

The Perception and Interpretation of English Tones by Iraqi Learners at the University Level: A Statistical Study

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Abstract

This paper investigates the perception and interpretation of English sentence intonation by Iraqi learners at the university level. Forty subjects participated in an experiment to perceive and interpret the tones of five pairs of sentences. Intonation was the only aspect that differentiated each pair. The analysis of the results reveals the poor knowledge of the learners in perceiving the tones and in realising the meanings associated with each tone. The study suggests that emphasis should be placed on the teaching of intonation in real life situations to increase the students' sensitivity to this important aspect of language.

إدراك وتفسير النغمات الانكليزية لدى المتعلمين العراقيين في الجامعة: دراسة إحصائية

الخلاصة

تبحث هذه الدراسة في إدراك و تفسير تنغيم الجملة الانكليزية لدى المتعلمين العراقيين في الجامعة. اشترك أربعون طالبا لإدراك وتفسير نغمات خمس أزواج من الجمل. وكان التنغيم هو العامل الوحيد الذي يميز كل زوج. كشف تحليل النتائج عن المعرفة الضعيفة للمتعلمين في إدراك النغمات والمعاني المتعلقة بكل نغمة. واقترحت الدراسة التأكيد على تدريس التنغيم في مواقف واقعية للحياة لزيادة حساسية الطلاب لهذا الجانب المهم من اللغة.

1-Introduction

In spite of the existence of numerous studies reported in the literature of second language teaching and learning, the area of phonology, and especially intonation, is usually neglected. In most EFL textbooks intonation is mentioned very briefly. As a result, only stereotypical rules such as the tone choice of yes/no questions and the wh-questions are taught. Thompson (1995: 235) remarks that a casual brows through recently published ELT teaching materials is likely to show that in many of them intonation is either completely missing or dealt with in a rather haphazard way. Pennington(1998,cited in Shun,2002:1) comments that phonology does not fall into the central area of pedagogical teaching. The lack of training, however, leads to serious communicative

breakdown between native and non-native speakers of even advanced levels of proficiency.

Chun (1988, as cited in Shun,2002:1) affirms that intonation is an important tool in conveying messages and facilitating communication. If second language learners have difficulties in the use of intonation, it will result in misunderstanding. So students need to be trained not only to communicate information, but to do so in the same way as native speakers (Al-Sibai,2004:2). Underhill (1998:75) remarks that in addition to its important role in speech production, intonation plays a vital role in perception, because inappropriate intonation can at times give rise not just to obscuration of the message, but to the reception of a quite different message. Gimson (1962:243) affirms that the appropriate knowledge of English intonation enables the foreign listener to interpret correctly those parts of an utterance upon which the speaker wishes to concentrate attention, or is aware of the speaker's attitude to him, or make judgments upon the personality of the speaker. The pattern of intonation used may constitute a linguistic system which has a communicative function within a particular community. Thus understanding prosodic structures plays an important role not only to native listeners, but also to foreign language learners' perception and production of speech.

The relationship between speech production and speech perception has usually been assumed to be straightforward. However, Neufeld (1980,as cited in Xia et al,2010:1) cautions that a distinction must be made between acquisition phenomena and performance phenomena because "there is frequent asymmetry in the adult's receptive and production performance in L2 at the phonological level." Chun (2002, as cited in Xia et al,2010:1) points out that more cross-linguistic research of this nature is needed. Thus it is very important to see whether foreign learners have the ability to perceive the English tones correctly and if they are really able to associate these tones with their correct meanings.

2-Intonation: Definition and Structure

Jones (1969:149)defines intonation as" the pitch of the voice with which a voiced sound is pronounced." When one speaks, one makes continuous rises and falls in the pitch of the voice to produce a certain effect on the addressee. Roach (2000:150) asserts that only in very unusual situations do we speak with fixed, unvarying pitch, and when we speak normally the pitch of our voice is constantly changing. He adds (Ibid: 155) that each speaker has his or her own pitch range : a top level which is the highest level normally used by the speaker and a bottom level that the speaker's pitch normally doesn't go below. In ordinary speech, intonation tends to take place within the lower part of the speaker's pitch range, but in situations where strong feelings are to be expressed it is usual to make use of extra pitch height. Underhill(1998:75) remarks that intonation refers to the patterns of pitch change over an utterance. Such patterns may be partly personal, but they are also conventional, and to that extent they

are also systematic. Being systematic it follows that at some level there are rules according to which the speaker of a language chooses one intonation pattern rather than another.

The unit used for analysing intonation is called the tone-unit; in its smallest form the tone-unit may consist of only one syllable. This syllable carries the tone and is underlined. It is called a tonic syllable or nucleus. Tonic syllables have a high degree of prominence. Prominence is, of course, a property of stressed syllables, and a tonic syllable not only carries a tone but also a type of stress that is called tonic stress or nuclear stress (Roach, Ibid:163).

Speech consists of a number of utterances : each utterance consists of one or more tone-units; each tone-unit consists of one or more feet; each foot consists of one or more syllables; each syllable consists of one or more phonemes. (Ibid:164)

Tone-units can either be simple or compound. The first type includes only one tonic syllable. The other parts of the simple tone-unit are: the pre-head, head and tail. The pre-head is composed of all the unstressed syllables in a tone-unit preceding the first stressed syllable. The head, on the other hand, is all of that part of a tone-unit that extends from the first stressed syllable up to, but not including, the tonic syllable. The tail includes any syllables between the tonic syllable and the end of the tone-unit (Ibid:164-5). High pitch stressed syllables are marked with (´) and the mark (˘) is used for low pitch stressed syllable. Compound tone-units, on the other hand, consist of two tonic syllables. The following is a description of English tones.

2.1 The Fall

The tonic of this tone may start from the highest pitch of the speaking voice and fall to the lowest pitch (in the case of the high fall (´)), or from a mid pitch to the lowest pitch (in the case of the low fall (˘)), or with variation of starting point according to the intonation context (Gimson,1962:245). This tone gives an impression of finality. If someone is asked a question and replies yes or no it will be understood that the question is now answered and there is nothing more to be said. (Roach, 2000:155)

Gimson (Ibid) remarks that the falling tone is most perceptible when it takes place on a syllable containing a long vowel or diphthong or a voiced continuant (e.g./m, n, ŋ, l, z/, etc.). For example:

It was raining.

When a fall occurs on a syllable containing a short vowel with its limits formed by fortis, voiceless consonants (especially the stops /p, t, k/), the glide, particularly of a low fall, is so rapid that it is not easily perceptible, or may be realized merely as a low level pitch in relation to a preceding higher pitch, e.g.:

'What have you got.

If the tonic is followed by a tail, the fall may be realized as the juxtaposition of relatively high pitch on the tonic syllable and low pitches on the syllables of the tail, e.g.:

It'll rain in a , minute. (Ibid:246)

2.2 The Rise

The rising tone may extend from low to mid(,),or from mid to high ('),or with other variations of starting and end points between low and high. (Gimson,Ibid:246)

Roach(Ibid:156) remarks that a rising tone gives the impression that something more is to follow; a quite common occurrence would be:

A:Do you know John Smith?

One possible reply from B would be ,yes, inviting A to continue with what he/she intends to say about John Smith after establishing that B knows him. To reply with yes would give a feeling of finality, of end of the conversation; if A does have something to say about John Smith, the response with a fall would make it difficult for A to continue. This is, in fact, a common cause of misunderstanding in English conversation. (Ibid: 156-7)

Gimson (Ibid.) remarks that the rising tone is more easily perceptible when it occurs on a syllable containing a long vowel or a diphthong or a voiced continuant consonant, for example:

No.

'Can I 'see?

He's ,not ,ill.

When a low rising tone occurs on a short syllable, it must necessarily be accomplished much more rapidly, or may merely consist of a relatively high level pitch in relation to a preceding low pitch, or even of a slightly lowered level pitch in relation to preceding mid or high pitch, e.g.:

'Can she ,cook?

,Can she ,cook?

With a tail, the rise is achieved by means of a relatively low pitch on the tonic syllable with an ascending scale on the following syllables, e.g.:

'Is it ,raining?

'Are you ,comfortable?

Gimson (Ibid:256) states that the low rising tone gives the impression that something is unfinished and continuative, often with overtones of politeness, encouragement, pleading, confidence and suspicion.

2.3 The fall-Rise

The falling-rising tone is the second most common of the English tones after the falling tone (Halliday, 1970:26-7). The fall and rise may be confined within one syllable, the glide beginning at about mid level and ending at the same level (or slightly above or below); in the case of a short syllable, the dip in pitch is

made extremely rapidly and may be realized as an instant of 'creaky' voice or even of cessation of voice, e.g.:

˘No.

It's ˘true.

When an unaccented tail follows the tonic syllable, the fall occurs on the tonic syllable and the rise is spread over the tail, e.g.:

It's ˘raining.

It's 'quite ˘comfortable.

(Gimson,1962:246-7)

This tone is frequently used in English and has some rather special functions. It gives the impression of reservation or limited agreement, the following example illustrates:

A:I've heard that it is a good school.

B:˘Yes.

B's reply means that he doesn't completely agree with what A said, and A would probably expect B to go on to explain why he was reluctant to agree. The Falling-rising tone in such contexts usually indicates both something 'given' or 'conceded' and at the same time some 'reservation' or 'hesitation'. (Roach,2000:157)

2.4 The Rise-Fall

A fall may be reinforced by an introductory rise, especially on a long syllable containing voiced continuants (which may be given extra length), e.g.:

It was [^]raining.

He , wasn't a [^]lone. (Gimson,1962:247)

A reinforced short syllable followed by a tail may be realized as a low accented tonic syllable followed by a fall on the tail, e.g.:

You'd [^]better.

It was [^]yesterday. (Ibid:248)

This tone is used to convey rather strong feeling of approval, disapproval or surprise, e.g.:

A: You wouldn't do an awful thing like that, would you?

B:[^]No. (Roach,Ibid)

Roach(Ibid:171) reports that a rising tone or a falling tone is quite easy to identify, whether it falls on a single syllable or extends over more syllables in the case of a tonic syllable followed by a tail. Fall-rise and rise-fall tones, however, can be quite difficult to recognize when they are extended over tails.

2.5 Level

This level tone is certainly used in English, but in a rather restricted context. It usually conveys (on single syllable utterance) a feeling of saying something routine, uninteresting, or boring. A teacher calling the names of students from a register will often do so using a level tone on each name, and the students are likely to respond with -yes when their name is called. (Roach,Ibid:158)

3.The Meaning of English Tones

The specific meanings of English tones are dependent on speech functions. Halliday (1970: 26) recognizes seven distinct speech functions: four 'major' and three 'minor'. Major speech functions include statements, wh-questions, yes/no questions and commands. The minor speech functions, on the other hand, include responses, exclamations and calls. The latter are not included within the study.

The major speech functions are always expressed in complete sentences. The normal or neutral tone for all the major speech functions is the falling tone except for yes/ no questions , where the high rising tone is used. The significance of the neutral tone is that it is the tone that can always be used if there is doubt about the appropriateness of the other tones.

The falling tone is the most frequent tone overall; but in certain particular categories such as prohibitions (negative commands), it is probably not. (Halliday, Ibid)

Examples are given below of each of the major speech functions, showing which tones are possible, other than the neutral tone, and how the others differ in meaning.

3.1 Statement:

The falling tone is neutral; the falling-rising tone expresses reservation, contrast, or a personal opinion offered for consideration (Halliday, Ibid: 26-7), e.g.:

It 's 'very ef ficient.

It 's 'very ef ficient. (it may not be beautiful, etc.)

I 'like it. (I like it too)

I 'like it. ('even if you don't' , 'I don't know anyone else')

Underhill (1998:87) remarks that a statement with a falling tone refers to new information while that with a falling-rising tone means something given or known.

The low rising tone on statements gives the impression of a request or an unexpected expectation- hence also reassurance, for example about the future:

I'll 'see what 'I can do.

I'll 'see what 'I can do. (since you ask me)

They'll 'soon be here.

They'll 'soon be here. (don't worry!) (Halliday,Ibid)

The use of the rising-falling tone on statements gives the meaning of assertion or expresses some other form of commitment, e.g.:

He wasn't 'telling the truth.

He wasn't 'telling the truth. (' I am quite certain', 'that's the whole explanation') (Ibid.)

The assertiveness of the rising-falling tone may express surprise: 'that's what you say, but are you sure?' (Ibid:24)

3.1.1 Statement- question:

The falling tone expresses observation or deduction; the high rising tone seeks confirmation:

'Peter isn't here yet. (I notice; is that correct)

'Peter isn't here yet. (is that what you're saying)

The falling tone here is ambiguous and is often misinterpreted as a simple statement: 'oh, isn't he?'- 'no, I am asking you; isn't he?'(Ibid.)

3.1.2 Statement-question with tag:

The statement may sometimes be followed by a question tag. It is most frequent for statement and question to be different in polarity, i.e. if the statement is positive the tag is negative and vice versa. Or, the tag may keep the polarity unchanged (positive tag with positive statement or, less commonly, negative tag with negative statement). (Murphy, 1994:102; Leech & Svartvik,1994:366)

The tag may be on a separate tone group with the falling tone, the high- rising tone, or the rising- falling tone; or the statement and tag may both be on a single tone group with the falling tone, the high rising tone , the falling- rising or the rising-falling tone. The following among the most usual: the falling tone and the high rising tone, polarity changed, neutral; the falling tone and the falling tone, polarity changed, expressing certainty or demanding an admission; the falling tone and the high rising tone, polarity unchanged, expressing new understanding together with forcefulness, accusation or criticism:

Peter's here, 'isn't he? (a neutral question)

Peter's here, 'isn't he? ('I am sure he is' , 'admit it!')

Peter's here, 'is he ? ('I've just heard' ; 'that explains it')

Peter's here, is he ? ('I see' , 'well he shouldn't be')

(Halliday,Ibid:27-28)

3.2 WH- Questions:

The falling tone is neutral; the high rising tone is mild (tentative or deferential):

'What's the time?

'What's the time? ('may I ask, please?) (Halliday,Ibid:27)

3.3 Yes/No Questions

The high rising tone is neutral; the falling tone is strong (forceful or impatient)

Are you satisfied? (a neutral question)

Are you satisfied? ('you ought to be') (Halliday,Ibid)

3.4 Multiple Questions:

In multiple questions, the use of a high rising tone plus the falling tone expresses an 'alternative question'. Whereas, the use of the high rising tone plus the high rising tone means a 'list question', e.g.:

Did you play 'tennis or 'golf? ('which?')

Did you play 'tennis or 'golf? ('yes or no?') (Halliday,Ibid:28)

3.5 Command:

With positive commands, the falling tone is neutral; the low rising tone is mild, expressing request; the falling tone plus the low rising tone expresses pleading or persuading, e.g. :

Tell me 'all a 'bout it. (instruction)

Tell me 'all a ,bout it. (invitation)

'Do tell me 'all a ,bout it. (' won't you, please?')

The falling-rising tone expresses compromise or concession, e.g. :

Give him a 'chance.

Give him a ~chance. ('at least' , 'even though he may fail')

With negative commands (prohibitions),on the other hand, The falling tone is forceful; the low rising tone is polite, expressing request; the falling tone plus the low rising tone means pleading or dissuading, e.g. :

Don't stay 'out too 'long. ('I mean it')

Don't stay 'out too ,long. ('I know you want', 'I don't really mind', 'I am not serious')

'Don't stay 'out too ,long. ('like you did last time', 'please-I know you probably will') (Halliday,Ibid)

4. Literature Review

The research conducted to investigate the perception and production of intonation was sparse as compared to what has been done on segmental features. Among the research which focused on intonation, some studies investigated the perception of accentedness, either from the view of the native English speakers or from the view of L2 speakers. Generally, the L2 speakers were found to have a non-native accent. The other type of studies concentrated on the production of intonation. Results of these studies concluded that the L2 speakers did not understand the use of stress and pitch movement and thus used the variables in whatever syllable they liked. Another area of studies paid attention to the perception of intonation. These studies tried to test the ability of non-native speakers in perceiving stress or tone movements or the meaning of the sentences as a result of variations of intonation components. The listeners felt that the prominence carrying a falling tone was more audible than other combinations.(Shun, 2002:3)

Herms and Rump (1994, cited in Shun, Ibid:16) carried out several experiments, using one polysyllabic word 'mamama' to investigate the effect of varying the tones of the second syllable on subjects' perception of prominence. They found that a falling tone lends more prominence to a syllable than a rising tone. It implies that listeners could identify a falling tone more easily than a rising tone. However, Beckman (1986, cited in Shun, Ibid: 71) noted that the rising tone was more perceptible.

Berkovits (1980, cited in Shun, Ibid: 17) investigated the native and non-native English speakers' ability to interpret sentences with meaning ambiguities caused by variations of intonation. He found that both native and non-native speakers of English could make use of intonation to interpret sentences, though non-native speakers tend to ignore this prosodic cue when semantic and pragmatic cues were available.

Shun (2002) studied the perception of English intonation from the perspective of Hong Kong native Cantonese speakers. Her study aims to test the ability of L2 learners in perceiving intonation variables and to study the values and meanings the L2 learners attach to the intonation variables. Shun (Ibid: 36) remarked that the native Cantonese speakers were able to perceive prominence more accurately than tone movement. In Shun's study (Ibid: 71) the native Cantonese didn't make any significant differences in perceiving the falling tone and the rising tone, though the subjects believed that they could identify the rising tone more accurately than the falling tone. The habit of assigning the falling tone to statements and the rising tone to questions ruins their overall performance. They thought the rising tone is a means to emphasize information and this affects the perception of tone movement.

Ar-Riyahi (2000) studied the pronunciation errors in the intonation of English imperatives by Iraqi learners at the university level. The study reveals the learners' poor knowledge of English intonation. Most of the subjects assign the rising tone to questions and the falling tone to all other utterances. They are ignorant of the proper use of English intonation patterns and their associated meanings.

Atoye (2005) investigated the perception and interpretation of sentence intonation by Nigerian university students of English. His findings indicate a low level of accuracy in their interpretation, in spite of a very high perception level of intonation by the subjects. To a large extent, the subjects also agreed amongst themselves in their interpretation of English intonation while differing widely from its standard interpretation. Atoye (Ibid:29-30) affirmed that most non-native users of English have the problem of perception of English intonation. They are at a loss when faced with the task of using intonation in their speech, or of interpreting it when they hear it from native speakers.

Ar-Riyahi (2008) studied the ability of Iraqi learners at the university level in pronouncing English question tags. The study revealed the learners' limited knowledge of intonation. The subjects had the habit of assigning the rising tone

to questions and the falling tone to all other utterances. They rarely used the low rising tone and the falling-rising tone because they are unaware of their uses and meanings. Thus, this study comes as an essential need to investigate the Iraqi learners' ability to perceive and interpret the English tones. If they are unable to perceive any differences in intonation they would be unable to use it in their speech. Their weak performance would justify the inappropriate achievements accounted for in previous studies.

5. The Experiment:

5.1 Aims and Objectives.

The present study investigates the perception and interpretation of sentence intonation by forty students of English at the university level. It attempts to discover the subjects' level of perception as well as their interpretation of intonation contrasts in five pairs of English sentences. It is concerned with finding out whether they could perceive and correctly interpret the differences in the intonation patterns of each of the five pairs of the test sentences.

5.2 The Subjects

Forty subjects were involved in this experiment. They were randomly chosen from third year students (2011-2012) of the English Department, College of Education, Basrah University. They had been exposed to the traditional analysis of intonation and its functions through the English phonetics and phonology courses. They therefore constituted a highly homogeneous socio-linguistic group with regards to such variables as age, education, exposure to and training in English phonetics.

5.3 Test Design and Administration

Each subject was given a sheet of paper on which the ten English sentences had been arranged in pairs with the tonic underlined. The sentences of each pair were lexically and syntactically identical on paper. Intonation is the only aspect that differentiates these pairs.

The sentences were played back to the subjects by a Stereo IC Recorder (type: Sony ICD-AX412F) using a different tone on each sentence of a pair. The subjects were asked to listen carefully to the five pre-recorded pairs and perform two tasks. First, they were asked to indicate the tone they perceive on each sentence. Then, they were asked to state the meaning of each sentence. The following table illustrates the test sentences with the tone played on each sentence together with their interpretation.

Table 1: The test sentences

No	The Test Sentences	The Intonation Patterns of the Test Sentences	The Interpretation of the Test Sentence
1	I like it.	\dot{I} like it.	I like it too.
2	I like it.	$\sim I$ like it.	I like it even if you don't.
3	He wasn't telling the truth.	He wasn't telling the \dot{t} truth.	A neutral Statement
4	He wasn't telling the truth.	He wasn't telling the \wedge truth.	I am certain, that is the whole explanation.
5	Peter's here, isn't he?	Peter's here, \dot{i} sn't he?	Is he here?
6	Peter's here, isn't he?	\dot{P} eter's here, \dot{i} sn't he?	I am sure he is, admit it.
7	Did you play tennis or golf?	Did you play \dot{t} ennis or \dot{g} olf?	Which one do you play?
8	Did you play tennis or golf?	Did you play \dot{t} ennis or \dot{g} olf?	Do you play any game?
9	Tell me all about it.	Tell me all a \dot{b} out it.	Command
10	Tell me all about it.	Tell me all a \dot{b} out it.	Request

6. Analysis of Results

After getting the scores of the subjects in the tested sentences our first aim was to investigate the degree of their performance in the whole test. The next aim was to investigate the degree of their performance in tone perception, tone interpretation and the difference between the two. Therefore, we worked out to find the mean (\bar{X}) and the standard deviation (SD) of the subjects' performance. The population mean (μ) was already known since it equals the total number of sentences divided by two. The t- test for one group was then used to find out whether the difference between the two means was statistically significant.

6.1 Testing Subjects' Performance in the Whole Test

The test examines the subjects' perception and interpretation of English tones. Thus, each subject returned twenty answers for the five pairs of sentences. The statistical analysis of the results shows that the subjects' achievements were dissatisfactory with regard to the whole test. These results are shown at significance level 0.01 in Table (2) below.

Table (2): Subjects' Performance in the Whole Test

The Test	\bar{X}	SD	μ	$T_{cal} \quad 1$
Total Tone Perception and Interpretation	7.000	2.241	10	19.74 *

1 T_{tab} at significant level (0.01) with the degree of freedom 39 is (2.71)

* T_{cal} is significant

The table shows the weak level of the subjects in the whole test since the mean of their achievements, i.e. 7.000, is lower than the population counterpart which is 10. This difference is statistically significant since the calculated t-value, i.e. 19.74, reads higher than T_{tab} which is 2.71.

6.2 Testing Subjects' Perception of English Tones

In the perception task, the subjects were asked to indicate the tone they hear on each sentence. Each subject therefore returned ten answers for the five pairs of sentences, making four hundred answers for the forty subjects. Their responses were analyzed to find out the extent to which they were correct in perceiving the English tones. Their performance is illustrated in Table (3) below.

Table (3): Subjects' Perception of English Tones

The Test	\bar{X}	SD	μ	$T_{cal} \quad 1$
Tone Perception	3.200	1.742	5	11.615 *

1 T_{tab} at significant level (0.01) with the degree of freedom 39 is (2.71)

* T_{cal} is significant

The subjects' performance is not at all satisfactory. The mean of their achievements, i.e. 3.200, reads lower than the population mean, i.e. 5. Most of the subjects failed to perceive the tones they hear on the tested sentences. This poor achievement is found to be statistically significant at the level of significance 0.01.

6.3 Testing Subjects' Interpretation of English Tones

The subjects' performance in this task is not at all satisfactory. Most of the subjects failed to interpret the tested sentences correctly. The following table illustrates.

Table (4): Subjects' Interpretation of English Tones

The Test	\bar{X}	SD	μ	$T_{cal} \quad 1$
Tone Interpretation	3.800	1.417	5	16.951 *

$1 T_{tab}$ at significant level (0.01) with the degree of freedom 39 is (2.71)

* T_{cal} is significant

The mean of the subjects' performance in the test, i.e. 3.800, reads lower than the population mean, i.e. 5. This difference was found to be statistically significant at significance level 0.01.

6.4 Testing Subjects' performance Differences in Tone Perception and Interpretation

The statistical analysis of the results shows that there is no statistically significant difference between the subjects' perception and interpretation of the test sentences. This is shown in Table (4) below.

Table (5): Subjects' Performance Differences in Tone Perception and Interpretation

The Test	\bar{X}	SD	$T_{cal} \quad 1$
Tone Perception	3.200	1.742	1.686
Tone Interpretation	3.800	1.417	

$1 T_{tab}$ at significance level (0.05) with the degree of freedom 39 is (2.02)

T_{cal} , i.e. 1.686, reads lower than T_{tab} , which is 2.02. Thus the difference between the two means is statistically insignificant. The subjects were found to be ignorant of the correct tone perception and interpretation of the test sentences.

7. Discussion

A calculation was carried out to investigate the subjects' achievements regarding tone perception and interpretation. Table 6 below presents the percentages of incorrect scores regarding tone perception and interpretation of each of the tested sentences.

Table (6): The Percentages of Incorrect Scores of Subjects' Performance in the Test Sentences

Sentences No.	Incorrect Tone Perception	Percentage %	Incorrect Interpretation	Percentage %
1	27	67.5%	19	47.5%
2	38	95%	40	100%
3	18	45%	7	17.5%
4	35	87.5%	24	60%
5	24	60%	14	35%
6	36	90%	28	70%
7	21	52.5%	20	50%
8	38	95%	29	72.5%
9	19	47.5%	34	85%
10	16	40%	35	87.5%
Total	272	68%	250	62.5%

The table shows that the subjects' achievements were dissatisfactory with regard to the whole test. Many subjects failed to perceive the tones of sentences 1, 2, 4, 5, 6, 7 and 8. Sentences 2 and 8 scored two correct answers only. Whereas sentences 1, 4, 5, 6 and 7 attracted 13, 5, 16, 4 and 19 correct answers respectively. However, the subjects performed well in sentences 3, 9 and 10 which attracted 22, 21 and 24 correct answers respectively. Nearly half of the subjects were able to perceive the tones of these three sentences.

As for interpretation, the subjects' performance was not very different from that of the first task, i.e. tone perception. Sentence 3 gathered 33 correct responses. Whereas sentences 1, 5, and 7 got 21, 26 and 20 correct responses respectively. On the other hand, all the subjects failed to interpret sentence 2 correctly. Subjects' achievements of the rest sentences were dissatisfactory. Sentences 4, 6, 8, 9 and 10 received 16, 12, 11, 6 and 5 correct responses respectively.

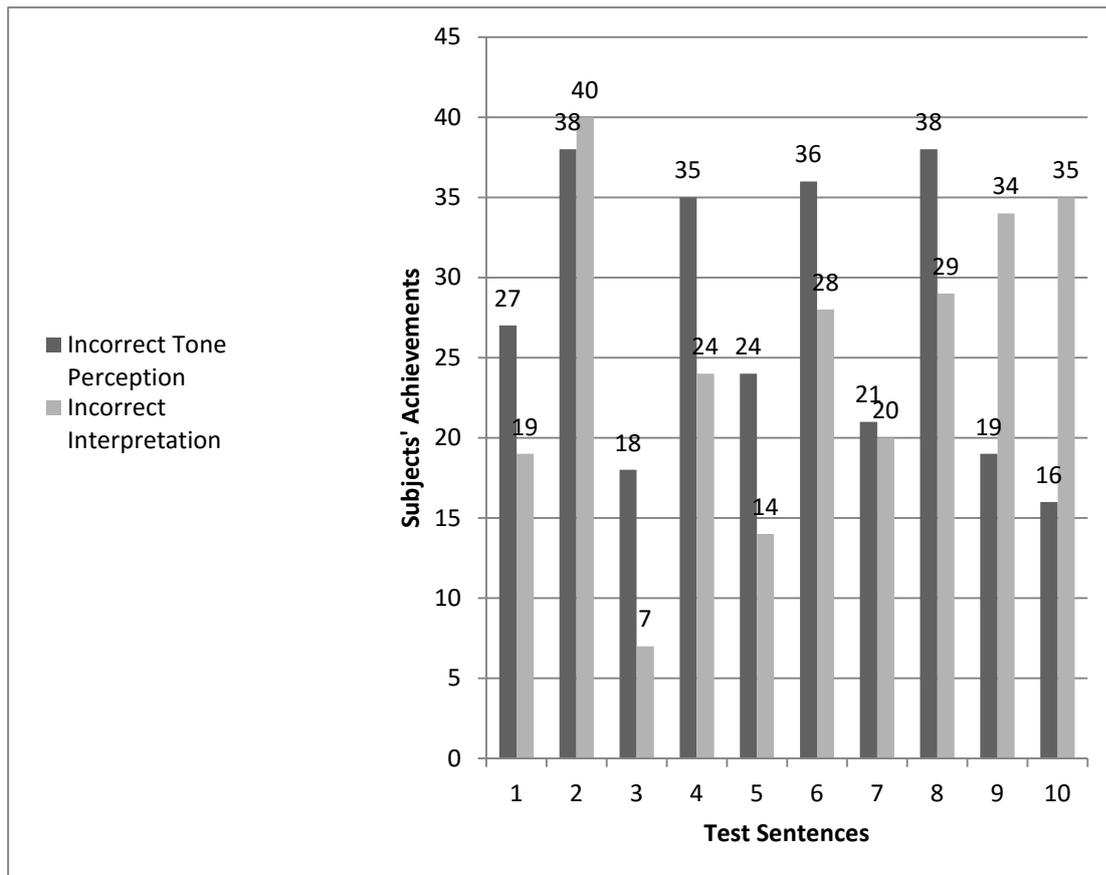


Fig (1) Histogram of Subjects' Achievements in the Test

The following is a detailed discussion of subjects' achievements in each of the tested sentences.

1- I like it.

Twenty seven of the subjects were unable to perceive the correct tone of this sentence, i . e. the falling tone. This tone on the pronoun of the statement gives the meaning 'I like it too'. Nineteen subjects incorrectly perceived the law rising tone on the pronoun " I ", six subjects perceived the falling-rising tone and two subjects perceived the rising-falling tone.

In concern with interpretation, nineteen subjects only failed to know the right interpretation of the sentence. Fifteen subjects interpreted the sentence as a neutral statement without explaining the meaning of the tone on the pronoun. Two subjects interpreted the sentence as a partial agreement. One response occurred as a question and another one as an exclamation.

2-I like it.

This sentence is said on the falling-rising tone giving the meaning of reservation, i.e. 'I like it even if you don't'. It gathered the least number of correct responses in tone perception and interpretation alike. Thirty eight subjects failed to perceive the tone of this sentence. Sixteen subjects incorrectly perceived the falling tone, thirteen perceived the low rising tone, eight perceived the rising-falling tone and one subject only perceived a level tone.

All the subjects failed to know the right interpretation of the sentence. The subjects were ignorant of the significant meaning of the falling-rising tone on the pronoun in this sentence. Ten subjects interpreted the sentence as an emphasis. Nine subjects thought the sentence to be a question. Six subjects interpreted the sentence as a neutral statement. Four responses interpreted the sentence as an exclamation. Agreement and partial agreement gathered three responses for each. Two subjects thought the sentence to give the meaning of uncertainty. One subject thought the sentence to express certainty. Another subject expressed the sentence as a surprise. And one subject didn't answer.

The falling-rising tone proved to be a problematic tone for foreign learners of English. The subjects' performance reflects their poor knowledge of this tone and its meanings.

3-He wasn't telling the truth.

The falling tone here is neutral. The sentence expresses a neutral statement. Twenty two subjects proved to be successful in perceiving the tone of this sentence. There were twelve incorrect responses with the low rising tone, three with the falling-rising tone, two with the level tone and one left without answer.

In concern to interpretation, the sentence gathered seven incorrect responses only. Three subjects didn't answer. Two subjects interpreted the sentence as an emphasis. Asking and partial agreement gathered one answer for each.

This sentence scored the most correct responses in tone perception and interpretation. Twenty two subjects correctly perceived the falling tone of this sentence and thirty three subjects correctly interpreted the sentence as a neutral statement. This emphasizes the idea that the foreign learners of English usually relate the falling tone to statements.

4-He wasn't telling the truth.

This sentence is said with the rising-falling tone to give the meaning of assertion, i.e. the speaker is certain of his information. Like sentence No.2, this sentence collected the least number of correct perceptions and interpretations. Thirty five subjects failed to perceive the tone of this sentence. Twenty two subjects incorrectly perceived the low rising tone. Nine subjects perceived the falling tone. Three subjects perceived the falling rising tone. And one subject only didn't answer.

Twenty four subjects failed to give the right interpretation. Eleven subjects interpreted the sentence as a question. Three subjects didn't answer. Another three subjects thought the sentence to mean uncertainty. Exclamation and agreement collected two answers for each. The other responses were imperative, surprise and angry.

The subjects' poor achievement reflects their limited knowledge of the rising-falling tone and its meanings.

5-`Peter's here, isn't he?

This sentence consists of a statement followed by a question tag. It is said with a falling tone on the statement and a rising tone on the tag. The speaker here is not sure whether Peter is present or not. Twenty four subjects failed to perceive the correct tone of the sentence. It collected seventeen responses with a rising tone on the statement and a falling tone on the tag. Three subjects perceived the sentence with a low rising tone. One subject responded with the falling tone on the statement and tag. And another one responded with the rising-falling tone on statement and tag. One response occurred with a level tone on statement and a rising tone on tag. One subject only didn't answer.

In concern to interpretation, fourteen subjects only failed to interpret the sentence. Four subjects left without answer. Three subjects interpret the sentence as a statement. 'Agreement' and 'emphasis' gathered two responses for each. The other responses are certainty, surprise and telling.

The sentence scored twenty six correct interpretations. The subjects understood the sentence as a question about Peter. But twenty four subjects failed to perceive the tone pattern of the sentence. This poor achievement reflects the subjects' ignorance of the English tones and their importance in signaling meaning.

6-`Peter's here, `isn't he?

This sentence is said with a falling tone on the statement and tag to mean that the speaker is certain of his information. Most of the subjects failed to perceive the tone pattern of this sentence and failed to interpret its meaning. Thirty six subjects failed in perception. Eleven subjects thought the sentence to be said with the rising tone on statement and the falling tone on tag. Ten subjects marked the statement with the falling tone and the tag with the rising tone. Four answers occurred with the rising tone on statement and tag. Three answers occurred with the falling tone. Three subjects left without answer. The tone patterns fall-rise plus rise-fall, rising tone plus level tone, level tone plus falling tone, fall-rise and rise-fall gathered one response for each.

In concern to interpretation, twenty eight subjects failed to perceive the correct meaning of the sentence. Nine subjects said that the speaker is uncertain and expects a yes/ no answer. Eight subjects didn't answer. The sentence gathered

seven interpretations as a statement. Three subjects interpret the sentence as an emphasis question. One respondent interprets the sentence as an exclamation.

7-Did you play tennis or golf?

This is an alternative question in which the speaker is asking the listener about which game did he/she play? Twenty one subjects failed to perceive the correct tone pattern of this question. Seven responses occurred with the falling tone on the first tonic and the rising tone on the second. Four responses happened with the falling-rising tone. Three subjects marked both tonics with the low rising tone. Another three subjects marked the sentence with the low rising tone at the end of the sentence. Two subjects didn't answer. And the tone patterns level tone plus low rising tone and rising-falling tone plus falling-rising tone received one answer for each.

With regard to interpretation, twenty subjects failed to understand the meaning of the sentence. Seven subjects didn't answer. Five subjects interpreted the sentence as a statement. Another five subjects interpreted the sentence as an emphasis question. Agreement, exclamation and uncertainty received one response for each.

8-Did you play tennis or golf?

This is a list question. The speaker is asking if the listener has ever played any game. This sentence collected the least number of correct perceptions and interpretations. Only two subjects were successful in perceiving the tone pattern of this sentence. The sentence gathered thirty eight incorrect responses. Fourteen responses occurred with the tone pattern the falling tone plus the low rising tone. Five subjects marked the first tonic with the low rising tone and the second with the falling tone. Four subjects didn't answer. Three subjects answered with the rising-falling tone at the end of the sentence. Two responses occurred with the falling tone at the end of the sentence. The tonal patterns fall-rise plus rise-fall, level plus level, rise-fall plus fall-rise, low rise plus level, level plus fall, fall plus level, fall- rise plus fall-rise, low rise plus fall-rise, fall plus fall and the falling-rising tone received one response for each.

Twenty nine subjects failed to interpret this sentence. Eight subjects didn't answer. Seven subjects interpreted the sentence as a statement. Three subjects gave the meaning 'uncertainty'. Two subjects stressed 'golf'. Another two responses occurred with the interpretation 'which one do you play'. Two subjects remarked that 'the speaker asks but he is sure of the answer'. Two subjects interpreted the question as an emphasis question. The other interpretations were: ability, disagreement, doesn't matter. They gathered one response for each.

9-Tell me all about** it.**

This is an imperative said with the falling tone to give the meaning of a command. Nineteen subjects failed to perceive the tone of this imperative.

Fourteen subjects marked the sentence with the low rising tone. Two subjects perceived the rising-falling tone. Two subjects didn't answer. And one response occurred with the level tone.

Thirty four subjects failed to give the right interpretation of this imperative. Six subjects only succeeded. Twelve subjects interpreted the imperative as a statement. Seven subjects didn't answer. Three responses marked the sentence as a question. Two subjects interpreted the sentence as an exclamation. Two responses interpreted the sentence as disagreement. Two other responses gave the meaning uncertainty. The other responses were: emphasis, request, unnecessary information, agreement, doesn't care, doesn't insist. Each of these received one response for each.

10-Tell me all a bout it.

This imperative is said on the low rising tone to give the meaning of a request. Sixteen subjects failed to perceive the tone of this imperative. The sentence gathered eleven responses with the falling tone. Three subjects didn't answer. One subject marked the sentence with the falling-rising tone. And one response occurred with the low rising tone plus the falling tone.

With reference to interpretation, only five responses were correct. Thirty five subjects failed to understand the meaning of this imperative. Eleven subjects interpreted the sentence as an emphasis. Nine responses marked the sentence as a statement. Six subjects didn't answer. Five subjects thought the imperative to be a question. The interpretations total agreement, partial agreement, certainty and order received one response for each.

8. Conclusions

The ultimate conclusions that can be drawn from the findings of the study are the following:

1-The Iraqi learners of English lack the appropriate knowledge of English intonation in spite of their exposure to its structural analysis in the classroom.

2-The subjects general performance in the test shows inconsistency between their perception and interpretation of the intonation patterns of the tested sentences. For example, sentences No. 10 and 9 collected the most correct responses of correct perception but the least correct responses in interpretation. Sentences No. 1, 5 and 7 received the most correct answers in interpretation but the least correct responses regarding tone perception. Sentence No.3 , on the other hand, gathered the most correct responses in tone perception and interpretation alike. Sentences No. 2, 4, 6 and 8 collected the least number of correct responses in tone perception and interpretation.

3-The subjects didn't agree among themselves in their perception and interpretation of the tested sentences. This reveals their limited knowledge of the intonation patterns and their associated meanings.

4-The subjects have the habit of relating the falling tone to statements and the high rising tone to questions.

5-The falling-rising tone and the rising-falling tone proved to be problematic tones for the foreign learners of English because they collected the least number of correct responses in tone perception and interpretation.

6-The falling tone proved to be difficult to perceive when it occurs at the beginning of a sentence.

7-Sentences that have more than one tonic scored the least number of correct tone perception.

9-Suggestions

As an outcome of the present study, the following suggestions are highly recommended

1-Intonation should be given a higher priority in the teaching programmes to develop the learners' level in English and increase their awareness of this important aspect of language.

2-Emphasis should be placed on the teaching of the social meanings of intonation to the non-native learners of English in addition to its phonological structures in order to increase their sensitivity to intonation by exposing them to real life situations.

3-The use of minimal pairs in teaching intonation is an effective way to draw the students' attention to the important role played by intonation in signaling meaning.

4-To get a native-like accent, it is essential for the foreign learners of English to talk to native speakers, or at least listen regularly to colloquial English.

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