having the wrong syllabification for the given words. These findings align with the findings obtained by Thakur (2020), in which he (Ibid.) found out that the insertion of the vowel phoneme in the consonant clusters changed the structure of the cluster as well as stress placement. (Al Mafalees,2020 AL-Jarf, 2019), Nurfitriani (2019) examined Yemeni, Saudi, and Sudanese EFL learners' production of consonant clusters and suggested that the subjects unintentionally insert a vowel sound in English syllables to break up consonant clusters as the reason why learners tend to insert vowel sounds to break up the consonant clusters. Arabic native speakers learning English as a foreign language may experience pronunciation issues due to the phonological variations between Arabic and English systems.

After reviewing the findings of this study and contrasting them with those of earlier research that examined the production of consonant clusters by EFL students from Arab nations other than Oman, such as Egypt, Kuwait, Libya, Yemen, Saudi Arabic, and Sudan, it appears that most Arab EFL students do experience difficulties in the production of consonant clusters, and this is primarily because there is no phonemic category for a sequence of consonants without a vowel in between in Arabic.

Implications

The results and findings of the current study have numerous consequences that can be emphasized. Reading aloud is effective as a technique of pronunciation assessment. One fundamental consideration in this regard is that the sample must produce natural language. EFL learners' pronunciation issues can be accurately diagnosed using atomistic testing, particularly when numerous assessors are engaged in the scoring process. Thus, this method of pronunciation assessment, though it is time-consuming as the assessors are required to listen and compare a considerable amount of the sample's production data, is recommended when assessing specific EFL pronunciation components.

The developed tests (CCPT) have been statistically and educationally demonstrated to be valid and reliable instruments for evaluating the production of consonant clusters of EFL students at the college level. Moreover, to prevent inter-lingual problems, it is advised that students study English phonetics and phonology at earlier stages of studying English and be given more practice with

pronunciation. Special attention should be paid to phonemes and phonetic features absent from the students' mother tongues.

A point to note is that it is very useful to assess phonetic data by assessors who are native speakers of English and native speakers of the language of the sample students involved. This process might pave the way to specifically realize if the sample students' pronunciation errors and obstacles are due to the impact of their mother tongue or not. On the other hand, this can also help to find out to what extent is the oral production of the sample students intelligible to native speakers of English.

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