

**Phonological and Morphological Issues in
Learners' Performance of English as a Foreign
Language: A Case Study of Ninth Grade Students
at Taybeh Secondary School for Girls in Ma'an
Governorate**

**مشاكل صوتية وصرفية في أداء متعلمي اللغة الإنجليزية كلغة
أجنبية: دراسة حالة الصف التاسع في مدرسة الطيبة الثانوية
للبنات في محافظة معان**

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**A Thesis Submitted in Partial Fulfillment of the Requirements
for the Degree of Master of Arts in English Language and
Literature**

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DEDICATION

This thesis is dedicated to my beloved husband Emad who supported me and to my beloved kids Ayham, Mohammad and Abdul Rahman.

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LIST OF ABBREVIATIONS

AP	Adjective Phrase
C	Consonant
JA	Jordanian Arabic
IP	Inflectional Phrase
IPA	International Phonetic Alphabet
L1	First Language
L2	Second Language
MEU	Middle East University for Graduate Studies
MSA	Modern Standard Arabic
NP	Noun Phrase
PP	Prepositional Phrase
RP	Received Pronunciation
SST	Surface Structure Taxonomy
V	Vowel
VP	Verb Phrase

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ملخص الدراسة

تهدف هذه الدراسة لتحليل الأداء الصوتي والصرفي في اللغة الانجليزية كلغة أجنبية لطالبات الصف التاسع في مدرسة الطيبة الثانوية للبنات في محافظة معان. وتهدف إلى الإجابة عن الأسئلة التالية:

- 1- كيف تتعامل نظرية تشومسكي وهالي (1968) مع التغيرات في الأداء الصوتي لمتعلمي اللغة؟
- 2- ما هي القواعد الصوتية التي تحكم اكتساب وفقدان الخصائص الصوتية المميزة؟
- 3- كيف تتعامل نظرية دولي وبيرت وكراشن (1982) مع التغيرات في الأداء الصرفي لمتعلمي اللغة؟
- 4- ما هي العوامل الرئيسة التي تؤثر في أداء الطالبات الصرفي؟

لتحقيق أهداف هذه الدراسة اعتمدت الباحثة نظرية تشومسكي وهالي (1968) الفونولوجيا التوليدية لتحليل الأداء الصوتي ونظرية دولي وبيرت وكراشن (1982) لتحليل الأداء الصرفي.

بينت النتائج أن العينة المشمولة بهذه الدراسة واجهت مشاكل صوتية عديدة لعدم معرفتهم باللفظ الصحيح لأصوات اللغة الانجليزية. وقد صُنفت هذه المشاكل في مجموعتين رئيسيتين هما:

(1) الأصوات الصامتة و(2) الأصوات الصائتة. أجابةً لسؤال الدراسة الأول: (1) عولجت مشاكل الأصوات الصامتة بتصنيفها وفقاً لخصائص المكان والطريقة والمصدر، و(2) عولجت مشاكل الأصوات الصائتة بتصنيفها وفقاً لخصائص اللسان وخصائص مكان حدوث الصوت. وقد وضعت الباحثة قوانين فونولوجية جديدة تتحكم بتلك العمليتين من وجهة نظر الفونولوجيا التوليدية أجابةً لسؤال الدراسة الثاني. ومن الملاحظ ان الباحثة قد تجنبت الخصائص المتعلقة بالنبرات والتشديد والتنغيم والعمليات المورفوفونومية (morphophonemic processes) على انها ليست جزء من هذا التحليل و بذلك كان التركيز على العمليات الفونولوجية التي تتعلق بالاقحام و الاسقاط.

أما فيما يخص المشاكل الصرفية فقد أظهرت النتائج أن هذه المشاكل وقعت في مجالي الصرف: التصريف والاشتقاق. وعولجت هذه المشاكل بتصنيفها وفقاً لاساليب الاسقاط والاقحام والبنية الخاطئة كاجابةً لسؤال الدراسة الثالث، وبينت الدراسة بوضوح أن معظم المشاكل كانت بسبب عدم معرفة العينة المختارة لقواعد وتراكيب اللغة الانجليزية من جهة وتأثير اللغة الأم في نظام اللغة الأجنبية من جهة أخرى. واتضح ذلك من خلال ارتكاب أخطاء تتعلق باستخدام خاصيتين لخاصية واحدة أجابةً لسؤال الدراسة الرابع. لهذا فان استخدام هاتين النظريتين فعال حيث أظهرت الدراسة نتائج جديدة تخص عينة الدراسة المستهدفة.

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Abstract

The objective of this study was to account theoretically for phonological and morphological performances of learners of English as a foreign language at Al-Taybeh Secondary School for Girls in Ma'an Governorate. It aimed at answering the following questions:

1. How does the theory of distinctive features account for phonological changes in performances?
2. What phonological rules are posited to govern the gain or loss of features?
3. How do morphological processes account for the distribution of morphemes in the participants' performances?
4. What are the major factors that influence the participants' performances in morphology?

To achieve the goal of this study, the researcher referred to Chomsky and Halle's (1968) theoretical views on distinctive features for phonology and to Dulay, Burt and Krashen's (1982) theoretical views on morphological processes. The results of the study revealed that the selective sample did certain phonological changes due to unawareness of the correct pronunciation of L2. The changes happened to be in two categories (i) consonants and (ii) vowels. As an answer to question (1), the consonants were tackled with the features related to cavity, manner and source. However, the vowels were tackled

with reference to the body tongue and cavity features. The results revealed that also there were other phonological processes, namely, insertion and deletion which are tackled with the same distinctive features. The researcher discovered certain phonological rules for each environment in which there is a difficulty visible as an answer to question (2). It is evident that the researcher avoided suprasegmental features as well as morphophonemics processes as they are irrelevant to the analysis.

As far as the morphological data were concerned, the results revealed that the processes divided the morphemes into derivational and inflectional. Such morphemic difficulties were tackled with reference to the morphological processes of (i) omission, (ii) addition and (iii) misformation as an answer to question (3). It was evident that, on one hand, morphological issues happened because of the participants' unawareness of the target language rules. On the other hand, the mother tongue rules played crucial role in influencing the learners' performances as an answer to question (4). Thus, using these two theoretical approaches is valid and led to good results.

Chapter One Introduction

1.1. Background of the Study

Language is an essential instrument of human mind to communicate; it reveals every aspect of intellectual, social and cultural lives. Mankind normally uses it to talk, question, argue, theorize, promise, insult and joke. A person may learn more than one language at a time and the performing fluency varies from one language to another according to the knowledge learned. It is important to study what shapes the learners' knowledge and performance.

Sapir (1921, p. 10) said that 'Language is primarily human and non - human instinctive method of communicating ideas, emotions and desires by means of a system of voluntarily produced symbols'. Thus, humankind prefers to use it to communicate with others of his kind and solve a number of his problems.

To learn a language is not an easy job; the first step is tough because a language is a complex system of abstract segments and one has to devote a good amount of time to learn it whether as first language (L1 henceforth) or a second language (L2 henceforth). Acquisition of L1 is natural; however, learning of L2 is a personal interest. In acquiring L1, the native speaker's mind is directed to understand the linguistic system of the mother tongue because of permanent exposure. However, in learning L2 the learner faces difficult issues as she/he is exposed to new linguistic system of a new language.

1.2. Statement of the Problem

The problem of this work is that students of English in Ninth Grade at Taybeh Secondary School for Girls in Ma'an Governorate perform incorrectly when speaking or writing English in classroom environment; in other words, they encounter phonological and

morphological difficulties when using English in classroom environment. For instance, the wrong phonological performance is made due to change of features of segments in articulation and in other phonological processes, namely, deletion and insertion. However, the morphological misuse of morphemes is made due to omission, addition and misformation. The ultimate goal of this study is to investigate the actual problems behind both issues.

1.3. Objectives and Questions of the Study

The objective of this work is to explicate both the phonological and the morphological problems encountered by learners of English as a foreign language. The researcher tries to find out solutions to the violations of the two types from different theoretical perspectives; therefore, the following questions are posited:

1. How does the theory of distinctive features account for phonological changes in performance?
2. What phonological rules are posited to govern the gain or loss of features?
3. How do morphological processes account for the distribution of morphemes in the participants' performance?
4. What are the major factors that influence the participants' performance in morphology?

1.4. Definition of Basic Terms

This work involves a number of linguistic terms that need to be defined.

Addition: The presence of an item that must not appear in a well-formed structure.

Consonantal: A segment produced with a closure or narrowing in the vocal tract so airflow is blocked so audible friction is produced.

Major class feature: A term refers to the sound produced with audible constriction in the vocal tract.

Misformation: The wrong use of a morpheme.

Morpheme: The smallest unit in language which has information about meaning or function.

Omission: The absence of an item that must appear in a well-formed structure.

Phoneme: It is the minimal abstract segment in the sound system of a language which indicates difference in meaning.

Phonological Features: Those characteristics of phonological segments according to voice, place of articulation and manner of articulation.

Phonological Rules: Those rules that govern the change, insertion or deletion of features in certain environment.

Regularization: The use of a regular rule instead of an irregular one.

Sonorant: A sound that is produced with a relatively free airflow in which a spontaneous voicing is possible.

Vocalic: A segment produced with a free passage of air through the vocal tract.

1.5. Limitations of the Study

This study is meant to analyze in detail the phonological and morphological problems encountered by the selected sample at Taybeh Secondary School for Girls in Ma'an Governorate for the academic year 2007/2008 in which English is taught as a foreign language.

Phonological problems include the change of features of vowels and consonants in the process of articulation; while, morphological ones include misuses of morphemes due to omission, addition or misformation. The studied morphemes are the functional ones (inflectional and derivational).

The data of both fields are collected from one section taught by the researcher. The Received Pronunciation (RP henceforth) English is referred to as the target language.

1.6. Significance of the Study

The researcher intended to trace the source of the phonological and morphological problems in spoken and written English of native speakers of Arabic. She tried theoretically to examine the question of features in phonology in terms of (i) which segments change, (ii) how they change and (iii) under what conditions they change. For morphological issues, she tried to figure out the misuses of morphemes in English writing in classroom. The approach she followed is of a great help for teachers to follow to help students overcome problems in both fields.

It is believed that language teachers as well as L2 learners need to have knowledge of at least the basic phonological and morphological concepts in English. It is evident that learning an l2 in Jordan especially English Language by students at the Ninth Grade is very essential and need to be investigated. The researcher hoped that this kind of empirical work will contribute to the understanding of English in a new manner to pave the way for a further research.

Chapter Two

Review of Literature

2.0. Introduction

This chapter consists primarily of two sections; section (2.1) involves data about the theoretical literature whereas section (2.2) involves relevant literature in which the focus is the Arab students while learning English in particular for whom it is typically an L2. The literature is restricted to the difficulties encountered in phonology as well as morphology.

2.1. Review of Theoretical Literature

2.1.1. Phonological Literature

In linguistics, the theory of distinctive features is the most prominent one ever written to account for the phonological as well as the phonetic framework concepts in a number of languages. It was first propagated by Jakobson in 1939 in which many of the phonetic parallels are properly captured. The salient characteristic of the Jakobsonian framework is that the same three features, namely, (i) gravity, (ii) compactness and (iii) diffuseness are used to describe the primary strictures in both vowels and consonants. This complete identification of vowel and consonant features seems in retrospect to have been too radical to reach a solution; for these reasons Chomsky and Halle (1968) made a number of changes in the framework, particularly, with regard to the primary cavity features. There is a complete departure from the old approach as there is a need to change the terminology once again and replace the reasonably familiar terms by totally new terms.

The phonological analysis is carried out from a generative perspective, which radically modifies the interpretations of the phonological processes. The phonetician's task is not only to identify and classify the elements in a given corpus, but also to devise a

system of rules that explains the phonological structure of sentences and the phonological changes undergone in various segments.

Chomsky and Halle (1968) argued that the phonological component explicates the relationship between the surface of a sentence and the patterns of speech sounds organized in a syntagmatic relation in a language. It is, in effect, based on a theory of what a speaker unconsciously knows about the sound segments of a language. The systematic use of sound segments encodes meaning in any spoken human language in a physical manner. It describes the way sounds function within a given language or across languages to encode meaning.

A phoneme is defined as a bundle of features in the process of articulation. It may lose, gain or change, for a reason or another, one of the original features. For this reason, the features are called distinctive features which can be primary or secondary. Phonemes can be described then in terms of features, that is to say, to see which features are present in that particular phoneme and which ones are not. The presence of a feature is marked by a plus sign [+] whereas the absence of a feature is marked by a minus one [–]; these signs are placed on the left side of the feature; for example, the phoneme /n/ has the phonetic features [+nasal, +continuant, +anterior, +coronal, -vocalic] while /p/ has the phonetic features [-nasal, -continuant, +anterior, -coronal, -voiced]

In this study, phonological issues are classified according to their types: (i) feature change, (ii) insertion, and (iii) deletion. The idea is fundamental in phonology, where many generalizations are standard stated in terms of features. The use of distinctive features in phonology enables us to capture ‘natural classes’, and, by extension, to generalize regularly occurring phenomena and to formulate predictions about the behavior of class members.

Features play crucial phonological rules, being used to express how segments contrast with each other, and what groups of segments formally have in common.

The features are defined primarily in articulatory terms and not in acoustic ones. The priority is given to an articulatory description is a circumstantial one rather than one pertaining to the essence of their theoretical approach. The phonological problems will be analyzed with reference to the distinctive features namely: (1) major class, (2) cavity, (3) manner of articulation features, and (4) source features. They are explained as follows:

(1) Major Class Features

Major class features deal with the fundamental vocalic/non-vocalic and consonantal/non-consonantal distinctions. The distinction was essentially an articulatory one. The production of vowels did not involve any major contact between articulators; so, the airstream is not obstructed at any point in the vocal tract while a major constriction at some point along the vocal tract was always associated with the articulation of consonants.

A. The distinction sonorant/nonsonorant (obstruent) is introduced to distinguish sounds that allow spontaneous voicing from sounds that do not respectively. The sonorant segments are vowels, glides, liquids and nasals while the nonsonorant ones are fricatives and affricates. A refinement of these features is suggested in the epilogue of the book where vowels are described as syllabic and vocoid while glides are characterized as non-syllabic and vocoid. Thus, the articulatory similarity between vowels and glides is captured by the distribution in the position of syllable nuclei. Consonants are described as contoids while the same distinction syllabic/non-syllabic is used to differentiate between vowels and glides operates in the case of consonants, too. It keeps apart syllabic consonants (nasals and liquids) and non-syllabic ones (obstruent). It must be mentioned that [+/- syllabic] is a

different type of feature since it refers to the possibility of occurrence of a sound in a given position i.e. syllable nucleus.

B. Vowelic/nonvowelic is another feature used to describe sounds produced with the oral cavity in which the most radical constriction does not exceed that found in the high vowels /ɪ/ and /ʊ/ and with vocal cords positioned so as to allow spontaneous voicing as vocalic; however, for nonvowelic sounds, one or both of these conditions are not met.

C. Consonantal/nonconsonantal is used to distinguish between vowels and consonants as two primary classes. Consonantal sounds are produced with a radical obstruction in the midsagittal region of the vocal tract; while nonconsonantal sounds are produced without such an obstruction. The former includes liquids; nasal and nonnasal consonants while the latter includes voiced vowels, voiceless vowels, glides /w/, /j/ and glottals /h/, /ʔ/.

(2) Cavity Features

1. Primary Stricture

A. Coronal/noncoronal: the former is used to describe sounds produced with the blade of the tongue raised from the neutral position. It includes dental, alveolar, palato-alveolar consonants; however, noncoronal is used to describe the sounds articulated with lips or with the body of the tongue in the neutral position. It includes glides, vowels, uvula and non retroflex vowels.

B. Anterior/nonanterior: the former is used to describe sounds that are produced with an obstruction that is located in front of the palato-alveolar region of the mouth; it includes labial, dental and alveolar segments ; but, nonanterior sound are produced without such an obstruction. It has palato-alveolar, retroflex, palatal, velar, uvular and pharyngeal.

2. *Features Related to the Tongue Body*

The three features, namely, (i) high, (ii) low and (iii) back characterize the placement of the body of the tongue.

A. High/nonhigh: high sounds are produced by raising the body of the tongue above the level that occupies in the neutral position. It includes /ɪ/, /i:/, /u:/ and /ʊ/. Nonhigh sounds are produced without such a raising of the body of the tongue; it has /e/, /ɜ:/, /æ/, /ʌ/, /ə/, /ɒ/, /ɑ:/ and /ɔ:/.

B. Low/nonlow: low sounds are produced by lowering the body of the tongue below the level that it occupies in the neutral position; it contains /æ/, /ɒ/ and /ɑ:/. However, nonlow sounds are produced without such lowering the body of the tongue. It has /ɪ/, /i:/, /ʊ/, /u:/, /e/, /ɜ:/, /ə/, /ʌ/ and /ɔ:/.

C. Back/nonback: back sounds are produced by retracting the body of the tongue from the neutral position; it consists of /ʊ/, /u:/, /ɔ:/, /ɒ/ and /ɑ:/. Nonback sounds are produced without such retraction from the neutral position; it has /ɪ/, /i:/, /e/, /æ/, /ə/, /ɜ:/ and /ʌ/.

3. *Rounded/Unrounded*

It makes a distinction between vowels pronounced with either rounded as in /ʊ/, /u:/, /ɔ:/ and /ɒ/ and unrounded lips as in /ɪ/, /i:/, /e/, /æ/, /ə/, /ɜ:/, /ʌ/ and /ɑ:/.

4. *Secondary Apertures*

A. Nasal/nonnasal sounds; the distinction is based on whether the air is released through the nasal cavity or through the oral cavity.

B. Lateral/nonlateral sounds, the opposition being again based on the type of release: the air is or is not allowed to flow laterally.

(3) Manner of Articulation Features

The following features are related to the ways of producing a consonant with regard to the flow of air.

A. Continuant/noncontinuant: in the production of continuant sounds, the primary constriction in the vocal tract is not narrowed to the point where the airflow is blocked. It includes vowels, nasals, liquids, glides and fricatives. Noncontinuant sounds are blocked somewhere in the oral cavity; they are stops and affricates.

B. Instantaneous/delayed release: this feature is used to differentiate stops from affricates. It refers then to sounds produced with a complete closure of the tract but which differ in the manner of the release. Instantaneous release refers to stops and delayed one refers to affricates. The two features then combine to describe the respective consonant classes. Stops are characterized as [-continuant; +instantaneous release], while fricatives are [+continuant] and affricates are [-continuant; +delayed release].

C. Tense/nontense (lax): The feature tense/lax is a new name for the feature long/short in vowels and voiceless/voiced in consonants. It describes the higher or lower muscular articulatory effort required for the uttering of the respective sound.

(4) Source Features

A Voiced/nonvoiced: it is a fundamental feature characteristic of sounds in any language, which operates on the status of the glottis. If the glottis is closed there is spontaneous vibration; however, if the glottis is apart, there is no voicing.

B Strident/nonstrident: the feature describes the acoustically marked sound by greater or lower. Noisiness is restricted to obstruent continuants and affricates. The former class has alveolar ones while the latter has the dental fricatives of English.

In short, these above features are used by Chomsky and Halle (1968) to cover all possible sound system of any language. The researcher refers to such features to solve the problems of articulations faced by the sample learners in the fourth chapter.

2.1.2. Morphological Literature

Dulay, Burt and Krashen (1982) proposed two taxonomies for classification of morphological deviant structures: (i) surface structure taxonomy (henceforth, SST) and (ii) comparative taxonomy. They are discussed as follows:

2.1.2.1. Surface Structure Taxonomy

The focus is on the alternation that takes place in the surface structure of the form. Learners omit, add unnecessary ones and misform morphemes.

(1) Omission

Omission of morphemes is characterized by the absence of an item that must appear in a well-formed utterance. Any morpheme is a possible candidate for omission; however certain morphemes are omitted more than others. Lexical morphemes, in particular, carry the meaning of an utterance thus their omission hinders the process of communication. To avoid such omission, learners try to compensate them by leaving the slots empty as in (1). However, grammatical morphemes are responsible for the grammaticality of the sentence as in (2):

1a. *John new captain team.

1b. John is the new captain of the team.

The sentence (1a) is incorrect as it lacks the lexical morpheme 'is'. This sentence is made correct if it is added as in (1b).

2a. * John is teacher.

2b. John is a teacher.

The sentence (2a) is ungrammatical because the indefinite article 'a' is omitted from the noun phrase. If it is added as in (2b), it will be correct.

(2) Addition

Learners at the early stage add unnecessary morphemes that finally make the structure ungrammatical as in (3):

3a. *the John is a boy.

3b. John is a boy.

In (3), the proper noun phrase 'John' cannot be marked by the definite article as it is already defined by being a proper name. As the definite article 'the' is deleted, the sentence becomes correct.

Addition of morphemes is represented in: (i) double marking, (ii) regularization, and (iii) simple addition.

(i) Double Marking

Learners sometimes add an item in a sentence or within a word to mark a certain feature which is already marked by another marker as in (4):

4. *Jane doesn't likes John.

In sentence (4), the third person singular present tense is shown on the auxiliary 'does' and in the main verb 'likes' thus the sentence is wrong. The English rule for tense formation is to place the tense marker on the first verb complex of the verb phrase as in (5):

5. Jane doesn't like John.

Learners sometimes are too faithful to the rule, so they mark the auxiliary as well as the main verb for tense which results in erroneous structure as in (6):

6. *Jane didn't saw John.

Other examples of double marking addition are the addition of the regular plural morpheme (s) to a noun that already has the plural morpheme as in (7) and (8):

7. *Mens are coming.

8. *My teeths pain me.

In the sentences (7) and (8), the noun phrases ‘mens’ and ‘teeths’ are irregular noun and are treated as regular in the plural forms.

This is also possible when learners add the regular past tense -ed morpheme to a verb that is already past as in (9):

9. *John wented home.

The verb ‘went’ in (9) is in the past to which the regular past morpheme is also added.

(ii) Regularization

This category indicates that the plural regular morpheme -s is added to a noun that has a zero plural morpheme as in (10).

10. *I bought two sheeps.

It is evident that in (10) the learner is sure of using the plural morpheme in ‘sheeps’ because number ‘two’ is visible in the structure. The mistake is committed because the learner faces intralingual conflict. He/she is unaware of the grammatical rule of L2 on one hand and his/her misunderstanding of the plural form of the irregular noun itself on the other.

(iii) Simple Addition

It is any item that is simply added to the structure by the learner making it ungrammatical as in (11-12):

11. *One books is on the table.

12. *They doesn't come on Fridays.

Sentence (11) is ungrammatical due to the simple addition of the plural morpheme -s to the noun 'book' because the numeral 'one' cannot permit it. However, (12) is incorrect because the agreement feature plural of the pronoun 'they' is violated; the s-form must be added if and only if the subject is a third person singular whether masculine or feminine. (11) can be grammatical if the plural morpheme is deleted; while (12) can be made correct if either the subject is changed to singular or the auxiliary is made 'don't' to agree with the subject.

(3) Misformation

Learners use wrong forms of a morpheme in the structure as in (13):

13. *My sister goed to her school yesterday.

In (13), a learner added the past tense form of the verb to the irregular verb 'go' producing the wrong form 'goed'. Having a deep look at the new form, one can easily guess that the suffix -ed is neither from the learner's intuition nor available in English.

There are three types of misformation identified, namely, (i) regularization, (ii) archi-forms and (iii) alternating forms.

(i) Regularization

The learner uses a regular morpheme in a noun that has an irregular one resulting in an ungrammatical structure as in (14):

14. *There are three mans.

In (14), the learner added the regular plural morpheme -s to the noun phrase 'man' which made it wrong.

In short, the learner used a morpheme in a wrong position.

(ii) *Archi-Forms*

The selection of one member of a class of forms to represent all other members in all contexts as in (15):

15. *Me saw the accident.

In (15), the learner used the objective form 'me' instead of 'I'.

(iii) *Alternative Forms*

This type of misuse of morphemes occurs when the learners' vocabulary and grammar have relatively grown up; so they, alternate morphemes as in (18):

16. *She told I.

In (16), the nominative form of the pronoun 'I' is used instead of 'me'. However, the accusative form of the pronoun 'me' must be used instead of 'I'.

To sum up; after having reviewed the theoretical views, the researcher has noticed that no study had been done like this before in the school. Therefore, phonological problems in the fourth chapter will be discussed according to Chomsky and Halle's (1968) distinctive features while morphological ones will be discussed as per Dulay, Burt and Krashen's (1982) perspectives.

2.2. Review of Relevant Literature

2.2.1. Phonological Literature

Kharma & Hajjaj (1989) wrote a book attempting to identify problems Arab beginning learners of English encountered. In consonants, they found that certain pairs were confused by learners such as /tʃ/ and /ʃ/ as in 'chair' and 'share' ; /v/ and /f/ as in 'fast' and 'vast'; /dʒ/ and /ʒ/ as in /dʒa:/ 'jar' and /ʒa:/ 'jar'; /p/ and /b/ as in 'pin' and 'bin'; /ŋ/ and /n/ as in /sɪŋ/ 'sing' and /sɪŋ/ 'sing'; /s/ and /θ/ as in 'sin' and 'thin'. Another difficulty mentioned by the authors regarding consonants was the consonant clusters where

learners inserted a short vowel to break down the long clusters to pronounce them as in /sɪprɪŋ/ for ‘spring’; /wɪʃɪd/ for ‘wished’; /ɑːskɪd/ for ‘asked’ (p. 14). In vowels, certain diphthongs were replaced by other sounds due to L1 interference for example, /eə/ → /eɪ/; /ʊə/ → /uː/; /ɪə/ → /ɪː/; and /əʊ/ → /ɔː/. Another difficulty in this area found was the distinction between certain pairs of vowels such as /ɪ/ and /e/ as in ‘sit’ and ‘set’; /ʌ/ and /ɒ/ as in ‘luck’ and ‘lock’; /əʊ/ and /ɔː/ as in ‘coat’ and ‘caught’ (p. 16).

Altaha (1995) carried out a study that investigated the problems Saudi Arabian students encountered when learning English pronunciation. The participants of his study started learning English at age 13 and never left their native country to acquire English. He collected the data by recording and analyzing the spoken English of the participants in different conditions and situations. Regarding consonants, he found that the participants had problems with some pairs of consonant sounds (i.e. /tʃ/ and /ʃ/ as in ‘chair’ and ‘share’; /v/ and /f/ as in ‘van’ and ‘fan’; /p/ and /b/ as in ‘pat’ and ‘bat’); consonant clusters (i.e. ‘grandfather’ often mispronounced *grandifather); consonant doubling (i.e. ‘allow’ often mispronounced *al-low).

Tushyeh (1996) conducted a study in which participants did not realize the difference between /p/ and /b/; /f/ and /v/; /ɪ/ and /e/.

Barros (2003) identified the difficulties encountered by Arabic speakers when pronouncing English consonants. The participants were a group of Arabic speakers came from different Arab countries with different colloquial Arabic backgrounds. All participants were in contact with the target language group and culture after the age of puberty for at least four years. The results showed that eight English consonants, namely, /ŋ/, /p/, /v/,

/d/, /l/, /dʒ/, /ð/, and /r/ were identified as problematic for Arabic speakers. The author also found that interference of L1 seemed to be the major factor contributing to pronunciation problems which might differ from one Arabic speaker to another depending on the country they came from.

Binturki (2008) made a study in which five Saudi learners of English as an L2. He investigated the difficulties in producing the voiceless bilabial stop /p/, the voiced labiodental fricative /v/ and the alveolar approximant /ɹ/ especially what word environments were most difficult for participants. His results showed that participants had difficulty with the three targeted consonants, but the greatest was with /v/. The study also found that difficulty was closely related to certain word positions, so all the three sounds were used more accurately when occurring in word initial position than in word final position.

In short, the above relevant literature is restricted to the study of phonology in which phoneticians tried to find out the problems that face the learners while learning English as an L2.

2.2.2. Morphological Literature

Zughoul (1984) stated that Jordanian students who learned English at schools and other educational institutions tended to commit serious errors in the choice of lexical items and their articulation in the process of communication in day to day conversations.

Kharma & Hajjaj (1989) found that certain prefixes were added incorrectly as in 'inkind' and 'undecent' for 'unkind' and 'indecent' respectively. In the area of inflection, they identified a number of difficulties as in '*sheeps', '*womans', '*wives' in a wrong plural formation, '*caughted', '*choosed' in wrong past tense form, '*cutten', '*putten' in

wrong past participle form, ‘*She eat’, ‘*He go’ in the omission of the third person singular present tense marker, ‘*He cans’, ‘*She mays’ in the addition of -s to modal verbs as and ‘*The boys eats’ in the addition of the third person singular morpheme -s in wrong places (p. 42).

Tushyeh (1996) made a study in which participants misused certain suffixes; she gave examples of the regular plural morpheme -s such as ‘*womens’ and ‘*furnitures’. She gave an example of a misuse of a lexical morpheme as in ‘*the clock is now ten a.m.’.

Zughoul (2002) examined the interlanguage syntax of (25) Arab learners of English in the area of noun phrase, focusing on the elements that occur before or after the headnoun. Participants were from seven Arab countries (two Algerians, five Libyans, five Egyptians, three Jordanians, two Lebanese, seven Saudi Arabians, and one Bahraini). These participants were attending an intensive English program at the University of Texas Austin. Results showed that NP errors were second to VP errors, forming (32.8%) of the total number of errors made by participants. The most frequent incorrect use of NP was in the use of articles, particularly, the omission of the indefinite article ‘a’ as in ‘*Tom is very good teacher’, the use of ‘the’ redundantly as in ‘*We study in the night’, omission of the article ‘the’ as in ‘*We went to X Libyan embassy’, and redundant quantifiers were confused as to their use with count/noncount nouns as in ‘*There is too much Arab student in Austin’. Another frequent error in the use of nouns was that of wrong number ‘*we are seven three sister and four brother’. Other errors include the misformation of plurals ‘*bookses’, ‘*womens’, misformation of nouns ‘*acception’ for ‘acceptance’, the confusion of nouns with other parts of speech ‘financial-finance’, ‘foreign-foreigner’, the

repetition of the subject ‘*Rent here it is expensive’ and omission of the noun as an object ‘*I am going to take X tomorrow’.

Akande (2003) investigated the acquisition of inflectional morphemes by Yoruba learners of English (a Kwa language spoken from Ivory Coast to Nigeria). The author focused on the occurrences of the misuses of morphemes. It was found that there was a wide gap in the mastery of the inflectional morphemes, so participants were familiar with only the past tense and the plural morphemes. In addition, the omission of -ed, -en, and 3rd person singular marker and wrong insertion of the past tense inflection were found.

Bataineh (2005) analyzed the written work of Jordanian university EFL students to identify the use of the indefinite article. She realized that nine different types of misuses of the morpheme: (1) deletion of the indefinite article, (2) writing ‘a’ as part of the noun/adjective following it, (3) substitution of the indefinite for the definite article, (4) substitution of the definite for the indefinite article, (5) substitution of ‘a’ for ‘an’, (6) use of the indefinite article with unmarked plurals, (7) use of the indefinite article with marked plurals, (8) use of the indefinite article with uncountable nouns, and (9) use of the indefinite article with adjectives. The deletion of the indefinite article was attributed to L1 influence; whereas, the other eight problems were caused by some developmental factors and common learning strategies like simplification and overgeneralization.

Akande (2005) examined the misuses of morphemes made by (250) senior secondary school pupils in Nigeria. The study revealed that the participants’ knowledge in English morphology was very low.

In a longitudinal study, Jia and Fuse (2007) investigated the acquisition of certain English grammatical morphemes by native Mandarin-speaking children and adolescents in

the United States (arrived in the United States between five and 16 years of age). The goals were to compare the acquisition processes and level of mastery of grammatical morphemes, and identify when age-related differences emerged. The authors chose the regular and irregular past tense morphemes, third person singular morpheme, progressive aspect -ing, copula BE, and auxiliary DO. Results indicated that children with early arrivals achieving greater proficiency than late arrivals in 3rd person singular and regular past tense. Another finding was that language environment is a stronger predictor of individual differences than age of arrival.

To sum up the review of relevant literature in morphology showed that this area of analysis was explored by many linguists. They analyzed the morphological difficulties encountered by Arab learners of English as an L2.

This work is new in its form and type since it tackled the two areas of phonology and morphology at the same time with a different selected study sample from the above literature. For the former, the researcher made use of Chomsky and Halle's (1968) views on generative phonology to account for the phonological issues; however, for the latter, she referred to Dulay, Burt and Krashen's (1982) views on morphological techniques to account for the misuses of morphemes. Both views will be analysed in detail in the fourth chapter.

Chapter Three

Methods and Procedures

3.0. Introduction

This chapter contains eight sections: (3.1) talks about the instrument of the study, (3.2) the population, (3.3) the sample, (3.4) the data collection, (3.5) corpus of the study, (3.6) the procedures, (3.7) validity of the instrument and (3.8) reliability of the instrument.

3.1. The Instrument of the Study

The approach of this study is theoretical as well as instrumental. It is theoretical in the sense that the researcher referred to Chomsky and Halle's (1968) theory of distinctive features for the analysis of the phonological data and referred to Dulay, Burt and Krashen's (1982) approach for the morphological data. It is instrumental as the researcher used (i) a computer provided with a microphone to record the speech of the learners, (ii) tables to illustrate the statistical figures, (iii) IPA symbols to transcribe learners' utterances, (iv) phonological rules to show the change that took place in which phonological environment and (v) a written text produced by the participants to elicit the morphological data.

3.2. The Population

The population of this study is the students of Taybeh Secondary School for Girls in Ma'an Governorate.

3.3. The Sample

The study sample consists of (20) Jordanian students out of the total population at Ninth Grade learners of English as foreign language at Taybeh Secondary School for Girls in Ma'an Governorate for the academic year 2007/2008. Participants' names are also listed in Appendix III.

3.4. The Data Collection

The data collection consists of two types: (i) phonological data and (ii) morphological data. For the former, the participants were asked to read a text and a list of words; their readings were recorded on a computer provided with a microphone and software for recording (Cowon Jet-Audio) and then transcribed phonemically using the IPA symbols. The phonological problems are listed in Appendix I. As for the latter, the researcher asked the students to write a paragraph on either ‘future ambitions’ or ‘a past experience’ on a sheet of paper in a classroom atmosphere. Sheets were collected after a period of (60) minutes as is obvious in Appendix II.

3.5. Corpus of the Study

The corpus of this study consists of (87) different words for the phonological analysis and (105) different sentences for the morphological analysis.

3.6. The Procedure

A. The phonological data.

After collecting the data from the sample, the researcher did the following:

- (i) Transcribed the recorded sounds of each participant using IPA symbols.
- (ii) Compared the learners’ performance with the correct one in RP English.
- (iii) Classified the types of performance into correct and incorrect.
- (iv) Excluded the correct utterances as they are irrelevant to the goal of the study.
- (v) Classified the data according to the process that took place whether feature change, insertion or deletion.
- (vi) Divided each group in (v) into consonants and vowels.
- (vii) Discussed in detail each change took place in each consonant with reference to distinctive feature theory.

- (viii) Pointed out the kind of consonant insertion made by the participants.
- (ix) Pointed out the kind of consonant deletion made by the participants.
- (x) Produced phonological rules for each difficult consonant.
- (xi) Discussed in detail each change took place in vowels with reference to distinctive feature theory.
- (xii) Pointed out the kind of vocalic insertion made by the participants.
- (xiii) Pointed out the kind of vocalic deletion made by the participants.
- (xiv) Produced phonological rules for each difficult vowel.
- (xv) Related, where possible, the difficulties encountered by the participants to the available literature.

Results were new and convincing insofar the sample is concerned.

B. The morphological data

After collecting the data from the sample, the researcher did the following:

- (i) Checked each participant's sheet for errors.
- (ii) Classified all sentences into correct and incorrect.
- (iii) Excluded all the correct ones from the analysis.
- (iv) Divided the incorrect sentences into two major groups: morphological problems and non morphological problems. The morphological ones are the focus of this study.
- (v) Grouped the morphological difficulties according to the subfield they fall under whether inflectional or derivational.

- (vi) Classified each group in (v) into a category that describes the exact morphological process took place, namely, omission, addition or misformation.
- (vii) Classified the sentences that have inflectional problems according to the type of the inflectional morpheme involved under each group in (vi), namely, plural morpheme, third person singular present tense morpheme, past tense morpheme, past participle morpheme and present participle morpheme.
- (viii) Classified the sentences that have derivational problems according to the categories mentioned in (vi).
- (ix) Divided all morphological difficulties into three groups according to the source of each difficulty, namely, intralingual, interlingual and ambiguous.
- (x) Related, where possible, the difficulties encountered by the participants to the available literature.

Results were new and convincing insofar the sample is concerned.

3.7. Validity of the Instrument

To ensure the validity of the test and prior to administering the test, a panel of three university professors at Al-Hussein University who have been teaching and have experiences in the area of phonology and morphology were requested to determine the face and the content validity of the chosen paragraph, the list of words and the topics of writing, (see Appendix IV). They were kindly asked to provide their comments, notice and recommendations on the adequacy and appropriateness of the used material in a classroom environment. Professors were responsive and provided the researcher with valuable suggestions and recommendations to make the project empirical. Accordingly, the

researcher referred to their suggestion and made some additions and omissions to the material. They were mostly related to specify the areas of difficulties in articulation and in some way related to derivational morphemes.

On the basis of the above suggestions, the researcher decided to write a proposal that suits the research work. The proposal was offered to the department of English Language and Literature at MEU for approval. The researcher had been given a date for discussion. It was approved by the department committee with certain modifications. The proposal was decided to have five chapters to get good results. Chapter one includes the introduction, statement of the problem, questions of the study and its significance. Chapter two includes review of both theoretical as well as relevant literature. Chapter three involves methods and procedures of the study. Chapter four includes discussions and results. Chapter five includes conclusions and recommendations.

3.8. Reliability of the Instrument

The reliability of the test was determine by the means of pre-testing (pilot study) it was decided to be in April of the academic year 2007/2008 given to a group of students of different sections in the same school where the researcher is conducting the work (see Appendix VII). It took (45) minutes to finish the test. However, they were asked to determine the approximate time it would take the students to answer the test. Their feedback provided the researcher with beneficial and constructive comments to start the research work. Therefore, participants were given (15) more minutes to accomplish the test easily. The participants showed no objection on both fields.

The above methods and procedures used were the cornerstone for the researcher to be followed to discuss the data in chapter four.

Chapter Four

Discussions and Results

4.0. Introduction

This chapter deals with phonological and morphological difficulties encountered by participants of this study; it sets off with identification, and then classification of difficulties according to types and sources.

4.1. Statistical Analysis of Phonological Problems

This section involves a statistical analysis of all phonological problems which the sample faced in the articulations. The tables merely contain the unacceptable articulations illustrated by the segment that succumb to change, the number of students that made the incorrect performance with their percentage of the total number of the participants, the number of students that performed correctly with the percentage, the correct performance according to RP English and the spelling.

4.1.1. Unacceptable Articulations of Consonants

Table (1) illustrates the consonants that caused confusion to the participants in articulation; for instance, the segment /ŋ/ becomes /g/ in pronouncing words like 'farming'. It indicates that the total participants face this problem whenever this phoneme occurs at the end of a word and shows the frequency of (100%). The target language sound /ŋ/ was proved to be difficult for Arab learners by Kharma & Hajjaj (1989) and by Barros (2003).

No.	Process	No. of Students with Wrong Performance	No. of Students with Correct Performance	Learners' Performance	Target Performance (RP English)	Spelling
1.	/ŋ/ → /g/	20 (100%)	0 (0%)	/fɑ:rmɪŋ/	/fɑ:rmɪŋ/	farming
				/bɪŋg/	/bɪ:ɪŋ/	being
				/sɪŋgər/	/sɪŋə/	singer
				/kɪlɪŋg/	/kɪlɪŋ/	killing
2.	/θ/ → /t/	1 (5%)	19 (95%)	/θaʊzəndz/	/θaʊzəndz/	thousands
3.	/s/ → /k/	4 (20%)	16 (80%)	/brʊdju:kɪd/	/prʊdju:st/	produced
4.	/dʒ/ → /d/	2 (10%)	18 (90%)	/sɔ:ldər/	/səʊldʒə/	soldier
5.	/dʒ/ → /g/	1 (5%)	19 (95%)	/lɑ:rg/	/lɑ:dʒ/	large
6.	/p/ → /b/	20 (100%)	0 (0%)	/dɪvɪlʊbɪd/	/dɪvɪləpt/	developed
				/brɪ:bʊl/	/pɪ:pl/	people
				/bl eɪ/	/pleɪ/	play
7.	/t/ → /d/	20 (100%)	0 (0%)	/brʊdju:sɪd/	/prʊdju:st/	produced
				/stʊbɪd/	/stɒpt/	stopped
8.	/s/ → /z/	6 (30%)	14 (70%)	/gru:bz/	/gru:ps/	groups
9.	/v/ → /f/	20 (100%)	0 (0%)	/ʊf/	/ɒv/	of
				/laɪf/	/lɪv/	live
				/lɪf/	/lɪv/	live
10.	/ð/ → /θ/	20 (100%)	0 (0%)	/bæθ/	/beɪð/	bathe
11.	/ʒ/ → /ʃ/	4 (20%)	16 (80%)	/dɪsɪdʒɪn/	/dɪsɪʒn/	decision
				/bledʒər/	/pleʒə/	pleasure
				/θaʊsənd/	/θaʊzəndz/	thousands
12.	/tʃ/ → /ʃ/	8 (40%)	12 (60%)	/sʌʃ/	/sʌtʃ/	such
				/rɪ:f/	/rɪ:tʃ/	reach

**Table 1: Feature Change of Consonants
(IPA Symbols)**

The segment /θ/ has become /t/ in words like ‘thousands’ in which case one participant faced the problem as against (19) made it correctly. This kind of difficulty has not been seen in the literature.

The phoneme /s/ is pronounced /k/ by four participants in words like ‘produced’ in which the sound occurs in medial position. This phenomenon is not discussed in the literature.

The sound /dʒ/ is pronounced /d/ in words like ‘soldier’ by two participants (10%) in which it occurs medially. It agrees with Kharma & Hajjaj (1989) and Barros (2003) who discovered that this sound is problematic for Arab learners of English. The same sound is articulated /g/ in certain environments as in ‘large’ in which case the sound occurs at the end of the word. It was a problem for one participant (10%) whereas (19) participants (95%) produced it correctly.

The phoneme /p/ is a drastic problem for the whole participants and scored a (100%) failure. Whenever this segment is found in initial or medial position, it is produced /b/ as in ‘play’ and ‘people’. This issue was raised by different scholars in the literature, namely, Kharma & Hajjaj (1989), Altaha (1995), Tushyeh (1996), Barros (2003) and Binturki (2008).

The sound /t/ becomes /d/ in final position as in ‘produced’. It forms a real problem for the whole participants and scored a (100%) difficulty. This is a new difficulty raised in this study.

The phoneme /s/ is pronounced /z/ in the word ‘group’. Six participants out of (20) encountered this difficulty making the percentage (30). It is a new issue discovered in this work.

The segments /v/ and /ð/ proved to be difficult for the participants. The former becomes /f/ in final position as in ‘of’ and the latter becomes /θ/ also in final position as in ‘bathe’. Both of them scored a (100%) frequency of articulations by the participants. The former agrees with Kharma & Hajjaj (1989), Altaha (1995), Tushyeh (1996), Barros (2003) and Binturki (2008) for the former but the latter is newly discovered.

The fricative /ʒ/ is pronounced wrongly /ʃ/ in medial environment as in ‘decision’. Four participants (20%) faced this difficulty out of the total sample. This point agrees with Kharma & Hajjaj (1989).

The last affricate phoneme in table (1) /tʃ/ is pronounced /ʃ/ whenever it occurs in word-final position as in ‘such’. Eight participants (40%) out of (20) encountered this problem. In the literature, Kharma & Hajjaj (1989) and Altaha (1995) mentioned such difficulty.

In short, the relevant literature shows certain problems of consonant phonemes of different manners of articulation but none of them discussed the feature change that took place in the production of the above segments. Due to such reason, the researcher preferred to check the feature quality of segments that caused the problem for the participants. The significance of following the distinctive feature theory is to show the drastic change whether in cavity, manner, or source features to regularize the occurrence of phonemes in true environments.

4.1.1.1. Distinctive Features Account for Misarticulated Consonants

This section involves some answers to question one and two due to the fact that they of jointly revolve around distinctive feature analysis. Phonological segments are classified according to Chomsky and Halle's (1968) on the basis of their articulation as a universal property. Each segment is discussed with reference to change of features with regard to the set already mentioned in Chapter Two. English consonants are listed in Appendix V.

(1) Major Class Features

It is obvious that segments of English are categorized on the basis of sonorant/nonsonorant. In this study, the pronunciation difficulty are categorized as [+sonorant] which is represented by the unique velar nasal /ŋ/. However, [-sonorant] sounds are represented by the stops /p/ and /t/, fricatives /s/, /v/, /θ/, /ð/, /z/, /ʃ/ and /ʒ/, and affricates /tʃ/ and /dʒ/. Such problems will be discussed accordingly.

(2) Cavity and Manner Features

These types of features are used to classify all possible segments into coronal/noncoronal in which case the segments are produced with the blade of the tongue raised from its neutral position for the former to include dental, alveolar and palato-alveolar segments. However, noncoronal is used to explicate segments articulated while the blade of the tongue is in its neutral position to cover segments such as glides, vowels and uvulars. Likewise, it covers the feature anterior/nonanterior in which case the former is used to explicate segments that are produced with an obstruction positioned in front of the palato-alveolar region while nonanterior segments are produced without such an obstruction to cover palato-alveolar, retroflex, palatal, velar, uvular and pharyngeal sounds. Such notions are used whenever possible to explain problems encountered by members of the selected sample. For instance, in (17a), the velar nasal is changed into a stop maintaining the place

(18a), the fricative /θ/ is changed into stop /t/. In this sense, the former used to carry the features [+coronal, +anterior, -voiced, +continuant] and becomes [-continuant]. In this regard it maintains all features except continuity. This phenomenon is captured in the phonological rule (18b).

18b.

$$\begin{bmatrix} +\text{continuant} \\ -\text{voiced} \\ +\text{coronal} \\ +\text{anterior} \end{bmatrix} \rightarrow \begin{bmatrix} -\text{continuant} \\ -\text{voiced} \\ +\text{coronal} \\ +\text{anterior} \end{bmatrix} \quad / \# ______$$

It is visible in (19a) that the fricative alveolar /s/ is pronounced as /k/. In this environment, /s/ used to have the features [+coronal, +anterior, +continuant, -voiced] before articulation; however, it loses the features [+continuant, +coronal, +anterior] after the articulation by the participants. This phenomenon is captured in the phonological rule (19b).

19a. /s/ → /k/

19b.

$$\begin{bmatrix} +\text{continuant} \\ +\text{coronal} \\ +\text{anterior} \\ -\text{voiced} \end{bmatrix} \rightarrow \begin{bmatrix} -\text{continuant} \\ -\text{coronal} \\ -\text{anterior} \\ -\text{voiced} \end{bmatrix} \quad / \quad \begin{bmatrix} +\text{coronal} \\ +\text{anterior} \\ -\text{voiced} \\ -\text{continuant} \end{bmatrix}$$

Participants faced such issue because of the fact that they depend heavily on spelling to pronounce words; for instance, the graphic segment ‘c’ can be pronounced at least in two ways: as in ‘cycle’ and ‘can’.

In (20a), the affricate /dʒ/ becomes stop /d/; thus, the features [+delayed release, +coronal, -anterior] become [-delayed release and -anterior]. This is visible in the phonological rule (20b).

20a. /dʒ/ → /d/

20b.

$$\left[\begin{array}{l} +\text{delayed release} \\ +\text{coronal} \\ -\text{anterior} \\ +\text{voiced} \end{array} \right] \rightarrow \left[\begin{array}{l} -\text{delayed release} \\ +\text{coronal} \\ +\text{anterior} \\ +\text{voiced} \\ -\text{continuant} \end{array} \right] / \text{ — } \left[\begin{array}{l} -\text{lateral} \\ +\text{trill} \end{array} \right]$$

It is obvious that the participants are unaware of the articulation of affricates in English. For instance, in (21a) the palato-alveolar voiced affricate /dʒ/ is totally changed into a velar stop /g/. In this sense, the manner of articulation is lost. The researcher argues that the features [+delayed release and -anterior] are lost. This is visible in the phonological rule (21b).

21a. /dʒ/ → /g/

20b.

$$\left[\begin{array}{l} +\text{delayed release} \\ +\text{coronal} \\ -\text{anterior} \\ +\text{voiced} \end{array} \right] \rightarrow \left[\begin{array}{l} -\text{delayed release} \\ +\text{coronal} \\ +\text{anterior} \\ +\text{voiced} \\ -\text{continuant} \end{array} \right] / \text{ — } \left[\begin{array}{l} -\text{lateral} \\ +\text{trill} \end{array} \right]$$

In short, cavity features particularly coronal and anterior are of a great help to sort out difficulties in articulation met by the participants due to misuse of place of articulation.

(3) Source Features

These kinds of phonetic features in this category rely primarily on the state of the glottis. If the glottis is closed, there is spontaneous vibration because the folds are almost in contact; however, if the glottis is open, there is no such vibration because the glottis is not in contact. In this study sample, there are obstruents that have lost the voicing feature in certain environments.

The researcher has categorized the obstruents as stops, fricatives and affricates. The following specimens illustrate the point:

In (22a), the voiceless stop /p/ maintains its place and manner of articulation but loses the voicing feature. This is captured in the phonological rule (22b).

22a. /p/ → /b/

22b.

$$\begin{bmatrix} -\text{continuant} \\ -\text{voiced} \\ +\text{anterior} \\ -\text{coronal} \end{bmatrix} \rightarrow \begin{bmatrix} -\text{continuant} \\ +\text{voiced} \\ +\text{anterior} \\ -\text{coronal} \end{bmatrix} / \# \text{ ______}$$

Likewise, in (23a) the voiceless stop /t/ is changed to /d/ maintaining the place and manner of articulation but gaining the feature [+voiced]. This is visible in the phonological rule (23b).

23a. /t/ → /d/

23b.

$$\begin{bmatrix} +\text{coronal,} \\ +\text{anterior} \\ -\text{voiced} \\ -\text{continuant} \end{bmatrix} \rightarrow \begin{bmatrix} +\text{coronal} \\ +\text{anterior} \\ +\text{voiced} \\ -\text{continuant} \end{bmatrix} / \text{ ______ } \#.$$

Not only stops but also the obstruent fricatives undergone this kind of change and have been categorized under the source feature as in (24).

24a. /s/ → /z/

In (24a), the voiceless alveolar fricative /s/ becomes /z/ maintaining the place and manner of articulation. It is evident that the former gained [+voiced] feature as is given in the phonological rule (24b).

24b.

$$\left[\begin{array}{l} +\text{continuant} \\ -\text{voiced} \\ +\text{coronal} \\ +\text{anterior} \end{array} \right] \rightarrow \left[\begin{array}{l} +\text{continuant} \\ +\text{voiced} \\ +\text{coronal} \\ +\text{anterior} \end{array} \right] / ___\#$$

In (25a), the labio-dental fricative /v/ maintains both cavity and manner of articulation features but loses [+voiced] feature. This phenomenon is shown in the phonological rule (25b).

25a. /v/ → /f/

25b.

$$\left[\begin{array}{l} +\text{voiced} \\ +\text{anterior} \\ -\text{coronal} \\ +\text{continuant} \\ -\text{nasal} \end{array} \right] \rightarrow \left[\begin{array}{l} -\text{voiced} \\ +\text{anterior} \\ -\text{coronal} \\ +\text{continuant} \\ -\text{nasal} \end{array} \right] / ___\#$$

In (26a), the voiceless fricative /θ/ is changed into voiceless stop /t/. In this sense, it maintains the cavity features but loses a manner of articulation feature. Thus, it loses the [+continuant] feature. This is captured in the phonological rule (26b).

26a. /θ/ → /t/

26b.

$$\begin{bmatrix} +\text{continuant} \\ -\text{voiced} \\ +\text{coronal} \\ +\text{anterior} \end{bmatrix} \rightarrow \begin{bmatrix} -\text{continuant} \\ -\text{voiced} \\ +\text{coronal} \\ +\text{anterior} \end{bmatrix} / \# \text{ ______}$$

In (27ai) and (27aii), the voiced fricatives /ð/ and /z/ maintain cavity and manner features; however, they lose the [+voice] feature. This environment is shown in (27b).

27ai. /ð/ → /θ/

27aii. /z/ → /s/

27b.

$$\begin{bmatrix} +\text{voiced} \\ +\text{continuant} \\ +\text{coronal} \\ +\text{anterior} \end{bmatrix} \rightarrow \begin{bmatrix} -\text{voiced} \\ +\text{continuant} \\ +\text{coronal} \\ +\text{anterior} \end{bmatrix} / \text{ ______ } \#$$

Not only the [+anterior] fricatives lose the [+voiced] feature but also the [-anterior] fricative /ʒ/ becomes /ʃ/ in (28a). The cavity and manner of articulation features are maintained while the voice feature is lost. This process is captured in the phonological rule (28b).

28a. /ʒ/ → /ʃ/

28b.

$$\begin{bmatrix} +\text{continuant} \\ +\text{voiced} \\ -\text{anterior} \\ +\text{coronal} \end{bmatrix} \rightarrow \begin{bmatrix} +\text{continuant} \\ -\text{voiced} \\ -\text{anterior} \\ +\text{coronal} \end{bmatrix} \# \text{ ______}$$

No.	Process	No. of Students with Wrong Performance	No. of Students with Correct Performance	Learners' Performance	Target Performance (RP English)	Spelling
1.	/ɪ/ → /ʌ/	3 (15%)	17 (85%)	/lʌv/	/lɪv/	live
2.	/e/ → /ɪ/	20 (100%)	0 (0%)	/dɪvɪlʊbɪd/	/dɪveləpt/	developed
				/tɪn/	/ten/	ten
				/rɪd/	/red/	red
3.	/ʊ/ → /ʊ/	20 (100%)	0 (0%)	/brʊdju:sɪd/	/prɒdju:st/	produced
				/stʊbɪd/	/stɒpt/	stopped
				/dʊg/	/dɒg/	dog
				/pʊt/	/pɒt/	pot
4.	/ə/ → /ʊ/	20 (100%)	0 (0%)	/dɪvɪlʊbɪd/	/dɪveləpt/	developed
				/ʊf/	/ɒv/	of
				/tʊ/	/tu/	to
				/tʊgəðər/	/təgeðə/	together
5.	/ɑ:/ → /ɔ:/	1 (5%)	19 (95%)	/fɑ:rmər/	/fɑ:məz/	farmers
6.	/e/ → /ə/	3 (15%)	17 (85%)	/tʊgəðər/	/təgeðə/	together
				/jəs/	/jes/	yes
7.	/ɪ:/ → /u:/	1 (5%)	19 (95%)	/bu:bɪl/	/pɪ:pl/	people
8.	/ɪ:/ → /ɪ/	9 (45%)	11 (55%)	/nɪdɪd/	/nɪ:dɪd/	needed
				/ðɪs/	/ðɪ:z/	these
9.	/ɑ:/ → /ə/	1 (5%)	19 (95%)	/fərərz/	/fɑ:məz/	farmers
10.	/u:/ → /ʊ/	4 (20%)	16 (80%)	/grʊbɪs/	/gru:ps/	groups
				/grʊbz/	/gru:ps/	groups
				/mju:zɪk/	/mju:zɪk/	music

**Table 2: Feature Change of Vowels
IPA Symbols**

The vowel /ʊ/ is prominent in learners' performance insofar as articulation is concerned. Three vowels, namely, /ɒ/, /ə/ and /u:/ were changed into /ʊ/. The first two changes were made by all participants which make the frequency (100%) as in words like 'produced', 'stopped', 'dog' and 'pot' for the first; whereas the second change was clear in words like 'developed', 'of', 'to' and 'together'. The third change was made by four participants (20%) as in words like 'groups' and 'music'. According to the available literature, the vowel /ɒ/ is a difficult area of learning for Arab learners of English as it was reported by Kharma & Hajjaj (1989). Other changes here are new.

One participant only (5%) has changed the vowel /ɑ:/ into /ɔ:/ in one word only which is 'farmers'. Such change was not found in the previous literature.

The vowels /e/ and /ɑ:/ were changed into /ə/ as in words like 'together' and 'yes' for the former and 'farmers' for the latter. The first vowel change scored a (15%) wrong performance whereas the second scored only (5%). The first vowel /e/ was proved by Kharma & Hajjaj (1989) as a difficult area of confusion with the high short vowel /ɪ/.

The high long vowel /ɪ:/ was produced /u:/ by one participant scoring (5%) as in the word 'people'; but it was shortened into /ɪ/ by nine participants scoring (45%) as in the words 'needed' and 'these'. These changes are new in this study and not seen in the available literature.

In short, the vowels /ɪ/, /e/, /ɒ/, /ə/, /ɑ:/, /ɪ:/ and /u:/ are found to be problematic for Arab learners of English as they were replaced frequently by different vowel sounds by losing or gaining certain features.

4.1.2.1. Distinctive Features Account for Misarticulated Vowels

According to Chomsky and Halle (1968), vowels are listed in cavity features related to the shape of the tongue (for English vowels see Appendix VI). In this situation, there are three primary cavity features namely, (i) high/nonhigh to cover the vowels: /ɪ/, /i:/, /ʊ/ and /u:/ for the former and /e/, /ɜ:/, /ə/, /æ/, /ʌ/, /ɑ:/, /ɒ/ and /ɔ:/ for the latter, (ii) low/nonlow to cover /æ/, /ɑ:/ and /ɒ/ and the rest in (i) for the latter, and (iii) back/nonback to cover /ɑ:/, /ɒ/, /ɔ:/, /ʊ/ and /u:/ for the former and the rest of vowels for the latter. Chomsky and Halle also added the cavity feature rounded/nonrounded to cover /ɒ/, /ɔ:/, /ʊ/ and /u:/ for the former and the rest for the latter. They also added the feature tense/nonsense in the category of manner of articulation to cover the vowels /i:/, /ɑ:/, /ɔ:/, /u:/ and /ɜ:/ for the former and the rest for the latter. These theoretical features will be used to cover all problematic areas faced by the participants in articulating vowels. In the analysis, for instance, the high short vowel /ɪ/ becomes nonhigh /ʌ/ as in (30).

In (30a), the [+high] short vowel /ɪ/ loses the [+high] feature and becomes [-high] /ʌ/. It can be seen in the phonological rule (30b).

30a. /ɪ/ → /ʌ/

30b.

$$\begin{bmatrix} +\text{high} \\ -\text{tense} \\ -\text{back} \end{bmatrix} \rightarrow \begin{bmatrix} -\text{high} \\ -\text{tense} \\ +\text{back} \\ -\text{low} \\ -\text{round} \end{bmatrix} / \text{ — } \begin{bmatrix} +\text{voiced} \\ +\text{anterior} \\ -\text{coronal} \\ +\text{continuant} \\ -\text{nasal} \end{bmatrix}$$

It is obvious that the weak central [-high] vowel /ə/ is made /ʊ/ in articulation creating a wrong performance as in (33). In (33a), the short vowel gains the [+high, and +round] features. Such environment can be represented in the phonological rule (33b).

33a. /ə/ → /ʊ/

33b.

$$\begin{bmatrix} \text{-high} \\ \text{+back} \\ \text{-low} \\ \text{-round} \\ \text{-tense} \end{bmatrix} \rightarrow \begin{bmatrix} \text{+high} \\ \text{+back} \\ \text{-low} \\ \text{+round} \\ \text{-tense} \end{bmatrix} \quad / \text{ ______ } \alpha$$

In (34) the participant produces the vowel /a:/ incorrectly due to the alternation of some of its distinctive features. In other words, a vowel which is [+low] /a:/ became a [-low] /ɔ:/.

In (34a), the long [+low] vowel /a:/ has become a [-low] and mid low.

34a. /a:/ → /ɔ:/

34b.

$$\begin{bmatrix} \text{-high} \\ \text{+back} \\ \text{+low} \\ \text{-round} \\ \text{+tense} \end{bmatrix} \rightarrow \begin{bmatrix} \text{-high} \\ \text{+back} \\ \text{-low} \\ \text{+round} \\ \text{+tense} \end{bmatrix} \quad / \text{ C ______ C}$$

In (35a), the mid high short vowel /e/ becomes mid low. This situation is captured in the phonological rule (35b).

35a. /e/ → /ə/

40b.

$$\begin{bmatrix} +\text{high} \\ +\text{back} \\ -\text{low} \\ +\text{round} \\ +\text{tense} \end{bmatrix} \rightarrow \begin{bmatrix} +\text{high} \\ +\text{back} \\ -\text{low} \\ +\text{round} \\ -\text{tense} \end{bmatrix} / ____ \alpha.$$

In short, difficulties encountered by the participants in the vowel area cover all body of the tongue features namely, high, low and back as well as the round feature. The most changes that the participants have done are found to be in the $[\pm\text{low}]$ feature as in (32), (34), (35), (37), (38) and (39). The $[\pm\text{high}]$ feature comes second in frequency order in which five different situations are found in (30-33) and (35). $[\pm\text{Tense}]$ feature have found altered in (37), (39) and (40). In (36) and (38) the $[\pm\text{round}]$ feature is lost whereas, the $[\text{+back}]$ feature is gained in (36).

4.1.3. Statistical Analysis of Phonological Processes

Participants have faced difficulties in the pronunciation of certain words. These difficulties are dealt with under (i) insertion and (ii) deletion.

4.1.3.1. Insertion

This phonological process is discussed under two broad categories, namely, (1) insertion of vowels and (2) insertion of consonants.

(1) Insertion of Vowels

Vowels have undergone the process of insertion causing words to which they are added pronounced wrongly as in the table (3) below.

No.	Process	No. of Students with Wrong Performance	No. of Students with Correct Performance	Learners' Performance	Target Performance (RP English)	Spelling
1.	Ø → /ɪ/	20 (100%)	0 (0%)	/stʊbɪd/	/stɒpt/	stopped
				/sɪblæʃ/	/splæʃ/	splash
				/sɪblɪ:n/	/splɪ:n/	spleen
				/tɪnθɪs/	/tenθs/	tenths
				/twɪlfɪθs/	twelfθs/	twelfths
				/tɪksɪts/	/teksts/	texts
2.	Ø → /ʊ/	20 (100%)	0 (0%)	/ bɪ:bul/	/pɪ:pl/	people

**Table 3: Insertion of Vowels
IPA Symbols**

According to the statistical calculations of table (3), all participants of this study have made insertions of vowels as illustrated in the table which shows a (100%) wrong performance. For instance, the two high short vowels /ɪ/ and /ʊ/ are found to be incorrectly inserted in different words to ease their pronunciation. The former is inserted before the past tense marker -ed as in ‘stopped’, before the plural morpheme -s as in ‘texts’ and in long initial clusters as in ‘splash’, and ‘spleen’; whereas the latter is inserted in the final cluster of the word ‘people’; so, it is pronounced incorrectly.

The insertion of the vowels /ɪ/ and /ʊ/ in final cluster is captured in the phonological rule:

$$\emptyset \rightarrow \begin{bmatrix} +\text{high} \\ -\text{back} \\ -\text{low} \\ -\text{round} \\ -\text{tense} \end{bmatrix} \quad \text{or} \quad \begin{bmatrix} +\text{high} \\ +\text{back} \\ -\text{low} \\ +\text{round} \\ -\text{tense} \end{bmatrix} \quad / \text{C(C)} ____ \text{C(C)} \#.$$

However, the insertion of the vowel /ɪ/ in initial clusters is captured in the phonological rule:

$$\emptyset \rightarrow \begin{bmatrix} +\text{high} \\ -\text{back} \\ -\text{low} \\ -\text{round} \\ -\text{tense} \end{bmatrix} \quad / \# \text{C} ____ \text{CC}.$$

In short, the high front vowels are inserted to break the cluster due to the wrong articulation made by the participants. The insertion of /ɪ/ agrees with Kharma & Hajjaj (1989) who exemplified it by words like /sɪprɪŋ/ for ‘spring’, /wɪʃɪd/ for ‘wished’ and /ɑːskɪd/ for ‘asked’. It agrees also with Altaha (1995) study who found that this vowel is inserted in words like *grandifather.

(2) Insertion of Consonants

Consonants have undergone the process of insertion causing words to which they are added pronounced wrongly as in the table (4) below.

The insertion of consonants involves the three alveolar consonants namely, /t/, /z/ and /r/. The voiceless alveolar stop /t/ is inserted in words that have the silent segment /t/ in spelling but not pronounced. This was made by (11) participants (55%) in words like

‘castle’. In one word, the voiced alveolar fricative /z/ is added to the word ‘power’ making it plural. It is inserted by one participant (5%) and not made by (95%) as shown in table (4).

No.	Process	No. of Students with Wrong Performance	No. of Students with Correct Performance	Learners’ Performance	Target Performance (RP English)	Spelling
1.	Ø → /t/	11 (55%)	9 (45%)	/kæstɪl/	/kɑːsl/	castle
2.	Ø → /z/	1 (5%)	19 (95%)	/bəwərz/	/paʊə/	power
3.	Ø → /r/	20 (100%)	0 (0%)	/fɑːrmərz/	/fɑːməz/	farmers
				/laːrdʒər/	/laːdʒ/	larger

**Table 4: Insertion of Consonants
IPA Symbols**

The post alveolar approximant /r/ is added in words like ‘farmers’ and ‘larger’ where it should be silent. The insertion of /r/ is made by all participants (100%). The first phenomenon is shown in the phonological rule:

$$\emptyset \rightarrow \left[\begin{array}{l} -\text{continuant} \\ -\text{voiced} \\ +\text{coronal} \\ +\text{anterior} \end{array} \right] / ____ \left[+\text{lateral} \right] .$$

The second phenomenon is shown in the following phonological rule:

$$\emptyset \rightarrow \left[\begin{array}{l} +\text{voiced} \\ +\text{continuant} \\ +\text{coronal} \\ +\text{anterior} \\ +\text{strident} \end{array} \right] / ____ \#.$$

The third environment is captured in the phonological rule:

$$\emptyset \rightarrow \begin{bmatrix} -\text{lateral} \\ +\text{trill} \end{bmatrix} / ____ \begin{bmatrix} -\text{high} \\ +\text{back} \\ -\text{low} \\ -\text{round} \\ -\text{tense} \end{bmatrix} .$$

In short, participants insert a vowel to ease the pronunciation of certain clusters as in ‘splash’, ‘spleen’ and ‘texts’; however, they insert a consonant which is not supposed to be pronounced accordingly as in ‘castle’, ‘farmers’ and ‘larger’. In the available literature, Barros (2003) pointed out that the phoneme /r/ is a problematic consonant for Arab learners of English. Other insertions are newly discovered.

4.1.3.2. Deletion

Vowels and consonants have undergone the process of deletion causing words from which they are deleted to be pronounced in a wrong way as in tables (5 and 6) below.

(1) Deletion of Vowels

Vowels have undergone deletion process as in table (5):

No.	Process	No. of Students with Wrong Performance	No. of Students with Correct Performance	Learners' Performance	Target Performance (RP English)	Spelling
1.	/ɪ/ → ∅	8 (40%)	12 (60%)	/bleɪs/	/pleɪsɪz/	places
				/nɪ:d/	/nɪ:dɪd/	needed
				/sta:rt/	/sta:tɪd/	started
2.	/ə/ → ∅	1 (5%)	19 (95%)	/la:rdʒ/	/la:dʒə/	larger

Table 5: Deletion of Vowels
IPA Symbols

Two short vowels are found to be deleted; they are the high front short vowel /ɪ/ and the central weak short vowel /ə/. The former is deleted by eight participants (40%) when it occurs with the past tense or plural morphemes and retained by (12) participants

(60%) in words like ‘places’, ‘needed’ and ‘started’. It can be shown in the phonological rule:

$$\begin{bmatrix} +\text{high} \\ -\text{back} \\ -\text{low} \\ -\text{round} \\ -\text{tense} \end{bmatrix} \rightarrow \emptyset / \text{---} \begin{bmatrix} +\text{voiced} \\ +\text{continuant} \\ +\text{coronal} \\ +\text{anterior} \\ +\text{strident} \end{bmatrix} \text{ or } \begin{bmatrix} +\text{voiced} \\ +\text{instantaneous release} \\ +\text{coronal} \end{bmatrix} \#.$$

The latter is deleted as an element of the comparative adjective morpheme by one participant (5%) in the word ‘larger’ which is captured in the phonological rule:

$$\begin{bmatrix} -\text{high} \\ +\text{back} \\ -\text{low} \\ -\text{round} \\ -\text{tense} \end{bmatrix} \rightarrow \emptyset / \text{---} \begin{bmatrix} -\text{lateral} \\ +\text{trill} \end{bmatrix} \#.$$

In short, certain short vowels, namely, /ɪ/ and /ə/ are omitted in certain environments in away to simplify the pronunciation of certain words which amounts wrong performance.

(2) Deletion of Consonants

Consonants have undergone the process of deletion as in table (6). According to the table, the three alveolar consonants /t/, /d/, /z/ and the palatal approximant /j/ are deleted in certain contexts.

No.	Process	No. of Students with Wrong Performance	No. of Students with Correct Performance	Learners' Performance	Target Performance (RP English)	Spelling
1.	/t/ → Ø	1 (5%)	19 (95%)	/dɪvɪlʊb/	/dɪveləpt/	developed
2.	/d/ → Ø	2 (10%)	18 (90%)	/nɪ:d/	/nɪ:dɪd/	needed
				/stɑ:rt/	/stɑ:tɪd/	started
3.	/z/ → Ø	10 (50%)	10 (50%)	/fɑ:rmər/	/fɑ:məz/	farmers
				/sɪtɪ/	/sɪtɪz/	cities
4.	/j/ → Ø	1 (5%)	19 (95%)	/brʊdɪkɪd/	/prɒdju:st/	produced

**Table 6: Deletion of Consonants
IPA Symbols**

The stops /t/ and /d/ are deleted in situations in which they represent the past tense morpheme. The former is deleted by one participant (5%) in words like ‘developed’ and retained by (19) participants (95%). It can be captured in the phonological rule:

$$\left[\begin{array}{l} \text{-continuant} \\ \text{-voiced} \\ \text{+coronal} \\ \text{+anterior} \end{array} \right] \rightarrow \emptyset \quad / \quad _____\#.$$

Whereas the latter is deleted by two participants (10%) in words like ‘needed’, and ‘started’ which is shown in the phonological rule:

$$\left[\begin{array}{l} \text{-continuant} \\ \text{+voiced} \\ \text{+coronal} \\ \text{+anterior} \end{array} \right] \rightarrow \emptyset \quad / \quad _____\#.$$

The fricative /z/ is deleted by two participants (10%) when representing the plural morpheme as in ‘farmers’ and ‘cities’. Such process is captured in the phonological rule:

$$\left[\begin{array}{l} +\text{voiced} \\ +\text{continuant} \\ +\text{coronal} \\ +\text{anterior} \\ +\text{strident} \end{array} \right] \rightarrow \emptyset \quad / \quad _____\#.$$

The voiced palatal approximant /j/ is omitted from the word ‘produced’ because it is not represented orthographically. It is deleted by one participant (5%) which can be captured in the phonological rule:

$$\left[\begin{array}{l} +\text{continuant} \\ +\text{voiced} \\ +\text{coronal} \\ -\text{anterior} \\ -\text{strident} \end{array} \right] \rightarrow \emptyset \quad / \quad _____\left[\begin{array}{l} +\text{round} \\ +\text{high} \\ -\text{low} \\ +\text{back} \\ +\text{tense} \end{array} \right].$$

Such deletions are newly discovered and have not been mentioned in the available literature.

In short, the phonological processes of insertion and deletion show that some of the short vowels and certain alveolar consonants have undergone such processes either to ease the pronunciation of words. Such phenomenon causes wrong articulation of the words.

4.2. Morphological Problems

4.2.1. Inflectional Affixes Problems

Participants produced variety of deviant structures in using inflectional affixes. Corder (1967) argued that like all other learners of any language whether L1 or L2, grammatical morphemes receive less attention from learners for the fact that the message of a sentence is carried out mostly by the lexical elements rather than the grammatical ones.

Dulay, Burt and Krashen (1982) classified deviant structures, as discussed in the second chapter, according to SST that is the general way the learner's sentences look different from what seems to be correct in the target language. The researcher prefers using the clause (i) 'what seems to be correct in the target language' rather than (ii) 'the target language sentence' for the reason that in many cases a learner's sentence is vague and can be corrected in different ways; thus, more than one target language sentence is possible. In this study the researcher depended heavily on the context to decide about what seems to be correct in the target language.

4.2.1.1. Omission

Participants have omitted a number of inflectional morphemes of the following types:

(1) Plural Morpheme Omission

In certain contexts, the plural morpheme -s has been dropped whether it is regular as in (41) or irregular as in (42).

41a. *I like sing song.

b. I like to sing songs.

42a. *I want have two child.

b. I want to have two children.

In (41a), the difficulty occurs as the regular plural morpheme -s is omitted at the end of the noun phrase (NP henceforth) 'song'. The sentence can be made correct if the same morpheme is added and the infinitive marker 'to' is also inserted because the verb 'like' subcategorizes an inflectional phrase (IP henceforth) as its internal complement. However, in (42a), the learner is not aware of the fact that the plural morpheme is to inflect the infix

in the NP ‘child’ to become ‘children’ as in (42b). Similar examples of the regular morpheme type are listed in (43) to avoid redundancy of the analysis.

43ai. *whatever these problem ...

ii. Whatever these problems...

bi. *I have got three brother and two sister

ii. I have got three brothers and two sisters.

ci. *I will have three boy and two girl

ii. I will have three boys and two girls

di. *I want give my child all thing...

ii. I want to give my children all the things...

ei. *my three sister tooked me ...

ii. my three sisters took me...

The morphology of the regular plural marker is not always the same with all NPs; however, if the NP ends with the grapheme ‘y’, this grapheme will be omitted and the suffix -ies will be added as in (44):

44a. *I saw amazing scenery and sites

b. I saw amazing sceneries and sites.

The NP ‘scenery’, in (44a), ends in ‘y’ thus, the suffix -ies is to be added and ‘y’ is deleted. The learner lacks the awareness of coordination in the sense that the coordinate NPs are to agree in number, person and gender with each other as in (44b).

In short, these types of wrong writing took place are because of the target language rules influence learners as they are unaware of the plural morphology of the regular and the irregular ones in English. This agrees with Zughouli (2002) who gave the example ‘*we are

seven three sister and four brother’ to show the omission of the plural morpheme. It disagrees with Akande (2003) who reported that Yoruba learners of English were familiar with the plural morpheme.

(2) Third Person Singular Present Tense Morpheme Omission

This is a kind of semi systematic mechanism in the omission of the third person present tense morpheme -s at the end of the imperfective verb which is governed by the linguistic context. For instance, in a sentence, the subject and the verb are separated by an adverbial adjunct; thus, the learner misuses the inflectional morpheme of the third person present tense marker as in (45):

45a. *my father always tell me to be a doctor

b. my father always tells me to be a doctor.

The sentence (45a) is wrong because of the omission of the agreement feature -s of the third person singular. This confusion happens due to the intermediate occurrence of the adverbial adjunct ‘always’ that ends with the phoneme /s/ between the subject ‘my father’ and the verb ‘tell’. Similar sentence in which the same problem took place in the dependant clause is (45c):

45ci.* because my father sometimes work there.

ii. because my father sometimes works there.

Omission of the third person present tense morpheme was found to be true in the relevant literature as mentioned by Kharma & Hajjaj (1989) and by Akande (2003).

The latter gave the examples ‘*She eat’ and ‘*He go’.

(3) Past Tense Morpheme Omission

The past tense regular morpheme -ed is omitted in a number of situations as in (46) in which case the verbs are regular in morphology.

46a. *I ate the lunch and clean the dishes yesterday.

b. I ate lunch and cleaned the dishes yesterday.

As the verb 'clean' of the conjoint lacks the -ed form in (46a); the structure is ungrammatical. The syntactic fault might have happened as the learner is unaware of the fact that the verb 'ate' is the correct past form of the irregular 'eat'. (46b) is made correct as the morpheme -ed is added. Similar examples of this fact are available in (46c).

46cia. *my weekend was very bad because I stay in my home

b. my weekend was very bad because I stayed at home.

iiia. *then we arrive to the land last night

b. then we arrived the land last night.

iiia. *that was good we return to Jordan

b. that was good. We returned to Jordan.

However, in (47), the problem has occurred as the learner did not write the regular form 'dreamed' nor the irregular form 'dreamt' as the verb in question bears the two forms.

47a.*when I was in second grade I dream doctor

b. when I was in second grade I dreamed\dreamt to be a doctor.

Thus, such problems are also regarded intralingual ones as the learner needs more knowledge of past tense morphology of the English verbs. It agrees with Akande (2003) findings.

(4) Past Participle Morpheme Omission

The past participle morpheme -en as an inflectional affix is omitted. It is obvious that all the structures in which the past participle marker is omitted are found in the perfective type form of the verb; whereas, it is retained in certain passive verb structures.

This process indicates that the passive morpheme is learned by the learners faster than the perfect at least in this study sample. The sentence (48) illustrates the point.

48a. *I have speak with my teacher.

b. I have spoken to my teacher.

In (48a), the past participle -en is missing from the verb 'speak' though the perfective marker 'have' is given by the learner. Once it is added, the sentence is good as in (48b). Similar problems of this kind are listed in (48c):

48cia. *Me and my friend have play good game.

b. My friend and I have played a good game.

iiia. *They have send a letter to my friend.

b. They have sent a letter to my friend.

As the learner's mother tongue is Arabic, the cause of these problems is the mother tongue as Arabic does not have similar forms of the verb in this fashion.

In the relevant literature, such omission is found only in Akande (2003) study.

(5) Present Participle Morpheme Omission

The inflectional suffix -ing at the end of a verb is omitted in a number of instances though the indicator is obvious in them as in (49):

49a. *I am live beautiful ...

b. I am living in a beautiful ...

The present participle suffix -ing is not found at the end of the verb 'live'; hence, the structure is incorrect. The learner does not know that if the auxiliary 'am' is overt, the addition of -ing is a must at the end of the provided verb as in (49b). Similar sentences that involve the omission of this morpheme are listed in (49c):

49c.ia. *what is happen!

b. what is happening!

ii. *when the ship was sink in the sea...

b. when the ship was sinking in the sea...

iiia. *I am study ...

b. I am studying...

According to the available relevant literature, this kind of omission is not found in any study. It is newly discovered in this study.

4.2.1.2. Addition

Different types of errors are committed by learners by adding an unnecessary affix which makes the structure ungrammatical. Addition is of three types: (1) double marking, (2) regularization and (3) simple addition.

(1) Double Marking

It refers to a situation in which the plural marker -s is added to an NP which is already in the plural form; in such case, the NP in question is double marked and the process amounts the ungrammaticality of the structure as in (50):

50a. *They want to repair their teeths.

b. They want to repair their teeth.

(50a) is wrong because the NP ‘*teeths’ is double marked; one for being an irregular plural that carries irregular morpheme and the other is the attachment of the plural -s. In (50b), it is made correct as the plural -s is deleted.

Not only NPs but also VPs are double marked by the participants of the study sample. This fact is visible in a structure in which the third person singular morpheme -s is added to a verb as in (51), the past tense morpheme -ed is also added to the past form of the

irregular verb as in (52), and in the presence of the past auxiliary with irregular verb as in (53):

51a. *My father he doesn't speaks English.

b. My father/He doesn't speak English.

The verb 'speaks' is marked by the third person singular marker -s though it is preceded by the auxiliary 'does' which is marked correctly by the same marker. If this marker is omitted from the verb, the sentence renders correct as in (51b); however, this marker is retained with the helping verb.

52ai. *My three sister tooked me.

ii. My three sisters took me.

bi. *She didn't cutted flower.

ii. She didn't cut the flower.

However, the situation is different with (52ai) and (52bi) in which case the past irregular verbs 'tooked' and 'cutted' are overtly marked by -ed which amounts repetition. The only way to make the sentences correct is to omit the past morpheme as in (52aai) and (52bii) respectively.

53a. *I did went to my grandfather's house.

b. I went to my grandfather's house.

c. I did go to my grand father's house.

As compared to (51), (53a) is ungrammatical due to the double marking of the past feature on the verb. The possible ways to make the sentence correct is either to delete the auxiliary as in (53b) or retain it and reduce the verb 'went ' to the base form as in (53c) to indicate emphatic meaning.

In short, double marking performance took place because of the lack of awareness of the grammatical rules of English. In such case, if a verb is in the present or past and is preceded by an auxiliary marked by the singular marker or the past marker, no other part of the verb phrase should be marked as it is restricted to the former as a rule of English. Likewise, if a verb is in the irregular form of the past, it cannot be marked by the regular marker -ed. English cannot bear double marking in tense.

Double marking addition findings of this study agree with the relevant literature, for instance, Tushyeh (1996) gave the examples ‘*womens’ and Zughoul (2002) gave the examples ‘*womens’, ‘*bookses’ and ‘*Rent here it is expensive’.

(2) Regularization

Regularization addition refers to the situation in which the regular morpheme is added to a verb that has a zero morpheme which results in a deviant structure. In the following analysis, the learner adds the regular past tense marker –ed to a verb that has a zero past tense marker. Regularizing such verb leads to ungrammaticality of the structure as in (54).

54a. *She cutted flower and taked it.

b. She cut the flower and took it.

In (54a), the learner has added the -ed morpheme to the irregular verb ‘cut’ in a way to make it regular. This process makes the sentence ungrammatical. This kind of problem has happened because the learner maintains regularity of all English verbs.

The relevant literature provided the researcher with some examples in which regularization addition is clear, for instance, Kharma & Hajjaj (1989) exemplified this phenomenon by ‘*cutten’, ‘*putten’ and ‘*sheeps’.

(3) Simple Addition

If the addition is neither double marking nor regularization, it is classified as simple addition. It is referred to as the ‘grab bag’ of additions. Most of the wrongly added affixes are found in this type.

These kinds of wrong structuring happen when the learners try to add the regular plural morpheme to an NP that is not needed at all as in (55):

55a. *She is my faithfully friends.

b. She is my faithful friend.

In (55a), the plural morpheme -s is added to the NP ‘friends’ in a wrong manner; it disagrees with the primary verb ‘is’ which is singular. The sentence can be made correct if it is deleted as in (55b). Another example of this category is written in (55c):

55ci. *I will design a beautiful things.

ii. I will design a beautiful thing.

Learners made this problem not only with regular NPs in the plural but also with NPs that cannot have plural forms at all as in (56):

56a. *I helped my sister in homeworks

b. I helped my sister in homework.

The NP ‘homework’ is an uncountable entity that cannot have a plural form; thus, (56a) is ungrammatical. If the NP in question is used in the singular form, the sentences can be made correct as in (56b).

In short, the plural morpheme -s cannot be attached to NPs preceded by a singular determiner like ‘a(n)’ or to NPs that cannot be made plural. Similar cases were discussed by Tushyeh (1996) such as ‘*furnitures’.

The third person singular present tense morpheme -s is added in a wrong place in the structure as in (57):

57a. *I don't know I changes this story.

b. I don't know that I will change this story.

c. I don't know that he changes this story.

In (57a), the first person 'I' cannot take the present morpheme -s at the end of the verb 'changes'. This is because this particular morpheme is restricted to the singular NPs that occur in the subject position in the present form of the verb as in (57c). Another possibility to make the sentence correct is to use the modal 'will' in (57b).

If the same morpheme is added to a verb in the past, the sentence reads wrong as in (58):

58ia. *my brother tolds me that...

ii b. my brother told me that....

The learners add the -s marker to any verb in the structure whether in the past or the present as in (59):

59a. *mother spokes studys English

b. mother spoke to me to study English.

It is obvious that (59a) contains two -s forms which are used wrongly. The first is added to the verb 'spoke' in the past and the other to the base verb 'study' in the incorrect position. They are unable to know that a verb like 'spoke' subcategorizes a PP and an IP as in (59b).

The learners also add the same marker to a verb whose subject is in the plural form as in (60a):

60a. *My parents decides we lives in Amman because my father sometimes work there.

b. My parents decide that we live in Amman because my father sometimes works there.

The NP 'my parents', as in (60a), is in the plural form; thus, it cannot take the -s form as in 'decides'. The learners also do not use the correct form of the verb 'work' in the subordinate clause though the subject of which is singular 'my father'. It can be made correct if the -s is deleted from the former to agree with the subject in plural and is added to the subordinate verb to agree with its respective subject as in (60b). Similar example is written in (60c):

60ci. *My mother and my father wants me a teacher sciences.

ii. My mother and my father want me to be a science teacher.

Thus, the present morpheme is added haphazardly to any verb whether in the past or in the present since the learner does not know the syntactic rules of agreement of L2.

The past tense morpheme is added randomly in various situations in which case the resulting sentence is wrong as in (61):

61a. *I want married businessman.

b. I wanted to marry a businessman.

The regular past morpheme -ed is added to the adjective 'married' in (61a) instead of being added to the verb 'want' as it is the main verb of the clause. It is supposed to be added to 'want' which also constituently selects an IP as in (61b). Likewise, it is the situation in (61c):

61ci. *I want invented anything

ii. I wanted to invent anything.

It is also added wrongly to a verb after a modal as in (62a):

62a. *I will travelled in Paris.

b. I will travel to Paris.

The -ed past form can never be added to the verb 'travel' as it is preceded by the modal 'will' in (62a). It has to be in the base form as in (62b) followed by the preposition 'to' to indicate the goal of direction. Similar instance is shown in (62c):

62ci *I will married...

ii. I will marry ...

The learner is unable to realize that -ed can never be added to a verb preceded by the infinitive marker 'to' as in (63):

63a. *I have to watched TV

b. I have to watch TV

The verb 'watch' in (63a) cannot be marked by the past regular morpheme -ed. (63b) is correct as -ed is removed. Similar examples of this type are listed in (63c and d):

63ci. *we took the rope to fixed...

ii. We took the rope to fix...

di. *I went with my uncle to cleaned...

ii. I went with my uncle to clean...

Hence, the past morpheme can never be added to adjectives, to embedded verb in the infinitive form and after a modal.

The present participle morpheme -ing is added wrongly to a verb that cannot syntactically accept it as in (64):

64a. *we finding directions

b. we will find directions.

As the verb ‘find’ is a stative verb in (64a), it can not be marked by the -ing in the participle form. If the morpheme is deleted, the sentence can be made correct as in (64b).

Worse than this, the learner marks the verb ‘study’ with the same morpheme in the presence of the modal ‘will’ and the absence of the auxiliary ‘be’ to make future progressive as in (65a). The sentence can be made grammatical as in (65b).

65a. *I will studying nurse

bi. I will study nursing.

ii. I will be studying nursing

Similar instances are written in (65c):

65ci. *I will working and building the house big.

ii. I will work and build a big house.

However, the same morpheme is added correctly to a verb but the learner does not realize that the same verb selects a different constituent as in (66):

66a. *I want learning drive ...

b. I want to learn driving.

In (66a), the verb ‘want’ selects an IP of an infinitival nature; thus, it does not accept the gerundive form of the verb ‘learning’. This syntactic fact is visible in (66b) in which case the matrix verb ‘want’ takes an IP while the embedded verb ‘learn’ selects the gerundive form -ing at the end of the verb ‘driving’.

However, the learner adds this morpheme to the verb ‘watch’ without inserting the auxiliary ‘am’ that makes (67a) wrong. Such fault is corrected as in (67b):

67a. *I watching programmes

bi. I watch programmes.

- ii. I am watching programmes.

Thus, the -ing morpheme as it represents the present participle form is added only if there is a preceding proper auxiliary or in the gerundive form of the verb.

The last wrong performance made by the learner is related to the misconception of using the comparative marker -er as in (68):

68a. *my father have car her color green and she is very bigger.

- b. My father has a car; its color is green and it is very big.

In (68a), the -er comparative marker is added to the adjective 'bigger' but in a wrong way. It cannot be attached to it in the presence of the intensifier 'very'. This is visible when the sentence is made correct in (68b) in which case the -er is omitted and other essential corrections are made. Similar problem happens in (69a) in which the learner uses the correct comparative style but without completion of the process as in (69b):

69a. *I like smaller family

- b. I like a smaller family than a bigger one.

Thus, the comparative -er is added to adjectives of only one or two syllables as a rule of English comparative.

In short, the simple additions made by the learners of the selected study sample cover: (i) the regular plural morpheme -s, (ii) the third person singular present marker -s, (iii) the past tense regular morpheme -ed, (iv) the present participle morpheme -ing and (v) the comparative form marker -er. All of them are used wrongly and the researcher made the corrections as shown in the analysis.

4.2.1.3. Misformation

Misformation cases prevail in learners' competence of a language. Misuses involve the substitution of (i) either an already existing morpheme or (ii) a new wrong formation of

a morpheme that causes the ungrammaticality of a structure. The wrong uses are classified as the following: (1) regularization, (2) archi forms, and (3) alternative forms. They are discussed as follows:

(1) Regularization

It is a process in which learners use a regular morpheme in a place of an irregular one. For instance, the plural regular morpheme -s is used instead of the irregular one as in (70):

70a. *I will have three childs only.

b. I will have three children only.

In (70a), the plural morpheme -s is attached to the NP 'child' instead of using the actual form of irregular as in 'children' in (70b). This kind of misformation made by a learner not only restricted to the plural morpheme but also it occurs with the past regular morpheme -ed attached to a verb as in (71):

71a.*I took ... I slept.

b. I took ... I slept.

It is evident that the verb 'sleep' is an irregular verb and cannot be marked by the regular morpheme -ed and thus the sentence is ungrammatical as in (71a). It is also clear that in (71a) the learner is unable to distinguish between regular and irregular verbs and thus she has treated the verb 'take' as irregular. (71b) is correct as both of them written irregular. Similar sentences of this type are listed in (72):

72.ai. *She cutted flower and taked it.

ii. She cut the flower and took it.

bi. *my boat sinked so I had to ...

ii. my boat sank so I had to ...

ci. *the ship striked iceberg.

ii. The ship stroke an iceberg.

Thus, the regular morpheme -ed can never be added to irregular verbs as they constitute a pattern in the past form of the verb which do not follow the regular pattern of English. This kind of problem is regarded intralingual as the learner lacks the knowledge of categorizing the verbs of English into two parts.

The past participle morpheme -en is also added wrongly to a verb in English in the presence of the perfective auxiliary as in (73):

73a. *She has leaved me alone.

b. She has left me alone.

The sentence in (73a) is incorrect as the verb 'leaved' is treated regular though it is preceded by the perfective marker 'has'. This sentence can be made correct if the real perfective form of the verb 'left' is written as in (73b). Similar to these cases are some examples provided by Kharma & Hajjaj (1989). They are '*catched' and '*choosed'.

(2) and (3) Archi Forms / Alternative Forms

These two types of misformation are grouped in one as the misuses intermingled in both the types. For instance, the learner uses one form of a verb to represent all other forms as in 'speak'; for 'speak', 'speaks', 'spoke', 'spoken', and 'speaking'. So, in this analysis, the second and third types are grouped together since it is not clear from the data available whether the misuse belongs to either type. However, any misformation problem that is not categorized as regularization, it is regarded as archi/alternative forms. For instance, the third person singular present tense morpheme -s is dropped and instead the past morpheme is used as in (74):

74a.*I think it suited I

b. I think it suits me.

In (74a), the learner uses the past tense regular morpheme -ed at the end of the verb 'suit' that causes the ungrammaticality of the structure. If the -s morpheme is used instead; it will result in the correctness of the sentence as in (74b).

Furthermore, the past tense morpheme is missed and substituted by the -ing morpheme as in (75):

75a. *I cleaned my home watching TV.

b. I cleaned my home and watched TV.

In (75a), the learner substitutes the present participle morpheme -ing for the past tense regular morpheme -ed which makes the structure ungrammatical. If the substitution is altered, the result will be grammatical as in (75b).

In short, problems of this type seem to be random in what substitutes what as in (74); the learner substitutes -ed for -s while in (75) the learner substitutes -ing for -ed. Thus, it can be said that the occurrence of these misuses is not governed by any rule.

4.2.2. Derivational Affixes Problems

A derivational affix is an affix morpheme that changes the class of the word as in: 'happy-happiness', 'teach-teacher', etc. The derivational affix problems are found in (1) omitting and (2) in adding certain derivational affixes in a wrong manner.

4.2.2.1. Omission

The nominal morpheme -ness normally changes the class of the entity from an adjective into an NP. The learner of English does not add this kind of morpheme to the adjective as in (76):

76ai. *I not like the sad

ii. I don't like sadness.

bi. *happy is important to me

ii. Happiness is important to me.

The morpheme -ness is not added to the adjectives 'sad' and 'happy' which results in the ungrammaticality of structures of (76ai) and (76bi) respectively. If the learners add it correctly, it will result in correctness of the structures as in (76aii) and (76bii) respectively.

The nominal morpheme -age changes certain verbs into NPs. The learner does not add this morpheme to the verb as in (77):

77.a *I will make good party for my marry.

b. I will have a good party for my marriage.

The learner does not use the nominal morpheme -age after the verb 'marry' and thus, produces ungrammatical structure as in (77a). If the suffix -age is correctly added, the structure will be grammatical as in (77b).

In short, the suffix -age is added to VPs to become NPs.

The morpheme -ing which is another English nominal morpheme that usually changes a verb into an NP as in (78):

78ai. *I want learning drive ...

ii. I want to learn driving.

bi. *I will studying nurse

ii. I will study nursing.

Learners do not attach the suffix -ing to the verbs 'drive', and 'nurse' as in (78ai) and (78bi) respectively. As a result, these two structures are ungrammatical. Using -ing in the two structures will make them grammatical.

The adjectival morpheme -ful is added to a verb to make it an adjective as in (79):

79a. *I will be care about this

b. I will be careful about it.

The morpheme *-ful* is not added to the adjective ‘*care’ which causes the ungrammaticality of structure as in (79a). If the learner adds this morpheme to ‘care’, the result will be grammatical as in (79b).

Thus, the derivational morphemes *-ing* and *-ful* are added to VPs to become NPs and APs respectively. It is evident that the examples (76-79) illustrate that all derivational morphemes are used to change the class of the lexical word into another one.

4.2.2.2. Addition

It is a process in which derivational morphemes are added to lexical items that do not require them. For instance, the nominal morpheme *-er* is added to a verb or an adjective to change it into an NP as in (80):

80ai. *I like live in foreigner country.

ii. I like living in a foreign country.

bi. *I ... to teacher

ii. I am going to teach...

ci. *I have to take a life belt to survivor

ii. I have to take a life belt to survive.

The suffix morpheme *-er* is added to the adjective ‘foreign’ and to the verbs ‘teach’ and ‘survive’ in (80ai), (80bi), and (80ci) respectively. As a result the three structures are ungrammatical. If the *-er* is omitted in these three sentences, the result will be grammatical as in (80aii), (80bii), and (80cii) respectively. A similar case was discussed by Zughoul (2002) in which he reported that pairs like ‘financial-finance’ and ‘foreign-foreigner’ are confused by Arab learners of English.

The nominal morpheme -al is added to a verb to change it into an NP as in (81).

81a. *when we want to survival...

b. when we want to survive...

In (81a), the learner adds the morpheme -al to the verb 'survive' and produces an ungrammatical structure. If the same morpheme is omitted, the structure will be correct as in (81b).

The adjectival morpheme -ful changes the noun into an adjective as in (82).

82a. *in my future the beautiful is necessary.

b. In my future, beauty is necessary.

In (82a), the learner adds the morpheme -ful to the noun 'beauty'; this addition results to render the incorrectness of the structure. If it is omitted, the structure will be a grammatical one as in (82b).

The adverbial manner morpheme -ly changes an adjective into an adverb as in (83).

83ai. *future live is not easily.

ii. Future life is not easy.

bi. *I listened a loudly sound

ii. I heard a loud sound.

In (83ai), the morpheme -ly is added to the adjective 'easy' that makes the structure ungrammatical. Its omission causes the correctness of the structure as in (83aii). Likewise, the same morpheme is added wrongly to the adjective 'loud' as in (83bi). The structure is made grammatical once it is omitted as in (83bii).

It is obvious that the derivational morphemes -er, -al, -ful, and -ly are added incorrectly to lexical items that do not necessarily be marked in the given examples (80 - 83).

4.2.2.3. Misformation

Misformation means the use of a suffix morpheme instead of another one; for example, the nominal morpheme -ing is added mistakenly to a lexical item already marked by another morpheme as in (84).

In (84a), the -ing morpheme is added to the verb 'babysit' instead of adding the correct morpheme -er to change the verb into an NP as in (84b).

Thus, the use of wrong derivational morphemes in (84) is due to the unawareness of the target language morphological rules.

84a. *In the past my uncle suggestion me working baby sitting.

b. In the past my uncle suggested me to work as a babysitter.

4.2.3. Sources of Difficulties

This section involves the sources of morphological difficulties that the participants have made in this study sample. The researcher is going to trace these sources and offers a justification for each wrong performance with reference to Dulay, Burt and Krashen (1982).

4.2.3.1. Intralingual Source

This source normally takes place if the new learner is unaware of the code of the second language. In other words, the learner relies on his\her intellectual assessment to get the correct answers about the target language rules.

Intralingual source includes learners' own strategy in learning a second language. Misuses of certain features are made by most learners of a language regardless of their L1. Amazingly, wrong uses are found to be very similar to the ones made by children acquiring the same language as their L1. It is a learning strategy adopted by learners of whether L1 or

L2 to be able to communicate especially in their beginning stages. Learners unintentionally omit grammatical morphemes rather than lexical ones since the latter carry the meaning of the message and overgeneralize certain rules in order to ease learning and simplify communication. It is generally felt by learners that one has to make and understand messages; so, the question of grammaticality is of a great concern in advanced stages. In later stages, learners overcome such difficulties as a result of gaining more information about the way target language works and developing their competence. Difficulties attributed to the learner's stage of development are called 'intralingual influence'. Most of the intralingual problems found in the available data are of the omission and overgeneralization types; however, a few are found to be of the addition and misformation types.

Insofar as the inflectional morphemes are concerned, the learners made it a fact that all plural nouns are formed by the simple addition of the regular plural morpheme -s as in (14). However, English has specific rules for the regular formation of NPs; for instance, if the NP ends in an affricate, '-es' should be added as in 'watch-watches', if the NP ends in 'y' then, 'ies' must be added after the deletion of 'y'. Participants of this study use the singular form of an NP instead of the plural one; as a result, the structure will be incorrect as in (42). At their beginning stages, they overgeneralize some of the learned features; for example in (57-60) the third person singular present tense morpheme -s is attached to verbs wrongly. It is added instead of the past tense morpheme -ed or added to past tense form of a verb or added to the base forms neglecting the agreement rules with the available subject NP.

One of the communicative strategies made by the participants is the omission of the third person singular present tense morpheme -s as in (45).

Such wrong uses are made as the participants do not have enough competence of the use of the third person singular present tense morpheme. This is evident in the sense that participants are not aware of the agreement feature rule in which case if the subject NP is a third person singular and the verb is in present tense, then -s is obligatory to be added to the verb; however, if it is not, the addition of the same morpheme amounts the ungrammaticality of the sentence.

Another instance of this category is the omission of the inflectional morpheme -ing as in (48).

In short, the participants are not aware of the plural formation rules in English to the extent that the -s morpheme is added to a singular regular NP as in (14) and the same morpheme is omitted whenever essentially needed to agree with the determiner quantifier as in (42).

As far as the third person singular present tense morpheme is concerned, the intralingual influence occurs as the participants are unaware of the agreement rule established between the verb and its singular subject at the present time. In the given examples, sometimes it is added to the verb whenever the subject is first person singular as in (57); however, it is added to the past form of verbs in the occurrence of the correct subject as in (58) and (59). In the last situation, the same morpheme is added to the verb in the imperfective form in the occurrence of the plural subject as in (60). In example (48), the participants do not know that if the copula occurs and followed by a primary verb, the morpheme -ing must be added as a rule of progressive in English.

The regular past tense morpheme -ed is used instead of the irregular form of a verb as in (71), and it is used with the past tense form of a verb as in (72). Participants have substituted the present form of a verb for the past as in (45).

In short, participants competence of adding the past tense morpheme -ed is insufficient and thus in one situation it is added to the past form that causes adding a second marker as in (72) or added the same morpheme to the wrong base for the irregular verb as in (71).

As far as the derivational morphemes are concerned, two processes are found to be prominent in this study sample. The first process is the omission of the nominal suffixes -ness, -age, and -ing as in the sentences (76-78). Participants repeated the same problem in the adjectival suffix -ful as in (79). The second process is the addition of the nominal suffixes -er and -al as in (80) and (81), the adjectival -ful as in (82), and the adverbial -ly as in (83).

In short, such intralingual influence took place because the participants are unaware of the derivational rules of English. It is a fact in English that the addition or omission of certain derivational suffixes changes the class of the lexical word to which they are added or omitted from. For instance, participants do not follow such rules correctly thus difficulties are encountered. The suffixes -ness, -age, and -ing are wrongly omitted in the examples (76-78); however, some other derivational suffixes, namely, -er, -al, -ful, and -ly are wrongly added to the lexicons as in (80-83) respectively.

4.2.3.2. Interlingual Source

Interlingual influence occurred because of the pressure of L1 rules over the target language. If L1 rule is the same as that of L2 then there will be a positive transfer; whereas, if the L1 rule is different then there will be a negative transfer.

In discussing the sources of difficulties, Richards (1974) has given the following figures: (3-25) per cent of all problems are of L1 influence and (75) per cent of them are ‘non-contrastive’ ones. That is to say the majority of problems have nothing to do with learners’ L1.

As far as the participants of this study are concerned, it is essential to mention that their L1 is a mixture of Jordanian Arabic (JA) and MSA. A negative transfer happened when the grammatical subject is doubled by using two NPs as in (85) given below.

85ai. *Fatima she is very good friend.

ii. Fatima/She is a very good friend.

bi. *my father he doesn’t speaks English

ii. my father/He doesn’t speak English.

In (85a and b), there are two overt subjects in each sentence; ‘Fatima’ and ‘she’ in (85ai) and ‘my father’ and ‘he’ as in (85bi). Sentences can be made grammatical if one of the grammatical subject NPs is omitted as in (85aii) and (85bii). The researcher considers this kind of difficulty a negative transfer from JA into English. For clarification in this colloquial, a native speaker may say a sentence like:

waalidi – huwwa – ma – bitkallam – ingiliiziy

‘*My father he doesn’t speak English.’

Another double marking situation made by participants is using two object NPs after transitive verb as in (86a). In (86a), the object ‘him’ is wrongly added because of the transitivity of the verb ‘see’.

86a. *the man I seen him yesterday.

b. The man I saw yesterday.

The participants do not realize that the NP ‘the man’ is the actual object. The sentence is made grammatical if the object is deleted and the verb is changed into past as in (86b). In JA, a native speaker might say a sentence like:

izzalama – huwwa – illi – anaa –shuft-uh ‘*The man I saw him.’

Due to the similarity in meaning between ‘foreigner’ and ‘foreign’, participants are confused between these two forms as in (80a). The problem happened because in MSA, a native speaker may not discriminate between the agent ‘foreigner’ and the adjective ‘foreign’; thus, Arabic speaker might say:

uhibu – ‘an – a ‘iisha – fii – baladin – ‘ajnabiy

‘I like to live in a foreigner\foreign country.’

So, the word ‘ajnabiy’ covers both meanings.

Another example of interlingual influence happened in (60c) and (65c) in which cases the word order of Arabic is entirely followed in the English sentences, for instance, in (60c) the adjective follows the head noun. This is because of the fact that the adjective is mostly predicative.

Unlike English language, Arabic language has a grammatical gender rather than natural; most NPs whether animate or inanimate take the gender marker which is reflected in their L2. As it can be seen in (68), the participant uses the pronoun ‘her’ to stand for the noun ‘car’ which makes the structure ungrammatical. If the pronoun ‘its’ is used instead, the structure will be grammatical.

In (87a), there is another case in which participants misuse the different forms of the pronoun ‘we’. The objective case ‘us’ is used instead of the possessive one ‘our’. This is

because of the fact that in JA the two forms are represented by one form *-na* ‘our’ or ‘us’ as in: *shaf-na* ‘He saw us.’ *beit-na* ‘our house’.

87a. *... to go home us.

b. ... to go to our home.

4.2.3.3. Ambiguous Source

Ambiguous influence is that which is attributed to L1 and L2 interference simultaneously; as a result, problems can be classified as interlingual and as well as intralingual ones.

In Arabic, the NP *waajib bayti* ‘homework’ has the plural form *waajibat baytiyyah* unlike English language in which it is merely singular. As in (56), participants add the plural -s the noun ‘homework’ as a result of L1 negative transfer and they deal with it as an intralingual pattern. The structure will be grammatical if the plural -s is not attached.

In many instances as in (41a), (42d) and (61), participants omit the infinitive marker ‘to’ as a result of L1 negative transfer because this feature doesn’t exist in their L1 and this difficulty is attributed to unawareness of L2 infinitive rule which tells that the marker ‘to’ must be followed by a base form. Adding ‘to’ before the second verb makes the structure grammatical.

Participants do not attach the nominal suffix -ing to the NP ‘engineer’ which results in unacceptable structure as in (88a) given below. However, if it is attached, the structure will be grammatical as in (88b).

88a. *I want study computer engineer

b. I want to study computer engineering.

Present simple tense and present progressive aspects are represented by one form in participants’ L1; thus, they are alternated. This process is also attributed to learners’ stage

of development which results in ungrammaticality of the structures in (65) and (80a) in which the verbs ‘working’ and ‘live’ are used instead of ‘work’ and ‘living’ respectively. Supplying the correct forms of the verbs makes the structure grammatical.

It is evident that ambiguous influence takes place because of L1 negative transfer and incomplete learning of L2 features. In other words, there are features of L1 transferred to L2 which are not universal properties, for instance, some NPs are countable in L1 and are absolutely uncountable in L2. It is also visible that participants are not aware of the infinitive as well as tense and aspect rules of English. Such problems are encountered because L1 does not involve most of them.

Chapter Five

Conclusions and Recommendations

The review of the relevant literature in Chapter Two revealed that a number of scholars investigated difficulties met by learners of English as an L2 at the two linguistic fields, phonology and morphology. In the area of pronunciation, the researcher agrees with Kharma & Hajjaj (1989), Altaha (1995), Tushyeh (1996), Barros (2003) and Binturki (2008) in the sense that the consonants /p/, /tʃ/, /dʒ/, /v/, /ʒ/ and /r/ and the vowels /ɪ/, /e/ and /ə/ are problematic ones for Arab learners of English. In the area of morphology, the researcher agrees with (i) Kharma & Hajjaj (1989) in third person singular present tense marker omissions, regularization additions and regularization misformations, (ii) Tushyeh (1996) in double marking additions and incorrect addition of the regular plural morpheme, (iii) Zughoul (2002) in plural morpheme omission and double marking additions and (iv) Akande (2003) in omission of the third person singular present tense, past tense and past participle morphemes.

What made this study new is the way it tackled the difficulties in both fields for instance, in the phonological issues, the theory of distinctive features was applied to distinguish the segments that lost or gained features from those which did not. As for the morphological issues, the processes of omission, deletion and misformation clarified the types of difficulties that the participants have faced in written English as a foreign language. This study highlighted the factors that influence the learning process for this sample. However, difficulties were classified into types and sources. The results were not universal but restricted to the purposive sample mentioned.

The purpose of this study was to tackle certain phonological and morphological issues that faced the learners of English as a foreign language at Ninth Grade in Ma'an Governate and to find out solutions to the problems; therefore the following questions were posited:

Question One:

How does the theory of distinctive features account for phonological changes in performance?

As far as the phonological issues were concerned, it was found that there were thirteen different types of consonant difficulties found in the participants' performance. They were related to (i) cavity, (ii) manner and (iii) source features as evident from (17-29). For instance, in (19) the fricative alveolar /s/ is pronounced as /k/; in this environment, /s/ enjoyed the features [+coronal, +anterior, +continuant, -voiced] before articulation; however, it lost the features [+continuant, +coronal, +anterior] but retained the voice feature after the articulation by the participants. Another example was (20) in which the affricate /dʒ/ becomes stop /d/; thus, the features [+delayed release, +coronal, -anterior] became [-delayed release and +anterior] and retained the [+coronal] feature. Insofar as the performance of vowels was concerned, there were eleven types which were found in relation to the body of the tongue features as were obvious from (30-40). For instance, the [+low and +rounded] vowel /ɒ/ in (38) lost these two features and became [-low and -rounded] vowel /ʌ/ whereas the [+tense] feature was retained. Another example was (40) in which the [+back and +tense] vowel /u:/ lost its [+tense] feature in the articulation and became [-tense] /ʊ/ while all other features were maintained.

There were other minor phonological difficulties found in the participants' productions, namely, insertion and deletion. In the former, the high front vowel /ɪ/ and the high back vowel /ʊ/ were inserted to break the cluster; whereas, the insertion of consonants involved three alveolar consonants, namely, /t/, /z/ and /r/ to ease the pronunciation of the particular words in which they were inserted. However, in the deletion process, the high front short vowel /ɪ/ and the central weak short vowel /ə/ are deleted. The three alveolar consonants /t/, /d/, /z/ and the palatal approximant /j/ were deleted in certain contexts.

Question Two:

What phonological rules are posited to govern the gain or loss of features?

It was evident that the researcher has discovered phonological rules for each environment in which there was a gain or loss of features. For instance, for consonants there were (13) phonological rules assigned to the numbers (17-29); however, for vowels, there were (11) phonological rules assigned to the numbers (30-40). Other phonological rules related to consonants and vowels in insertion and deletion processes were written in the body of the text.

Question Three:

How do morphological processes account for the distribution of morphemes in the participants' performance?

The analysis showed that the morphological problems fall under two broad categories namely, (i) inflectional and (ii) derivational. The former ones were of three types (i) omission in which the plural morpheme -s, the third person singular present tense -s, the past tense -ed, the past participle -en, and the present participle morpheme -ing morphemes were omitted in different environments as in the specimens (41-49), (ii) addition in which

the inflectional morphemes were classified into double marking, regularization and simple addition as in the specimens (50-69) and (iii) misformation which involved three subtypes namely, (i) regularization, (ii) archi forms and (iii) alternative forms as in (70-75).

Morphological derivational difficulties were found to be as omission, addition and misformation. As far as the omission of the nominal morphemes -ness, -age, -ing and the adjectival morpheme -ful were concerned, they were available in (76), (77), (78) and (79) respectively. The addition of the nominal morphemes -er and -al, adjectival morpheme -ful, and adverbial morpheme -ly were visible in (80), (81), (82) and (83) respectively. The misformation problem took place in the nominal morpheme -ing as in (84) in which case the -ing was substituted for the nominal morpheme -er.

Question Four:

What are the major factors that influence the participants' performance in morphology?

The analysis of this study showed that participants encountered certain morphological difficulties because of two major reasons namely, (i) their unawareness of the rules of the target language and (ii) the influence of their L1 on learning L2. The misuse of morphemes was because of intralingual and interlingual reasons. Intralingual influence was found in (45) in which the confusion happened due to the intermediate occurrence of the adverbial adjunct 'always' that ended with the phoneme /s/ between the subject 'my father' and the verb 'tell'. Other instances were found in (14), (42), (48), (57-60), (71), (72) and (76-83).

Interlingual influence was found clear in (85) in which learners double marked the subject as influenced by their L1 structures. Other examples were found in (60), (65), (68) and (85-87).

To sum up;

This work tried to test the validity of the theory of generative phonology of Chomsky and Halle (1968) and the researcher found that it was the case. The researcher looked at various phonological environments in which difficulties happened in articulation and she justified the gain and loss of features with reference to the theory of distinctive features. It was evident that each segment lost or gained features had been accounted for in a phonological rule to test the change. It was also evident that the features were universal and yielded very precise results in dealing with any phonological issue.

Insofar as the morphological issues were concerned, Dulay, Burt and Krashen's (1982) morphological processes were valid and reliable in tackling the participants' morphological issues. The researcher discussed morphemes under two major categories (i) inflectional and (ii) morphological. Both of them were tackled with reference to: (i) omission, (ii) addition and (iii) misformation. Thus, the researcher could say with certainty that both theoretical perspectives were fit and deserved to be followed.

Recommendations and Suggestions

The researcher recommended that these types of studies conducted in this work were worth to be investigated and followed to tackle similar issues in phonology and morphology with any kind of participants who learn English as a foreign language. They are valid to be applied to any language as they lead to precise results.

It is also recommended to be read and followed by teachers and students at the same time to avoid difficulties that might come in the way in the process of learning English as a foreign language as it is a common phenomenon in Jordan.

The researcher found it reasonable to teach the theory of distinctive features and morphological processes involved in this work to ease the process of learning at schools and it will be the lead in its kind. It is an escape from the routine of teaching which was focused merely on the surface change without testing deeply the nature of change.

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Appendices

Appendix I: Phonological Problems

Learners' Performance	Target Performance (RP English)	Spelling
/fɑ:rmɪŋ/	/fɑ:mɪŋ/	'farming'
/bɪŋg/	/bɪ:ɪŋ/	'being'
/sɪŋgər/	/sɪŋə/	'singer'
/kɪlɪŋg/	/kɪlɪŋ/	'killing'
/təʊzəndz/	/θəʊzəndz/	'thousands'
/brʊdju:kɪd/	/prʊdju:st/	'produced'
/sɔ:ldər/	/səʊldʒə/	'soldier'
/lɑ:rg/	/lɑ:dʒ/	'large'
/dɪvɪlʊbɪd/	/dɪveləpt/	'developed'
/bɪ:bʊl/	/pɪ:pl/	'people'
/brʊdju:kɪd/; /brʊdju:sɪd/	/prʊdju:st/	'produced'
/stʊbɪd/	/stɒpt/	'stopped'
/gru:bz/	/gru:ps/	'groups'
/bleɪs/	/pleɪsɪz/	'places'
/bəwər/	/paʊə/	'power'
/bl eɪ/	/pleɪ/	'play'
/dɪvɪlʊbɪd/	/dɪveləpt/	'developed'
/brʊdju:kɪd/, /brʊdju:sɪd/	/prʊdju:st/	'produced'
/stʊbɪd/	/stɒpt/	'stopped'
/gru:bz/	/gru:ps/	'groups'

/ʊf/	/ɒv/	‘of’
/laɪf/; /lɪf/	/lɪv/	‘live’ (v.)
/taʊzəndz/	/θaʊzəndz/	‘thousands’
/bæθ/	/beɪð/	‘bathe’
/ðɪ:s/	/ðɪ:z/	‘these’
/əreɪs/	/eəriəz/	‘areas’
/æs/	/əz/	‘as’
/dɪsɪʃɪn/	/dɪsɪʒn/	‘decision’
/bleʃər/	/pleʒə/	‘pleasure’
/sʌʃ/	/sʌtʃ/	‘such’
/rɪ:ʃ/	/rɪ:tʃ/	‘reach’
/lʌv/	/lɪv/	‘live’
/dɪvɪlʊbɪd/	/dɪveləpt/	‘developed’
/tɪn/	/ten/	‘ten’
/rɪd/	/red/	‘red’
/ɪnd/	/end/	‘end’
/brʊdju:sɪd/	/prɒdju:st/	‘produced’
/stʊbɪd/	/stɒpt/	‘stopped’
/dʊg/	/dɒg/	‘dog’
/pʊt/	/pɒt/	‘pot’
/dɪvɪlʊbɪd/	/dɪveləpt/	‘developed’
/ʊf/	/ɒv/	‘of’
/tʊ/	/tu/	‘to’
/tʊgəðər/	/təgeðə/	‘together’
/fɔ:rmər/	/fɑ:məz/	‘farmers’
/tʊgəðər/	/təgeðə/	‘together’

/jəs/	/jes/	‘yes’
/bu:bɪl/	/pi:pl/	‘people’
/nɪdɪd/	/ni:dɪd/	‘needed’
/bɪŋg/	/bi:ɪŋ/	‘being’
/ðɪs/	/ði:z/	‘these’
/gʌn/	/gʌn/	‘gone’
/fərmərz/	/fa:məz/	‘farmers’
/grʊbɪs/,/grʊbs/,/grʊbz/	/gru:ps/	‘groups’
/mju:zɪk/	/mju:zɪk/	‘music’
/stʊpɪd/	/stɒpt/	‘stopped’
/dɪvɪlʊpɪd/	/dɪveləpt/	‘developed’
/brʊdju:kɪd/; brʊdju:sɪd/	/prɒdju:st/	‘produced’
/grʊbɪs/	/gru:ps/	‘groups’
/tɪnθɪs/	/tenθs/	‘tenths’
/tɪksɪts/	/teksts/	‘texts’
/twɪlfθɪs/	/twelfθs/	‘twelfths’
/sɪblæʃ/	/splæʃ/	‘splash’
/sɪblɪ:n/	/splɪ:n/	‘spleen’
/ bi:bʊl/	/pi:pl/	‘people’
/kɑ:stl/	/kɑ:sl/	‘castle’
/bəwərz/	/paʊə/	‘power’
/mɔ:r/	/mɔ:/	‘more’
/tʊgəðər/	/təgeðə/	‘together’
/fɑ:rmərz/	/fa:məz/	‘farmers’
/sentər/	/sentə/	‘centre’
/lɑ:rdʒər/	/lɑ:dʒ/	‘larger’

/bəwə/	/paʊə/	'power'
/bleɪs/	/pleɪsɪz/	'places'
/nɪ:d/	/nɪ:dɪd/	'needed'
/stɑ:rt/	/stɑ:tɪd/	'started'
/la:rdʒ/	/la:dʒə/	'larger'
/dɪvɪləb/	/dɪveləpt/	'developed'
/nɪ:d/	/nɪ:dɪd/	'needed'
/stɑ:rt/	/stɑ:tɪd/	'started'
/æriə/	/eəriəz/	'areas'
/bleɪs/	/pleɪsɪz/	'places'
/fɑ:rmə/	/fɑ:məz/	'farmers'
/sɪtɪ/	/sɪtɪz/	'cities'
/sentə/	/sentə/	'centre'
/θaʊzənd/	/θaʊzəndz/	'thousands'
/brʊdɪkɪd/	/prɒdju:st/	'produced'

Appendix II: Morphological Problems

*John new captain team.

*is the of the.

*the Jordan (for Jordan).

*Jane doesn't likes John.

*Jane didn't saw John.

*Mens are coming.

*My teeths pain me.

*John wented home.

*I bought two sheeps.

*One books is on the table

*They doesn't come on Fridays.

*My sister goed to her school yesterday.

*There are three mans.

*She leaved me alone.

*Salma breaked the glass.

*My mother speaked to him.

*I seed the film.

*Salma shutted the door.

*John cutted the bread.

*Me saw the accident.

*This is me book.

*This pen is me.

*Me saw the accident me.

*This books are on the table.

*She told I

*Me saw the accident.

*Saw Jane John.

*Killed John the lion.

*I helped my sister in homeworks.

*I like sing song.

*I want have two child.

*whatever these problem ...

*I have got three brother and two sister

*I will have three boy and two girl

*I want give my child all thing...

*my three sister tooked me ...

*my father always tell me to be a doctor

*because my father sometimes work there.

*my weekend was very bad because I stay in my home

*then we arrive to the land last night

*that was good we return to Jordan

*when I was in second grade I dream doctor

*I have speak with my teacher.

*Me and my friend have play good game.

*They have send a letter to my friend.

*I am live beautiful ...

*what is happen!

*when the ship was sink in the sea...

*I am study ...

*They want to repair their teeths

*My father he doesn't speaks English

*My three sister tooked me.

*She didn't cutted flower.

*I did went to my grandfather's house.

*She cutted flower and taked it.

*She is my faithfully friends.

*I will design a beautiful things.

*I helped my sister in homeworks

*I don't know I changes this story.

*my brother tolds me that...

*mother spokes studys English

*My parents decides we lives in Amman because my father sometimes work there.

*My mother and my father wants me a teacher sciences.

*I want married businessman.

*I want invented anything

*I will travelled in Paris.

*I will married...

*I have to watched TV and married ...

*we took the rope to fixed...

*I went with my uncle to cleaned...

*we finding directions

*I will studying nurse

*I will working and building the house big.

*I want learning drive ...

*I watching programmes

*my father have car her color green and she is very biger.

*I like smaller family

*I will have three childs only.

*I took ... I sleeped.

*She cutted flower and taked it.

*my boat sinked so I had to ...

*the ship striked iceberg.

*She has leaved me alone.

*I think it suited I

*I cleaned my home watching TV.

*I not like the sad

*happy is important to me

*I will make good party for my marry.

*I want learning drive ...

*I will studying nurse

*I will be care about this

*I like live in foreigner country.

*I ... to teacher

*I have to take a life belt to survivor

*when we want to survival...

*in my future the beautiful is necessary.

*future live is not easily.

*I listened a loudly sound

*In the past my uncle suggestion me working baby sitting.

*Fatima she is very good friend.

*my father he doesn't speaks English

*the man I seen him yesterday.

*... to go home us.

*I want study computer engineer

Appendix III: Names of Participants (Study Sample)

These are the names of the selected sample of participants who belong to Ninth Grade at Taybeh Secondary School for Girls in Ma'an Governorate.

1. Alaa' Majed
2. Alaa' Suleiman
3. Amani Khlaifat
4. Aseel Saidat
5. Aseel Yousef
6. Athari Sabbah
7. Duha Salem
8. Hadeel Mohammad
9. Haneen Atallah
10. Haya Khlaifat
11. Heba Saleh
12. Israa' Ali
13. Jumana Abdullah
14. Maram Salah
15. Maymoona Mohammad
16. Reema Rawadyeh
17. Samah Ibrahim
18. Sanaa' Khlaifat
19. Turfa Khaleel
20. Yasmeeen Khalil

Appendix IV: Panel of Experts' Letter

Dear Assistant Professors,

My name is **Faten Husameddin Amer**. I am a graduate student at Middle East University for Graduate Studies. I am writing a thesis on *Phonological and Morphological Issues in Learners' Performance of English as a Foreign Language: A Case Study of Ninth Grade Students at Taybeh Secondary School for Girls in Ma'an Governorate* to get my M. A. Degree in English Language and Literature. My supervisor, Dr. Atef Jalabneh, has recommended your names to serve as members of the panel of jurors for some morphological matters.

I am investigating certain morphological issues and I have enclosed the written text made by the participants. Would you please review the enclosed written text and check the underlined morphemes hoping to provide me with your comments, notes and recommendations on adequacy of the content and its suitability to judge what intended to be analyzed.

I would like to thank you for your assistance.

Yours faithfully

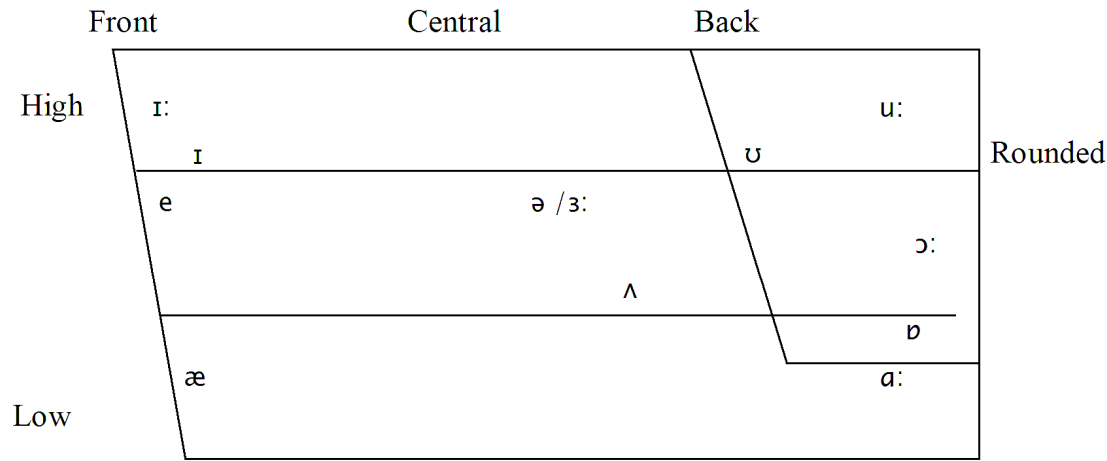
Faten Husameddin Amer

Appendix V: English Consonants Chart (RP English)

Manners of Articulation	Places of Articulation							
	Bilabial	Labiodental	Dental	Alveolar	Palato- alveolar	Palatal	Velar	Glottal
Plosive	p b			t d			k g	
Fricative		f v	θ ð	s z	ʃ ʒ			h
Affricate					tʃ dʒ			
Nasal	m			n			ŋ	
Lateral				l				
Approximant	w			r		ɹ		

(c.f., Roach, 1997, p. 62)

Appendix VI: English Vowels Chart (RP English)



(c.f., O’Grady and et al, 1996, p. 41)

Appendix VII: Names of Participants (Pilot Study)

The following list consists of the names of the students who participated in the pilot study who belong to Taybeh Secondary School for Girls in Ma'an Governorate.

1.	Ahlam Saidat	Ninth Grade
2.	Alaa' Majed	Ninth Grade
3.	Amani Khlaifat	Ninth Grade
4.	Amneh Mousa	Ninth Grade
5.	Aseel Saidat	Ninth Grade
6.	Baraa' Mohammad	Ninth Grade
7.	Bushra Ismail	Ninth Grade
8.	Duha Salim	Ninth Grade
9.	Eman Saidat	Ninth Grade
10.	Farah Khaleel	Eighth Grade
11.	Fayzah Khlaifat	Eighth Grade
12.	Ghadeer Saidat	Ninth Grade
13.	Hadeel Khalayfeh	Eighth Grade
14.	Hala Ahmed	Ninth Grade
15.	Haneen Mahmoud	Eighth Grade
16.	Haya Hussein	Ninth Grade
17.	Haya Khleif	Ninth Grade
18.	Heba Khalid	Ninth Grade
19.	Heba Khlaifat	Ninth Grade
20.	Ikhlas Abdullah	Ninth Grade
21.	Ikhlas Deifallah	Ninth Grade
22.	Ikhlas Jameel	Eighth Grade
23.	Ikhlas Rawadiah	Ninth Grade
24.	Israa' Saidat	Ninth Grade
25.	Kawthar Khlaifat	Ninth Grade

26.	Kawthat Awamreh	Ninth Grade
27.	Khalida Khlaifat	Ninth Grade
28.	Manal Abdullah	Ninth Grade
29.	Manal Awadat	Ninth Grade
30.	Manar Khalayfeh	Ninth Grade
31.	Maymoona Khalayfeh	Ninth Grade
32.	Maymoona Mohammad	Eighth Grade
33.	Nihad Saidat	Ninth Grade
34.	Rabee'a Abdul Rahman	Eighth Grade
35.	Rana Mohammad	Ninth Grade
36.	Rania Ahmed	Eighth Grade
37.	Renad Khalayfeh	Eighth Grade
38.	Rimah Hussein	Eighth Grade
39.	Rufaydah Younis	Eighth Grade
40.	Rusaila Saidat	Ninth Grade
41.	Ruwaydah Mohammad	Eighth Grade
42.	Safaa' Abdul Kareem	Ninth Grade
43.	Safaa' Attallah	Eighth Grade
44.	Sajeda Ahmed	Ninth Grade
45.	Sajeda Khalid	Ninth Grade
46.	Sajeda Saidat	Ninth Grade
47.	Samah Ibrahim	Ninth Grade
48.	Samah Khlaifat	Ninth Grade
49.	Sanaa' Khlaifat	Ninth Grade
50.	Shifaa' Khlaifat	Ninth Grade
51.	Warda Khalayfeh	Ninth Grade
52.	Yasmin Mahmoud	Eighth Grade