Difficulties Faced by Law College Students in the Area of Spelling-Pronunciation Correspondence

Nada Mohammed Hindi

Abstract

Languages, which have regular alphabetic systems, are largely easy to learn. But English spelling, although largely phonemic, has more complicated rules than other spelling systems used by languages written in alphabetic scripts. That is because it has many inconsistencies between spelling and pronunciation, which makes learning it very difficult. Such irregularity of English is considered a problem to the students of the college of law who study English for three years in the field of their specialization.

This study aims at investigating the difficulties faced by Law College students in dealing with spelling-pronunciation correspondence in English. To achieve the aim of the study, two hypotheses have been posed:

1- Law College students are able to spell words without making a link with pronunciation.

2- The students are able to pronounce words without making a link with spelling.

To verify the hypotheses of the study, a sample of 81 students has been chosen from the third year, College of Law, Diyala University. Thirty one of them are assigned to represent the pilot study, whereas the other 50 represent the final application including the spelling and the pronunciation tests. By using T-test formula for one independent sample, the hypotheses are verified and the following results have been obtained:

1- Law College students face difficulty in spelling i.e. they most of the time spell words as they are pronounced. Only 10 of the students out of 30 could pass the score of success.

2- Pronunciation is to some extent difficult because they pronounce words as they are spelled. In addition, they face difficulties in dealing with silent letters. The students who could reach the score of success are 7 out of 20.

On the basis of the results, the following conclusions have been posed:

1.Law College students are not aware enough that there is no correspondence between spelling and pronunciation.   .

2.The students who study English are not able to spell new words correctly without making a link with pronunciation.

3.They are not able to pronounce new words without linking them with their spelling.

4.They are not aware enough that some English letters are silent i.e. written but not pronounced.   .

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Chapter One
The Introduction

1.1 The Problem of the Study

Language learning like any other human learning could be accompanied by many difficulties and learners would make countless errors in the process of learning. These errors must be analyzed carefully for they held in them the keys to alleviate the difficulties made by language learners.   .

In some languages there is a high level of correspondence between spelling and pronunciation so somebody learning such languages who is familiar with the sounds or (phonemes)represented by the individual letters can, in theory, work out how a word they have only heard should be pronounced(Kelly, 2000:122).

However, it is not always easy for English learners of whatever first language to pronounce a word they have never encountered before or to give the written   form of a word they have only heard. The English language contains many inconsistencies between spelling and pronunciation, necessitating rote learning for new speakers (English Spelling-Definition and Overview, 2009:1).

English learners will know that there are 26 letters used in writing, but they will have no idea how many phonemes there are in their speech. They will not automatically recognize a difference between the initial sounds in *this* and *thin,* as the same letters are used to write them. Moreover, the schwa sound will not exist for most people since there is no letter to represent it (Stark, 2003:2).

In addition, one of the noted difficulties of English spelling is the high number of silent letters. Silent letters create problems for both native and non-native speakers of a language as they make it more difficult to guess the spellings of spoken words or the pronunciation of written words (Wikipedia, the Free Encyclopedia, 2009:1).   .

1.2 The Aim

The study aims at investigating the difficulties faced by Law College students in dealing with spelling-pronunciation correspondence in English.   .

1.3 Hypotheses

It is hypothesized that:

1- Law College students are able to spell words without making a link with pronunciation.

2- The students are able to pronounce words without making a link with spelling.

1.4 Limits

This study is limited to:

1- Third stage, Law College students, Diyala University.

2- English spelling-pronunciation relationship.

1.5 Procedures

The procedures followed in this study include the following:

1-presenting the theoretical background of the study,

2-conducting, for data collection, an elicitation techniques to investigate law college students' spelling and pronunciation in English,

3-analyzing, quantifying, statistically tabulating the results, and

4-drawing conclusions and presenting some recommendations to alleviate the difficulties.

1.6 Value

The study is hoped to be of theoretical and practical value to: :

1- English teachers to stress the fact that there is no correspondence between spelling and pronunciation in English.   .

2- The practical findings are expected to be of great value to English teachers to identify areas of difficulties, which English learners may face in learning.

3-The findings are also expected to be useful to textbook writers especially in the area of ESP.

Chapter Two
The Theoretical Background

2.1 An Introductory Note

This chapter is concerned with the presentation of the relationship between spelling and pronunciation and the many inconsistencies, which may cause problems to English learners of whatever first language

2.2 English Spelling-Pronunciation Relationship

One crucial thing, which nobody would argue about, is that letters are written, sounds are spoken. It would be much more useful if the reader could be certain that one letter represents one and only one sound, i.e. when he sees a letter he will know at once how to pronounce it (O'Connor, 1980: 7-8).

That would never be the case in English. English contains 24 separate consonant phonemes and, depending on a dialect, anywhere from fourteen to twenty vowels and diphthongs. However, there are only 26 letters in modern English Alphabet. Therefore, there cannot be a one-to-one correspondence between letters and sounds (English Spelling- Definition and Overview, 2009: 1).

Because of these inconsistencies, one phoneme may have several different letters or letter combination used to spell it (Edwards, 1997: 55). For example, if an English learner is asked to write certain words, he would give more than one orthographic representations. The phonological forms /sait/ and /rait/ happen to have more than one spelling, each one of which represents separate morphemes:

<div style="text-align:center">

a. /saɪt/   sight   site   cite
b. /raɪt/   right   write   wright   rite

(Katamba, 1993: 36)
</div>

The complex and often- arbitrary quality of the relationship between English spelling and pronunciation has been blamed for many reasons. Some of them are the prolonged development period of literacy skills by English children and the poor standard of their spelling at the age of ten, the higher incidence of dyslexia in English-speaking nations, and the errors of second language learners of English (Huckvale, 2004: 1).   .

Moreover, there are many contributing factors, which affected the evolving of

these inconsistencies. First, gradual changes in pronunciation, such as the Great Vowel Shift, accounts for many irregularities. Second, relatively recent loan words from other languages carry their original spellings. Third, some prescriptions have had partial success in their attempts to normalize the English, forcing a change in spelling (English Spelling-Definition and Overview, 2009: 1).

2.2.1 Single Letter Representing Variant Sound

As it is mentioned earlier, the written letters are useful to remind of corresponding sounds, but they cannot make readers pronounce sounds which they do not already know (O'Connor, 1980: 7). That is obvious in the following examples: :

Banana   / bə'na:nə/
Many   /'meni/
Bathe   /beɪð/
Man   /mæn/

The letter a stands for five different vowel sounds which are /ə/, /a:/, /e/, /eɪ/and /æ / respectively (Ibid: 8). Consonant letters also share the same feature having different sounds. For example *s* has the primary sound value of **/s/** as in **gets,** but will have the secondary pronunciation of **/z/** as in **has** (Kelly, 2000: 123).

Many English letters behave in certain predictable way when they are in certain environment. Very often, the phonological context determines the choice of the variants, so the English plural **[s]** appears as **/s/** in **[lips, books, cats]** and as **/z/** in **[bags, bells, keys]** affected by the preceding sound (Haspelmath, 2002:29).

Similarly, as in the following examples, the letter o behaves differently appearing in three different sounds under the influence of rules called "alternations":   :

Melody/'melədi/   harmony/'ha:məni/
Melodic/me'lodIk/   harmonic/ha:'monIk/
Melodious/me'ləudiəs/   harmonious/ha:'məuniəs/

Though the letter **o** occurs in the same base **"melod"**, it has different sounds attributing to processes of affixation (Ladefoged, 1982:35).   .

Kelly (2000:148-150) illustrates how letters can be pronounced in different ways in the following table: :

the letter	Pronounced as
c	/k/ cat /s/ when followed by e, i or y:cent, cenima, cycle /ʃ/ before certain suffixes: delicious, prejudicial
g	/g/ go /dʒ/ when followed by e, I, or y:gentle, gin, gym /dʒ/ before a suffix: contagous, prestigious /ʒ/ in certain originally borrowed words: prestige, mirage
S	/s/ sun, sleep, loss, eats /z/ when between two vowels: present, losing /z/ at the end of a word, after a voiced consonant: hands, minds or after a vowel :loses, houses /ʃ/between a consonant and a following i:mansion, pension /ʒ/ between two vowels: vision, measure, lesion
T	/t/ cat, too /ʃ/ when followed by a letter I in many suffixed words: information, substantial, ambitious /tʃ/ in words ending in ure: picture, furniture, denture and when followed by the the sound /u:/ :Tuesday, tumour,

	tumultuous
X	/ks/ fix, mix /gz/ between vowels: exam //z/ at the beginning of words like xylophone, xenophobe
y	/j/ at the beginning of words: yet, yellow /I/ between consonants: gym, bicycle /i:/ at end of words: city, busy /aI/ in short words(why, my, by) and in stressed final syllables(apply, deny) /aI/ in words ending in –fy: satisfy, beautify, and in psychology and related words.

2.2.2 Letter Combinations Representing Sounds

As it is mentioned earlier, some English letters have more than one pronunciation. Moreover, pairs of letters are associated with a particular sound, i.e. two letters combined which represent a single phoneme. Such letter pairs are known as *digraph* (Wikipedia, the free encyclopedia,2009:1).

The term, as defined by Crystal (1985: 44) refers to a graphic unit in which two symbols have combined to function as a single element in a system, for example, [æ] stands for the vowel in cat or the linked ae and oe in the classical spelling of some English words (encyclopedia, onomatopoeia)   .

In certain cases, a digraph can have two or three different sound associations depending on the words in question: :

/tʃ/ **(chip)**

ch   can be pronounced as   **/k/ (character)**

/ʃ/ **(machine)**

With vowel digraphs, it is possible to identify primary and secondary values for certain pairings. For example, in words containing ea the pair will be pronounced as a primary value, **/i: /** as in (**eat, heat** and **cheap**), while secondary values include the less frequent /**eI/** as in (**great** and **break**) and **/e/** as in (**dead,weather**and**breakfast**)(Kelly,2000:123-124).

The following table shows digraphs, some of which have more than one value.

Consonant digraphs	Pronounced as	Vowel digraphs	Pronounced as
ck	/k/ pick, kick	ai	/eI/ train
ch	/tʃ/ chip /k/ character /ʃ/ machine	ea	/i:/ dream /eI/ break /e/ dead /ɜ:/ learn /eə/ bear /Iə/ near /a:/ heart
gh	/g/ ghost /f/ tough Silent ought	ee	/i:/ tree /I/ weak form as in been
ng	/ŋ/ sing, thing	ei	/i:/ seize /aI/ height /eI/ eight
ph	/f/ phone, photograph	ie	/aI/ die /e/ friend /i:/ piece /Iə/ pierce
qu	/kw/ queen, quiz /k/ in words ending in –que: antique, oblique or at the beginning of some borrowed words: quiche	oa	/əu/ coat /o:/ abroad
sh	/ʃ/ ship, sheep	ou	/əu/ soul /au/ house /ʌ/ double

			/u:/ soup /o/ cough /o:/ bought
tch	/tʃ/ watch, catch	ue	/u:/ blue /ju:/ sue
th	/θ/ theatre, bath /ð/ this, bathe	ui	/u:/ fruit /ju:/ suit /I/ building /aI/ guide
wh	/w/ what, where /h/ who, whole		

(Ibid: 149-150)

2.2.3 Silent Letters

In an alphabetic writing system, a **silent letter** is defined as a letter in a particular word, does not correspond to any sound in the word's pronunciation (Wikipedia, the free encyclopedia, 2009: 1).   .

Many English letters happen to be silent in certain words when they are immediately preceded or followed by another consonant in the same syllable, for example the silence of **n** in **autumn** and its pronunciation in **autumnal**(Kelly, 2000: 123). Moreover, the word **soft** is usually pronounced /soft/ in isolation and before words beginning with a vowel, but as /sof/ before words beginning with a consonant and before the suffix **–en** as in soften /sofən/ (Smith & Wilson, 1979: 133).   .

Carny (1994, as cited in Wikipedia, the free encyclopedia, 2009:1) distinguished different kinds of "silent letters" and as follows:

1- Auxiliary letters: the letters which with another Letter, constitutes digraphs, and it includes:

a. exocentric digraphs, where the sound of the digraph is different from that of either of its constituent letters as in: :

ng for /ŋ/ as in sing

th   for /θ/ as in thin

ph   for /f/ physical

b. endocentric digraphs, where the sound of the digraph is the same as that of one of its constituent letters as in most double consonants, as in:

bb   in clubbed

ss   in misspell

2- Dummy letters, the letters which bear no relation to neighboring letters and have no correspondence in pronunciation and it includes:

a. inert letters, where the letter is sounded in a cognate word as in:

n   in damn→ damnation

g   in phlegm→phlegmatic

b. empty letters, which never have a sound as in:

w   in answer

h   in honest

s   in Island

The following table illustrated by Bear (2009:1-3) contains most of the silent letters that give English as a second language students difficulties:

The silent letters	Not pronounced when	Examples
B	Following m at the end of a word	Climb, dumb
c	In the ending "scle	muscle
d	In the following common words	Handkerchief Sandwich Wednesday
e	At the end of words and usually makes the vowel long	Hope, drive, gave
g	Followed by an n	Foreign, sign
gh	Before t and at the end of many words	Thought, might
h	Following w , some speakers whisper the h before the w, and at the beginning of many words	What, when Hour, honest
k	Followed by n at the beginning of a word	Knife, know
l	Before l, d, f, m, k	Calm, half, salmon, talk, balk, would
n	Following m at the end of a word	Autumn, hymn
p	At the beginning of many words using the suffix "psych" and "pneu"	Psychotic, pneumonia
s	Before l in the following words	Island, isle

t	In these common words	Castle, fasten, listen, often
u	After g and before a vowel	Guess, guidance
w	At the beginning of a word followed by an r	Wrap, write
	With these three pronouns	Who, whose whom

2.3 Related Studies
2.3.1 Huckvale (2004)

The study of Mark Huckvale, entitled "Regular English Pronunciation" is based on the observation that if spelling cannot be changed to match the pronunciation, maybe the pronunciation can be changed to match the spelling. The aim of the study is to provide a pronunciation of written English that is highly intelligible, easy to learn, and logically connected to the current spelling of English.

The outcomes of the study are   :
1- it confirmed that REP was highly intelligible, having about 90% of the intelligibility of standard pronunciation on a difficult intelligibility in noise.
2- it discovered that listeners adapted to REP showing significantly improved intelligibility even within the first hour of exposure.

2.3.2 Stark (2003)

The theme of this study, entitled "Standardized Spelling-Pronunciation" builds on the analysis of the implications of different accent for a reformed world –standard for English. This standardized spelling – pronunciation is not determined by the way one might have heard the word pronounced by one particular individual or group of people, but by the spelling itself.

Stark's premise is that it is a mistake to believe that the reference for an alphabetic orthography is the actual spoken word; instead, it is the pronunciation derived and learned from the standard spelling. This concept holds the key to how an alphabetic orthography works, and offers an escape route from problems which have beset English spelling reforms.   .

2.3.3 Discussion of the related Studies

The above-mentioned studies have a relation in one way or another to the present one. As for Huckvale's study, he is trying to solve the problem of the spelling-pronunciation inconsistencies by the idea of changing the pronunciation

to be much more connected to the spelling. While Huckvale stresses the idea of changing the pronunciation, Stark works on standardized spelling-pronunciation and on the idea that it is too difficult to adopt a revised orthography.

The present study is trying to reveal that problem by using a test and apply it on the students who learn English to raise their awareness to the fact that there is no correspondence between spelling and pronunciation.   .

Chapter Three
Procedures

3.1 An Introductory Note
The aim of this chapter is to provide a description of the procedural measures adopted to fulfill the aim of the study. It also covers the population and the sample, the test and its validity and all the statistical methods used to validitate the test and calculate the results.   .

3.2 Population and Sample
Generally, the population is defined as any set of items, individuals, etc.which share some common and observable characteristics from which a sample can be selected (Richards et al, 1992: 282). The population of the study is the third year, College of Law, University of Diyala during the academic year (2009-2010). The number of the population is (157) male and female distributed in three sections.

The performance of the third year students at the college of law provides the level of difficulty, which they face when learning English in the field of their specialization.   .

In order to fulfill the aim of the study, a sample must be selected. The sample is defined as suitable items selected at random from a population for study and used to test hypotheses about the population (Dictionary of English Language, 2003: 1). The total number of the sample, which is randomly selected, is (81) as shown in the following table.   :

Table (1)
The Study Sample and Population

stage	section	No. of students	Type of study
Third year	A	55	31 as pilot study
	B	50	30 for the spelling test(final application)
	C	52	20 for the pronunciation test(final application)
total	3	157	81

3.3 The Test Main Instruments

In order to achieve the aim of the study, two main instruments are used. is constructed. The kind of questions which are used in First, a questionnaire the questionnaire are open format, in other words, those that ask for unprompted opinions and there are no predetermined set of responses, therefore the participant is free to answer however he chooses (Paper,gifwritten, 2009:1). The questionnaire is distributed to English lecturers[1] who teach English to Law students to give their insights whether their students face difficulty in learning English. All the lecturers have agreed that their students face difficulty in spelling, pronunciation and dealing with silent letters. The questionnaire is as follows:

The students of the College of Law, from first stage to the third , study English in the field of their specialization. From your experience as an English lecturer, how is the students' performance in the following areas?

1- the spelling of new English words.	
2- the pronunciation of new English words.	

3- dealing with silent letters in English.	

Second, an achievement test of two parts is constructed. Part one, which is the spelling test, aims at measuring the extent to which students make a link with pronunciation when writing new words. The kind of test used in this part is dictation and the students are asked to write certain words read aloud by the researcher. In part two, or the pronunciation test, the students' pronunciation is to be tested. In this test, which is applied to a different sample the students are asked to read the same words aloud while the researcher listens and scores. This way is one of the most common ways of testing pronunciation in which students read aloud words and sentences (Madsen, 1983: 66). .

The words used in the test are selected from a textbook entitled "Public International Law"by Dr. Salah Eddin Al-Hamdi, 1988 which is taught to third year Law College students and the test is as follows:

The Spelling Test

Listen to me carefully and write the following points: :

1- The International law is a body of rules that govern the relation between sovereign states or between states and international organizations. .

2- Public international law is a body of legal rules that are binding upon a great number of states and organizations. .

3- Private international law is a body of rules that govern the relation between individuals in the matters, which are connected with the jurisdiction of different states. .

4- The sovereign state must have a specified territory under its own independent government. .

5- The main sources of the international law are the international conventions, the international customs and the general principles of law. .

6- The view of equal significance maintains that both the international and the municipal law are of equal level and value. .

7-The international convention is the main source because it regulates the international economic and political relations. .

The Pronunciation Test

Read the following points:

1- The International law is a body of rules that govern the relation between sovereign states or between states and international organizations.   .
2- Public international law is a body of legal rules that are binding upon a great number of states and organizations.   .
3- Private international law is a body of rules that govern the relation between individuals in the matters, which are connected with the jurisdiction of different states. .
4- The sovereign state must have a specified territory under its own independent government. .
5- The main sources of the international law are the international conventions, the international customs and the general principles of law. .6- The view of equal significance maintains that both the international and the municipal law are of equal level and value.   .
7-The international convention is the main source because it regulates the international economic and political relations.   .

3.3.1 Test Validity

Validity, the most complex and important criteria of a good test, is defined by Brown (1987: 221) as "the degree to which the test actually measures what it is intended to measure"(cf. Bachman, 1990:279).   .
Two types of validity are considered important i.e., face and content validity.

3.3.1.1 Face validity

Face validity refers to "the way the test looks to the examinees test administrators, educators and the like"(Harris, 1969: 7). Moreover, Ingram (1977: 18)defines it as "the surface credibility or public acceptability".   .

To achieve face validity, the test is exposed to a jury of experts[2] in the field of linguistics and EFL. They were asked to point out their remarks, give suggestions and even modify if necessary. The jury have agreed that the items of the test are appropriate to the level of the students.   .

3.3.1.2 Content Validity

"If a test actually samples the class of situation, that is, the universe of subject matter about which conclusions are to be drawn, it is said to have content validity" (Brown, 1987: 222).   .

Table (2) below shows how the content validity of the test has been achieved.

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Table (2)
Behavioral and Content Specifications

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Content area	No. of test items	Behaviour of test	Notes
Part One	18	Production	To be able to spell words without linking them with pronunciation
Part Two	18	Production	To be able to pronounce words without linking them with spelling

3.3.2 Pilot Study

Before applying the test, it is highly preferred to run a pilot test in order to revise it according to its results. The pilot study refers to "the attempts to determine weather the test items passed the desired qualities of measurements and discriminability"(Tuckman, 1972: 197).   .

In order to conduct the pilot study, 35 students were randomly chosen from the third year at the college of law. The researcher explains the instructions of the test so that no misunderstanding would occur.   .

After conducting the pilot study, the following findings were revealed:
1- There is no ambiguity in the test.
2- The time needed to answer the questions ranges between (45-60) for each tests, the spelling test and the pronunciation test.

3.3.3 Item Analysis

Item analysis includes principally the measurements of item difficulty level and item discrimination on the basis of the results of the pilot test.   .

3.3.3.1 Item Difficulty Level

The measurement of item difficulty level (henceforth DL) is considered crucial because it "permits the identification of items which are too difficult or too easy, or which fail to discriminate strongly enough between candidates" (Baker, 1989: 54).   .

Escudero et al (2000: 6) refer to item difficulty as the proportion of the persons who answer a test item correctly. The higher the proportion is the lower the difficulty, which means that it has to do with an inverse relationship.

DL is considered acceptable if it is ranged between (0.20%-0.80%) (Ebel, 1972:2000).   .

3.3.3.2 Item Discrimination Power

Item discrimination power (henceforth DP) refers to "the degree to which an item differentiate correctly among test takers in the behaviour that the test is designed to measure" (Anastasi & Urbina, 1988:179).   .

Ebel (1972: 202) considers DP of items acceptable if it is 0.30 and above.

Table (3)
Item Difficulty Level & Discriminating Power of both the Spelling Test and the Pronunciation Test

The spelling test			The pronunciation test		
Item No.	DL	DP	Item No.	DL	DP
1	0.68	0.42	1	0.80	0.50
2	0.80	0.42	2	0.80	0.38
3	0.60	0.57	3	0.60	0.38
4	0.20	0.42	4	0.20	0.62
5	0.63	0.42	5	0.66	0.75
6	0.50	0.57	6	0.53	0.75
7	0.23	0.71	7	0.33	0.38
8	0.27	0.42	8	0.26	0.38
9	0.23	0.42	9	0.20	0.50
10	0.20	0.71	10	0.26	0.62
11	0.20	0.57	11	0.26	0.62
12	0.20	0.71	12	0.33	0.50
13	0.20	0.42	13	0.26	0.62
14	0.23	0.57	14	0.33	0.50
15	0.20	0.71	15	0.26	0.62
16	0.20	0.71	16	0.33	0.75
17	0.30	0.57	17	0.20	0.75
18	0.63	0.57	18	0.46	0.38

3.3.4 Reliability

Next to validity, reliability is a fundamental concern in the development and use of language of tests. Harmer (2007: 167) states that "a good test should have marking reliability. Not only it be fairly easy to mark, but anyone marking it should come up with the same result as someone else". In order to estimate the reliability of the test, a mark-remark method is used. A sample of 30 students is randomly chosen from the third year. Their papers are corrected

twice by two scorers, first by the researcher and second by an Instructor at the college of Education[3]. Using Pearson correlation coefficient, it is found that the correlation coefficient is 0.85 which is considered acceptable according to Caroll & Hall(1985: 118).

3.3.5 Test Administration

The test in its final version was administrated after checking its validity and reliability. The test was applied on 50 students, 30 of them took part in the spelling test and 20 in the pronunciation test. In the latter test, the students were asked to read aloud while the researcher giving scores on the basis of their performance. The time needed for each test ranged between (45-60) minutes.

3.3.6 Scoring Scheme

The results of language test often reported as numbers or scores, and it is those scores that test users will make use of. Because test scores are used to assist in making decisions about individuals, the scheme used to arrive at these scores is a crucial part of the measurement process (Bachman & Palmer, 1996: 193).The scoring scheme used in the test is to give 1 mark for the correct item and zero for the incorrect one. Since each test consists of 18 items, then the highest mark is 18 and the lowest mark is zero.   .

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3.4 Statistical Methods

The following statistical methods are used in the analysis of the test:

1- Item discrimination power for estimating DP of each item:

$$DP = \frac{RU - RL}{1/2\ N}$$

DP : Discriminating power
RU : The number of students in the upper group who answered correctly
RL : the number of students in the lower group who answered correctly
N : The total number of students

(Gronlund, 1976: 277)

2- Item difficulty level for estimating the DL of the test:

$$DL = \frac{Hc+Lc}{N}$$

DL : Difficulty level
Hc : High correct
Lc : Low correct

(Thorindike & Hagen, 1986: 244)

3-Pearson correlation coefficient for estimating reliability of the test:

$$R = \frac{N\sum xy - (\sum x)(\sum y)}{\sqrt{[n(\sum x^2) - (\sum x)^2][n(\sum y^2) - (\sum y)^2]}}$$

X : Label for one of the varieties
Y : Label for the other variety
N : Number of the pairs of the varieties
∑ : A symbol means sum of

(Glass & Stanley, 1970: 114)

4- t-test formula for one independent sample is used to find out the level of the sample   in   each   test:

$$t = \frac{x - \mu}{S/\sqrt{n}}$$

X : Mean
S : Standard deviation
N : Number of students

(Guilford, 1965: 18)

3.5 Notes to Chapter Three

1. Names and academic ranks of the lecturers who participated in the questionnaire: :
-Asst. Prof. Sami Al-Ma'muri Ph.D
-Asst. Prof. Isam Al-Ma'muri Ph.D
-Inst. Imad Muayed Jasim Ph.D
-Asst. Inst. Muslih Al-Dien Nassif MA
-Asst. Inst. Ahmed Rasheed Majeed MA

2. Names and academic ranks of the jury members:

-Asst. Prof. Sami Al-Ma'muri Ph.D
-Inst. Zaineb Abbas Ph.D
-Inst. Izet S. Nagim MA
-Asst Inst. Ashuaq Mahdi MA
- Asst. Inst. Liqa'a Habeeb Aboud MA

3. Asst. Inst. Liqa'a Habeeb Aboud MA

Chapter Four
Data Analysis

4.1 An Introductory Note
    This chapter is concerned with analyzing the results of the test. It shows, ob the basis of the students' scores, the statistical as well as the linguistic analysis of the students 'performance.   .

4.2 Overall Performance
    To fulfill the aim of the study which is investigating the difficulties faced by Law College students in dealing with spelling-pronunciation correspondence, and to verify the two hypotheses of the study stating.   :

 1- Law College students are able to spell words without making a link with pronunciation.   .
2- The students are able to pronounce words without making a link with spelling; the students' performance was analyzed by using t-test formula for one   independent sample for each test.
    As shown in the table below, the mean score of the students' performance in the spelling test is **6.83** while the theoretical mean is **9***. Concerning the

pronunciation test, the mean is **6.6**. By comparing the computed mean with the theoretical one in each test, it is clear that the students' performance is weak. On the other hand, by comparing the computed t-value, which is 6.516 of the spelling test to that of the table one, which is 2,045, it shows that the former is higher than the latter, so the hypothesis is verified. Accordingly, Law college students are not able to spell words without making a link with pronunciation.

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Table (4)
Statistical Analysis of the Overall Students' Performance in the Spelling & the Pronunciation Tests

	Sample size	Computed mean	Theoretical mean	S.D	Computed t-value	Table t-value	D.F	Level of significance
Spelling test	30	6.83	9	1.824	6.516	2.045	29	0.05
Pronunciation test	20	6.6	9	2.0575	5.228	2.093	19	0.05

$$\text{Theoretical mean} = \frac{\text{Higher score + Lower score}}{2}$$

The same is true concerning the pronunciation test. The computed t-value, which is 5,228 is higher than the table one which is 2,093 which signifies that the students are not able to pronounce words without making a link with spelling

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4.3 Students' Performance
4.3.1 Students' Performance in the Spelling Test

This test deals with students' ability to spell new words correctly without making a link with pronunciation. The kind of test used here is dictation.

The higher score of the test is **18**, which means that the student who scores **9** is considered to achieve the level of success. As shown in the table below, the number of students who could get **9** and above is **10** out of **30** with percentages ranging between **(50%- 55%)**. The percentages of the other students who failed to reach the level of success range between **(22%-38%).**   .

Table (5)
Statistical Analysis of Students' Performance in the Spelling Test

Student No.	Correct answers	Percentages	Students No.	Correct answers	Percentages
1	6	33%	16	5	28%
2	6	33%	17	7	38%

3	9	50%	18	5	28%
4	9	50%	19	5	28%
5	6	33%	20	5	28%
6	7	38%	21	7	38%
7	7	38%	22	5	28%
8	6	33%	23	4	22%
9	6	33%	24	9	50%
10	9	50%	25	5	28%
11	6	33%	26	9	50%
12	4	22%	27	9	50%
13	5	28%	28	9	50%
14	6	33%	29	10	55%
15	9	50%	30	10	55%

4.3.2 Students' Performance in the Pronunciation Test

This test is designed to measure students' ability in pronouncing new words without linking them with spelling. The kind of testing used here is reading aloud. As in the spelling test, the higher score is **18** accordingly, the students who obtains **9** reaches the level of success. The results of the test shows that only **7** students out of **20** could get **9** and above with percentages ranging between (**50%-55%**) as illustrated in the following table.   .

Table (6)
Statistical Analysis of Students' Performance in the Pronunciation Test

Students No.	Correct answer	Percentages	Students No.	Correct answer	Percentages
1	10	55%	11	9	50%
2	7	38%	12	4	22%
3	9	50%	13	9	50%
4	6	33%	14	4	22%
5	9	50%	15	5	28%
6	5	28%	16	5	28%
7	9	50%	17	5	28%
8	5	28%	18	6	33%
9	9	50%	19	6	33%
10	4	22%	20	6	33%

4.4 Performance According to Items
4.4.1 Students' Common Misspellings

In this test, the students are asked to write certain words in the field of law. They are dictated by the researcher and the results, as shown in t5he table below,

illustrates that the number of items on which half of the students or more could answer correctly is 6 out of 30 with percentages ranging between (50%-80%).

These items are:
1-law 2-international 3-rules 5-states 6-organization 18-legal

The percentages of the other items ranged between (**20%-30%**), which means that they are, to some extent difficult for the students, as shown in the following table:

Table (7)
Statistical Analysis of Items in the Spelling Test

Rank order	Item No.	Correct answers	percentages	Rank order	Item No.	Correct answers	Percentages
1	2	24	80%	10	9	7	23%
2	1	20	67%	11	14	7	23%
3	5	19	63%	12	4	6	20%
4	18	19	63%	13	10	6	20%
5	3	18	60%	14	11	6	20%
6	6	15	50%	15	12	6	20%
7	17	9	30%	16	13	6	20%
8	8	8	26%	17	15	6	20%
9	7	7	23%	18	16	6	20%

Most of the students when being dictated they write words exactly as they hear them giving little awareness to the fact that there is no correspondence between spelling and pronunciation. For example, in the word *sovereign* the g is silent so most of the students do not write it and the word *soverin* is the alternative. The following table shows most of the students' misspellings:

Table (8)
The Students' Common Misspellings

The letter Consonants	Misspellings	Examples
g	Not written k	*Soverin* instead of *sovereign* *Kovernment* instead of *government*
p	b	*Bublic* instead of *public* & *bolitical* instead of *political*
b	p	*Puplic* instead of *public*

d	g	*Indivigual* instead of *individual*
j	g	*Gurisdiction* instead of *jurisdiction*
s	z	*Jurizdiction* instead of *jurisdiction*
v	f	*Confentions* instead of *conventions*
c	k	*Political* instead of *political*
Vowel letters		
aw	ow	*Low* instead of *law*
a	e	*Stete* instead of *state*, *minicipel* instead of *municipal*
	i	*Private* instead of *private*
o	u	*Political* instead of *political*
i	e	*Endependen*t instead of *independent*
o	i or e	*Custim* or *custem* instead of *custom*

4.4.2 Students' Common Mispronunciation

The pronunciation test shows that the students always link the pronunciation of words with the way these words are written the result is a wrongly pronounced word.

The number of items on which half of the students or more could pass the level of success is 6 out of 18 namely 1, 2, 3, 5, 10 and 18 with percentages ranging between (50%-80%). These items are

1-law2-international3-rules5-states10-jurisdiction18-lega

The percentages of the other items ranged between (10%-35%), and as illustrated in the following table:

Table (9)
Statistical Analysis of Items in the Pronunciation Test

Rank	Item	Correct	Percentages	Rank	Item	Correct	Percentages

order	No.	answers		order	No.	answers	
1	1	16	80%	10	7	5	25%
2	2	16	80%	11	15	4	20%
3	3	14	70%	12	14	4	20%
4	5	14	70%	13	12	3	15%
5	10	11	55%	14	16	3	15%
6	18	11	55%	15	17	3	15%
7	6	7	35%	16	9	3	15%
8	8	7	35%	17	13	2	10%
9	4	5	25%	18	11	2	10%

As an example of the mispronunciation is reading the word law as /lau/ and the word rules as /ru:lɪz/ etc.   .

The following table includes most of the mispronunciations which the students of the college of law made

Table (9)
The Students' Common Mispronunciations

The sound Consonants	Mispronunciation	Examples
/z/	/s/	Rules, jurisdiction
Silent g	/dʒ/	Sovereign
/p/	/b/	Public, municipal, political
/b/	/p/	Public
/v/	/f/	Convention
/g/	/k/	Government
/dʒ/	/d/	individual
Vowels & Dipthongs		
/o:/	/au/	Law

/eI/	/e/	St<u>a</u>te
/ʌ/	/æ/ , /o/	P<u>u</u>blic & c<u>u</u>stom, g<u>o</u>vernment
/ə/	/I/ or /e/	Priv<u>a</u>te & cust<u>om</u>
/I/	/e/	Econom<u>i</u>c
Silent e	/I/ or /e/	Rul<u>es</u> & sov<u>e</u>reign
Vowel insertion		Poliit/kel/ & munici/pel/

Chapter Five
Conclusions and Recommendation

5.1 Conclusions

 The data analysis in the previous chapter came out with the following conclusions:

1. Law College students are not aware enough that there is no correspondence between spelling and pronunciation.

2. The students who study English are not able to spell new words correctly with out making a link with pronunciation   .

3. They are not able to pronounce new words without linking them with their spelling.   .

4. They are not aware enough that some English letters are silent i.e. written but

not pronounced.   .

5.2 Recommendations

On the basis of the conclusions of the study, a number of recommendations can be put forward:

1. Since Law College students at the university level study English in the field of their specialization, much more attention must   be paid particularly at secondary school by incorporating words through reading passages or dialogues etc. Then, encountering such words at college would be easier
.

2. English teachers teaching at Law colleges must always concentrate on the fact that English spelling is full of inconsistencies by giving examples like the different pronunciations of the letter "c" in the words *court, innocent* etc.

3. English teachers when presenting new words must focus on pronunciation by using various classroom activities like reading aloud, repetition etc.

4. The English teacher must always remind the students of the fact that some letters are written but not pronounced like the letters "g" and "e" in the words *sovereign*   etc.   .

5. Training on spelling must be done constantly through different activities like dictation   etc.   .

الخلاصة

إن اللغات التي تتمتع بنظام أبجدي منتظم يمكن تعلمها بسهولة إلى حد كبير. لكن النظام الهجائي للغة الانكليزية يحوي العديد من القواعد المعقدة مقارنة باللغات الأخرى. يعود وجود هذه القواعد إلى وجود التناقض بين طريقة كتابة الكلمات وطريقة تلفظها مما يجعل عملية تعلم اللغة الإنكليزية معقدة إلى حد كبير لدارسي اللغة من طلبة كلية القانون الذين يدرسون اللغة لثلاث سنوات في مجال اختصاصهم و هو القانون.

تهدف هذه الدراسة إلى التحقق من الصعوبات التي يواجهها طلبة كلية القانون في العلاقة بين طريقة الكتابة و التلفظ في اللغة الانكليزية. ولتحقيق هدف الدراسة تم وضع الفرضيتين التاليتين:

1. إن طلبة كلية القانون قادرين على كتابة الكلمات الإنكليزية دون التأثر بتلفظ تلك الكلمات.
2. إن الطلبة قادرين على تلفظ الكلمات الإنكليزية دون التأثر بطريقة كتابة تلك الكلمات.

لإثبات صحة الفرضيتين تم اختيار عينة من 81 طالب و طالبة من المرحلة الثالثة، كلية القانون، جامعة ديالى. حدد 31 منهم ليمثلوا العينة الاستطلاعية بينما اختير الخمسون الباقون لأداء الاختبار النهائي متضمنا اختبار التلفظ واختبار الكتابة. باستخدام الاختبار التائي لعينة واحدة تم التوصل للنتائج التالية:

1.إن طلبة كلية القانون يواجهون صعوبة في الكتابة، بمعنى آخر عند كتابة الكلمات غالبا ما يتأثرون بطريقة تلفظ تلك الكلمات إذ تمكن 10 طلبة فقط من مجموع 30 من تحقيق درجة النجاح.
2. يواجه الطلبة صعوبة في التلفظ حيث تلفظ الكلمات كما تكتب. كما يواجهون صعوبة في التعامل مع الحروف الصامتة أي التي تكتب ولا تلفظ. عدد الطلبة الذين تمكنوا من تحقيق درجة النجاح هم 7 من مجموع 20.
في ضوء النتائج السابقة تم التوصل للاستنتاجات التالية:

1. إن طلبة القانون غير مدركين تماما إلى حقيقة أنه لا يوجد توافق بين طريقة كتابة الكلمات وطريقة تلفظها في اللغة الانكليزية.
2. إن الطلبة الذين يدرسون اللغة الانكليزية غير قادرين على كتابة الكلمات بطريقة صحيحة دون التأثر بطريقة تلفظ تلك الكلمات.
3. إن الطلبة غير قادرين على تلفظ الكلمات الجديدة دون التأثر بطريقة كتابة تلك الكلمات.
4. إن الطلبة غير مدركين تماما إن بعض الحروف في اللغة الانكليزية هي صامتة أي تكتب ولا تلفظ.

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