

Iraqi EFL College Students' Recognition and Production of Intonation

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Abstract

The acquisition of prosody by EFL learners has a significant impact on their fluency and intelligibility. Similarly, inability to recognize and produce prosody reduces the speaker's intelligibility and comprehensibility. Intonation is sometimes used interchangeably with prosody, as it is regarded as one of its primary and most prominent characteristics. The current study examines Iraqi EFL college students' recognition and production of intonation and measures to what extent their order of acquisition parallels those of native speakers of English. The results of the current study show that Iraqi EFL college students' production of intonation precedes their recognition. Thus, concluding that a strong ability to perceive prosody in a second language is not necessarily correlated with a great ability to produce it. Furthermore, their order of acquisition is noted to partially follow the order that is observed by native speakers of English.

Keywords: Intonation, Recognition, Production.

Introduction

It is generally regarded as challenging to master the pronunciation of a second language, and very few people are observed to achieve native-like pronunciation; given that the process of acquiring the sound system of an L2 involves not only the accurate pronunciation of the actual segments but also mastering L2 prosody (Mennen & Leeuw, 2014). Accordingly, acquiring prosodic features by EFL learners notably influences their speech fluency and comprehensibility, and plays a pivotal role in their speech intelligibility (Kanoksilapatham, 2010). Similarly, failure to produce and recognize prosodic features by either the speaker or the listener can lead to failure to convey and conceive the intended message and ultimately lead to misunderstanding or a complete breakdown in communication (James, 1976). The acquisition of intonation is one of the contributing elements to pronunciation issues encountered by many EFL students; given that intonation is regarded as one of the main and prominent features with respect to prosody. Different intonational contours convey different meanings, and the placement of the nuclear tone or the tonic accent alter the meaning of the sentence and ultimately the message that needs to be conveyed by the speaker. Therefore, intonation plays a crucial role in both speech recognition and production and failure to recognize and produce different intonational contours by EFL learners can lead to failure and breakdown in communication.

Aims of the Study

The current study aims at

1. Investigating the recognition and production of intonation by Iraqi EFL college

students.

2. Comparing the acquisition of intonation by Iraqi EFL college students to that of the native speakers of English.

Hypotheses

The current study hypothesizes the following

1. Iraqi EFL college students' production of intonation precedes their recognition.
2. Iraqi EFL college students' acquisition of intonation follows the same order followed by native speakers of English.

Limits of the study

The current study is limited to examining the recognition and the production of intonation by Iraqi EFL college students. Thus, the subjects of the study are twenty-five students chosen randomly from the under-graduate studies, namely, the third stage in the Department of English, College of Arts, University of Baghdad, during the academic year 2020-2021.

Moreover, the analysis of the current study is limited to examining the recognition and production of English intonation by Iraqi EFL college students and comparing their acquisition process to that of native speakers of English. Hence, explanations so as to how and why such features are acquired fall beyond the scope of this study.

Literature Review

Intonation as a Prosodic Feature

"It's not what you say, it's how you say it". In order to identify the prosody of a given utterance, one should examine the way and manner in which it is said. That is, its tempo, pitch, duration, and so forth. Thus, prosody is present in every stretch of speech and every utterance no matter how brief or lengthy it is, or what language it is spoken in. Intonation is regarded as a prominent feature of prosody. It is significant to note that the term intonation is also used synonymously by some researchers with prosody and suprasegmentals (Chun, 2002).

Another confusion arises in the literature is due to the terminology used by different schools as with the case of the terms *tone* and *intonation*. The American school regards the term *tone* as having to do with tonic languages only. On the other hand, according to the British school, intonation incorporates three interrelated concepts (Halliday, 1967):

Tonality (also known as phrasing) or the chunking of speech into units, called intonation units or tone-units among other designations (Carr, 2008).

Tonicity, or the placement of the tonic accent/syllable, also called sentence stress (Schmerling, 1976), nucleus or nuclear accent/syllable (Crystal, 1969) in a unit.

Tone, that is, fall, rise, fall-rise, rise-fall, etc., referring to the pitch movement or melody.

L1 and L2 Intonation

Prieto and Esteve-Gibert (2018) note that as early as two months after birth, infants develop an understanding of how their mother tongue sounds, such as the ability to distinguish between languages with distinct rhythm and intonation patterns. Moreover, Levitt (1993) asserts that infants begin imitating some prosodic properties of their mother tongues prior to mastering its segmental properties. Intonation is used by infants to express meaning long before developing grammatical knowledge, they can use the accurate stress and intonation contours of their language to distinguish between statements, questions, and commands (Levitt, 1993).

Prieto and Esteve-Gibert (2018) argue that this early sensitivity to prosody contrasts with their relatively limited ability to produce it.

Following the nuclear tone approach which stems from the British tradition of autosegmental phonology and which is adopted by a large number of developmental studies, Cruttenden (1997) stresses that the analysis of intonation starts with: the division of connected speech into intonation-groups, the selection of one syllable within one word in each intonation-group to bear the nuclear accent or *nucleus*, alternatively called the 'tonic' (which is the main stressed syllable of an intonation-group), the choice of the nuclear tone within the intonation-group, which begins at the nucleus, and the syllables that follow to the end of the intonation-group.

It is widely acknowledged that intonation is an early-developing aspect of language acquisition. In the late babbling period, infants are observed to use intonational contours that resemble those of adults which are referred to as “jargon intonation” (Crystal, 1979, p.3).

As far as the acquisition of nucleus placement (*Sentence stress*) is concerned, Cruttenden (1997) observes that children begin to acquire nucleus placement as soon as they develop two-word sentences. And they, in addition, tend to link nucleus placement to sentence-type. Thus, when the child expresses a locative relationship in an utterance like "Daddy Garden", the nucleus will be placed on the second word. On the other hand, if the child wants to express possession, the nucleus will be shifted on the first word. Soon after the child begins to develop three- and four-word sentences, and while combining these sentences or utterances, children are observed to mark the new information with stress rather than the old one.

With regards to the acquisition of nuclear tones, Cruttenden (1997) observes that the most frequently occurring boundary marker in early meaningful speech is the falling tone. Studies (Kent & Murray, 1982; Kent & Bauer, 1985) show that falling contours prevail at 3- to 9-month ages. Delack and Follow (1978, as cited in Snow & Balog, 2002) assert that the physiological demands of both rising and falling contours are different, thus rising contours start to appear in infants' vocalizations as the child becomes more exposed to his native language.

Therefore, by one-word to the two-word stage, children begin to approach and develop adult-like intonation patterns and produce rising intonation. Furthermore, the local meanings associated with intonation patterns are developed at least at the age of ten (Cruttenden, 1997).

A further and detailed order of the acquisition of nuclear tones (Pitch direction and pitch range) in English is provided by Crystal (1981) as cited in Gut (2000):

falls are the first pitch movements to be produced. Next, the contrast between falls and level pitch is acquired, then the contrast between falls and rises. Later, a low fall is distinguished from a high fall and a low rise from a high rise. The last pitch movements to be acquired are rise-falls and fall-rises (p.45).

On the basis thereof, the results of the present study are to be compared to the developmental patterns of L1 acquisition of the same features by NSs to account for the deviations in view of the developmental trends and patterns of the acquisition process.

Recognition and Production

Recent experimental investigations on prosody perception that address how prosodic

features are perceived reveal that many of the challenges that learners face with L2 production of prosodic features seem to be caused by their perception of the features; that is, they are perceptually driven (Mennen & Leeuw, 2014). In contrast, Altmann (2006) concludes from his experimental work on the acquisition of stress that a strong aptitude for perceiving prosody in a second language is not always connected with a strong aptitude for producing it. Thus, maintaining that learners may underperform in perception while exhibiting native-like prosody in L2 production. The current study adopts Altmann's (2006) perspective and hypothesizes that production of intonation by Iraqi EFL students outperforms recognition.

The Identity Hypothesis

Given the widely held idea that second language acquisition is based only on the transfer from the first language, the relationship between child language acquisition and second language acquisition has remained unexplored (Ervin-Tripp, 1974). Meisel (2011) asserts "The question of whether or not different types of language acquisition share essential properties was not addressed in a systematic fashion until the late 1960s" (p.3). Since then, L1=L2 hypothesis, often called the identity hypothesis, the universalistic, or the creative construction hypothesis, has received considerable attention in SLA research (Ellis, 1994). According to the identity hypothesis, L2 learners actively arrange the speech of the target language that they hear and form generalizations about the structure of the language in the same manner as L1 learners do when they acquire their mother tongue. The course of the acquisition process is determined by the structural properties of the target language and of the learning system, not by the differences or similarities between the source and the target language. Moreover, according to the identity hypothesis, the errors of L2 learners are largely identical to those made by children learning that same language as their first language (Appel & Muysken, 2005).

Johnson and Johnson (1999) state that L1 and L2 acquisition share some similarities and differences: L2 acquisition, like L1 acquisition, occurs in broadly systematic stages. The use of corrections, rewards, and reinforcements does not appear to be a significant factor in the acquisition of both L1 and L2, although Bley-Vroman (1988) argues that correction is generally viewed as helpful in the case of L2 acquisition. Both children and L2 learners' knowledge extends beyond what they were exposed to in the input. However, unlike L1, L2 is not inevitable (Johnson & Johnson, 1999). Whereas children normally achieve perfect mastery in L1, adults L2 learners are very unlikely to attain perfect mastery. Success in children language acquisition is independent of affective factors, while affective factors, such as motivation, personality, and attitude have a huge influence on L2 success (Bley-Vroman, 1988).

Variation among L2 learners is more common with regard to the degree of proficiency and the path they follow, unlike child language acquisition, where there is little variation. L2 learners often fossilize at one point in their development or even return to an earlier stage, whereas this is not common in child language acquisition. Children develop innate understandings of correctness, while L2 learners do not. Instruction is viewed as helpful in the case of L2 acquisition, and unnecessary in the case of L1 acquisition (Bley-Vroman, 1988).

There exist a number of studies which prove that both first and second language acquisition follow a pattern of development and show a significant degree of similarity. Ravem's (1968, 1970) study, as cited in Larsen-Freeman and Long (1991), centers on the acquisition of English negation and WH-questions by Norwegian-speaking children. A remarkable similarity is found between their developmental sequences and those discovered by Brown (1973) in his research on the acquisition of the same structures by children acquiring English as their mother tongue. Milon's (1974) research on the acquisition of negation by a Japanese speaker goes hand in hand with Ravem's discoveries. In addition, Lightbown and Spada's (2006) study confirms Ravem's findings with regard to the

acquisition of Wh-words.

Moreover, Dulay and Burt's (1974) research on the acquisition sequences of L1 English functors by native Chinese- and Spanish-speaking children show that regardless of L1 background, L2 learners follow a similar pattern in acquiring English syntax. Thus, a high similarity between L1 and L2 acquisition is detected. On the other hand, the study conducted by Bailey et al. (1974) investigate the same phenomenon but with adults from different L1 backgrounds. Their findings are consistent with Dulay and Burt's (1974) study of L2 acquisition by children, which shows that children and adults undergo the same process and show similar patterns in their L2 acquisition, agreeing with the patterns of the first language acquisition. A further study by Ervin-Tripp (1974) that tackles L2 acquisition of French by English speakers shows that in many respects, the development of comprehension of syntax and morphological features follows the same order in the mother tongue studies.

However, there is some disagreement to such assertions of similarities between the development of L1 and L2. Wode (1981) highlights differences in the developmental sequences of L1 and L2 with regard to negation. When there is a 'crucial similarity' between L2 and their mother tongue, he claims, children resort to using their mother tongue.

Thus, it can be concluded that the study of developmental order in L1 acquisition research provides L2 researchers with essential methodological procedures for analyzing developmental order. Moreover, L1 acquisition order can serve as a foundation for L2 acquisition. Thus, the identity hypothesis is to be followed in the current study. An essential question to be noted is whether the order through which L2 learners undergo is the same as those for L1 children or different.

Methodology

Research Design

The current study is constructed descriptively using both quantitative and qualitative methodologies. Two tasks are designed to collect quantitative data, and qualitative data are collected as the researcher investigated the subjects' performance in both tasks with regard to recognition and production, and as their performance was compared to native speakers of English to examine how parallel their order of acquisition is to that of the NSs.

Subjects

A total of twenty-five students are chosen randomly from the third stage of the Department of English, College of Arts, University of Baghdad, during the academic year 2020-2021. It is to be noted that students in the Department of English are exposed to Phonetics and Phonology courses in the first and second stages. Two textbooks are used in these two stages respectively: "Better English Pronunciation" (1980) by J.D. O'Connor, and "English Phonetics and Phonology: A Practical Course" (2009) by Peter Roach.

Data Collection

The data of the present study are collected using two tasks that focus on both recognition and production of intonation, which are:

1. The Listening task, which is intended to assess the recognition of intonational contours and the nuclear tone i.e., sentence stress.
2. The Reading task, which is intended to assess the production of intonational contours and the nuclear tone.

The items of the test have been constructed relying on Lado (1961). The selection of the sentences for the subjects in both tasks are made in a similar manner. The scoring of the Listening task is done individually by the researcher depending on correct and incorrect answers of the subjects. On the other hand, the scoring of the Reading task is done with the aid of two native speakers of British English depending on correct and incorrect productions of intonation.

Data Analysis and Discussion

This section illustrates the entire results of the data analysis that are related to the subjects' recognition and production of intonation.

Data Analysis Results of the Recognition and Production

With respect to the recognition of intonation, Table 1 reveals the frequencies and percentages of the subjects who recognized nuclear tone and intonational contours.

Table 1 *Frequencies and Percentages of the Recognition of Intonation*

The Feature	Frequencies	Percentage
Sentence Stress	16.6	66.4%
Falling	16	64%
Rising	10	40%
Rise-Fall	16	64%
Fall-Rise	9	36%
Level	11	44%

The percentage of the subjects who recognized nuclear tone i.e., sentence stress is (66.4%). As for falling intonation, it is recognized by (64%), whereas rising intonation marks (40%). With regard to the other intonational contours, rise-fall is recognized by a percentage of (64%), fall-rise is recognized by a percentage of (36%), while level marks a percentage of (44%).

As concerns the production, the frequencies and percentages of the produced features by the subjects are displayed in table 2 below:

Table 2 *Frequencies and Percentages of the Production of Intonation*

The Feature	Frequencies	Percentages
Sentence Stress	14.4	57.6%
Falling	19	76%
Rising	22	88%
Rise-Fall	15	60%
Fall-Rise	15	60%
Level	20	80%

The percentage of the subjects who produced sentence stress marks (57.6%). On the other hand, rising intonation is produced by (88%) which overcomes the falling intonation which shows a percentage of (76%). Furthermore, both rise-fall and fall-rise are produced by a percentage of (60%), while level is produced by a percentage of (80%).

Discussion of the Data Analysis Results

To assess the differences between subjects' performance in recognition and production, a *t*-test for paired samples is utilized.

Table 3 *Recognition Vs. Production*

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Recognition	53.1533	25	12.21072	2.44214
	Production	67.1133	25	20.34447	4.06889

According to the table above which displays the descriptive statistics for the paired variables, it can be noted that subjects recognize intonation at a rate of (53.1533%), whereas their production shows (67.1133%); thus considerably exceeding recognition.

On the other hand, if we consider their order of acquisition with regard to recognition, falling intonation is acquired by (64%), while rising intonation is acquired by (40%) which goes along with the developmental order of the acquisition of English as a first language. Furthermore, Rise-fall (64%) overcomes level (44%), and the last to be acquired at this stage is fall-rise (36%) which marks a deviation from the developmental order provided that the level contour is marked to be acquired before the rise-fall and fall-rise by NSs.

Intonation as concerns production marks a partial deviation from the order of acquisition by the NSs of English in that rising intonation (88%) is acquired before falling intonation (76%). Meanwhile, level (80%) is acquired before rise-fall (60%) and fall-rise contour (60%), which goes hand in hand with the developmental order of the native speakers of English.

Conclusions

From the foregoing analysis, the following conclusions can be drawn

1. Iraqi EFL college students' production of intonation precedes their recognition; therefore, hypothesis (1) is verified.
2. Iraqi EFL college students' order of acquisition partially follows the order followed by NSs of English, Thus, hypothesis (2) is only partially validated.

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