Integrating CAPL in Teaching English as Foreign Language: 
A Discourse approach to teach intonation

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Abstract
Discourse Intonation seems to be particularly well suited for use in the EFL classroom, much more so than the rather complex traditional models or some recent phonological theories. Yet if English teachers are to be provided with clear guidelines on how to incorporate Discourse Intonation into communicative language teaching, much more empirical research is needed with English students to uncover the specific problems they face.

This paper aims to examine the theory of discourse intonation and to discusssome issues related to teaching intonation.

Key words: discourse intonation, EFL students, teaching intonation, PALE, tone.

Résumé
L’Intonation du Discours semble être particulièrement bien adaptée pour une utilisation dans la classe de EFL, beaucoup plus que les modèles traditionnels plutôt complexes ou certaines théories phonologiques récentes. Pourtant, si les professeurs d'anglais doivent être fournis avec des directives claires sur la façon d'intégrer l'intonation du discours dans l'enseignement de la langue de communication, plusieurs recherches plus empiriques sont nécessaires avec les étudiants en anglais pour découvrir les problèmes spécifiques auxquels ils sont confrontés.

Le présent article vise à examiner la théorie de l'intonation du discours et de discuter quelques questions liées à l'enseignement de l'intonation.

Mots clés: intonation du discours, étudiants d'anglais langue étrangère, enseignement de l’intonation, PALE, le ton.
Introduction

Teaching and learning English as a foreign language for communicative use has been drawing increasing attention at educational institutions in the last decade in Algeria, where storing grammatical knowledge and acquiring reading and translating skills have long been extremely emphasized.

Teachers and learners are now eager to train in spoken phases of English and have a deep interest in improving their speaking ability, wishing to gain communicative skills. Alongside this tendency, they begin to feel the importance of intonation and seriously hope to acquire native-like competence of it.

However, it seems that they are unaware of the close relationship between communication and intonation. Hence, they tend to teach/learn intonation to show off how well they can mimic sounds by uttering lists of words or reading aloud written texts. This unfavorable situation seems to be caused because EFL teacher/learners living outside English-speaking countries cannot see the connection between spoken communication and uses of intonation.

1. Discourse intonation approach

1.1. Definition of intonation: There are different definitions about intonation. Cauldwell and Allen (1997:12) present general agreement of it by summing up the fundamentals stated by a number of experts as follows:

(a) the form of intonation centres on pitch and variation on pitch.

(b) there exists a system in intonation.

(c) intonation has meaning, although the nature of that meaning is in dispute.

Intonation is frequently defined more or less generally. Cruttenden, for example, seems to link intonation specifically with pitch movement (1986: 9) while Coulthard has identified it with prosody in general (1992: 96), which would therefore include pitch movement but also loudness, length, speed, and even voice quality. Pitch, however, is the common thread running through most descriptions. Cruttenden describes pitch as the perceptual correlate of fundamental frequency, which is the continuous variation in the sounds we perceive because of the vibration of the vocal cords. Intonation can be narrowly defined as the movements or variations in pitch to which we attach familiar labels describing levels (e.g. high/low) and tones (e.g. falling/rising), etc.

1.2. Intonation in EFL teaching: There are also numerous views regarding what is central to the function of intonation. Among them, there are three views that can be useful in EFL teaching. The two traditional ways view intonation in terms of grammatical function and attitude/emotion; thus, they are called the grammatical approach and the attitudinal approach (McCarthy 1991:106-109).

2. Discourse intonation

Discourse intonation had its beginnings in the formal descriptions of Halliday but was developed into a complete theory by Brazil (Coulthard 1985). He studied intonation from the viewpoint of, and in relation to, spoken interaction exclusively. He examined 'how intonation affects the communicative value of an English utterance' (1995:ix), how intonation functions and what meanings it bears in spoken interaction. Cauldwell and Allen (1997:10) summarize two important points in Brazil's theory:

First, Brazil sees speech as a purpose-driven activity in which speakers and hearers co-operate to reach 'target states' of shared understanding. The conditions governing spoken interaction ... mean
that in their move towards that target state, speakers build their message bit by bit, in tone units. A second point of importance is that it is not speakers alone who use intonation. Brazil highlights the interactive nature of spoken communication. Intonation signals play a key role in listening as well as speaking, as they signal a speaker’s assumptions and intentions with regard to the shared ground between speaker and hearer.

2.1. Systems and choices in discourse intonation: Discourse intonation is concerned with the speakers’ moment-by-moment context-referenced choices. It recognizes four systems of speaker choice: prominence, tone, key, and termination. These four systems containing a total of thirteen choices, which can be summarized in the table below (Brazil 1995:vii):

<table>
<thead>
<tr>
<th>System</th>
<th>Choices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prominence</td>
<td>prominent/non-prominent syllables (2)</td>
</tr>
<tr>
<td>Tone</td>
<td>rise-fall, fall, level, rise, fall-rise (5)</td>
</tr>
<tr>
<td>Key</td>
<td>high, mid, low (3)</td>
</tr>
<tr>
<td>Termination</td>
<td>high, mid, low (3)</td>
</tr>
</tbody>
</table>

The following schema shows clearly these thirteen choices:

![Figure 1: Systems and choices in discourse intonation](image)

Coulthard describes these choices in the table below (Coulthard 1985: 101):

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prominence</td>
<td>Distinguishes marked from unmarked syllables … given to a property that is not inherent (like word ‘accent’) but only associated with a word by virtue of its function as a constituent part of a tone unit. A tonic syllable is one which is prominent but on which there is also major pitch movement.</td>
</tr>
<tr>
<td>Tone</td>
<td>Pitch movements distinguished by their particular direction or contour. In Brazil there are five: falling, rising, fall-rise, rise-fall and level.</td>
</tr>
<tr>
<td>Key</td>
<td>A relative pitch level chosen by speakers for each tone unit, from three choices, low, middle and high. Key choices are made and recognized with reference to the key of the immediately preceding tone unit.</td>
</tr>
<tr>
<td>Termination</td>
<td>Also a low, middle, or high pitch-level choice, made by speakers at the beginning or end of a tone unit. Termination choices relate to the key choices of the preceding and following tone units, whether these are spoken by the same person or an interlocutor.</td>
</tr>
</tbody>
</table>
The tone unit

In addition to the thirteen choices, there is a fundamental component called a tone unit in discourse intonation.

Tone unit in discourse intonation is building blocks of speech which scaffolds the comprehension of whole message (Chapman 2007). Unlike grammatical model of intonation which looks at tone groups and clauses occurring coincidently, discourse intonation model focuses on various intonation features within the tone unit. Discourse intonation model locates a prominently toned item, lexical or grammatical, in each tone group of speech. Brazil (1980, p. 39) mentions that making any word prominent, whether lexical or not, constitutes a meaningful choice. He introduced the concept of tone segment which begins with the first prominent syllable and ends with the last prominent syllable (Brazil 1980, p. 40):

<table>
<thead>
<tr>
<th>Proclitic segment</th>
<th>Tonic segment</th>
<th>Enclitic segment</th>
</tr>
</thead>
<tbody>
<tr>
<td>he was</td>
<td>GOING to GO</td>
<td></td>
</tr>
<tr>
<td>that’s a</td>
<td>VERY TALL STO</td>
<td>Ry</td>
</tr>
<tr>
<td>it was A</td>
<td>WED</td>
<td>Kesday</td>
</tr>
</tbody>
</table>

Prominent words are called tonic syllables or the nuclear syllables and prominence is achieved by raising or lowering the pitch level on the tonic syllable. Brazil points out that tonic syllable reflects the speaker’s judgement that the word in question contains matter which, at this time and in this context, will be informing. Look at the following example (Coulthard 1992, p. 40):

- the queen OF heart
- Which heart did you play?
- the QUEEN of heart
- Which queen did you play?
- the queen of HEART

We can see in this example that tonic syllable depends upon the context of interaction. Shift of tone from queen to heart is determined by the focus of information required by the listener. According to discourse intonation, it is the knowledge of the context that is realized on the spot and speakers make decision on the intonation pattern immediately.

1. Teaching discourse intonation: the example of PALE

Pronunciation for Advanced Learner of English (PALE) is one of the approaches to teaching discourse intonation prepared by Brazil himself. Keeping with the spirit of discourse intonation, the teacher’s book says the focus is on encouraging learners to “see pronunciation from the point of view of how it can best enable them to make their meanings and intentions clear to the listener” (1994: 2)

PALE is a detailed introduction to discourse intonation theory, although some items have been left out in the interest of pedagogy (e.g. termination, the rise-fall and oblique falling tones). Learners are taught in the forms and functions of tone units, prominence, tonic syllables, and tones. PALE makes much use of linguistic terminology and a transcription system, because according to Brazil these are the “best way of pinning down the otherwise elusive nature of intonation and so avoiding the vagueness that can so easily undermine one’s confidence when working with it” (1994: 5).
The methodology is inductive. Students are encouraged “wherever possible to discover ‘rules’ and other regularities for themselves, and formulate them in their own terms, before these are stated in their institutionalized form.” (1994: 4). When stated, however, the generalizations are clear and explicit. For example,

*There are two different tones which you can use when you want to say that what you are saying is not news: a rise and a fall-rise. Both of these tones tell your listener the same thing: that the tone unit refers to a part of the message that you both know about already. For this reason, we call them both referring tones* (1994: 3).

Each unit begins with a listening text which learners first process for meaning, and which provides a context and examples for analysis and discussion. Exercises which follow usually involve students analyzing tone units from the tapescript and deciding why, for example, a speaker chose a referring tone in one particular instance – that is, how could the information be said to be given, or part of the shared background. In addition to listening, learners do some production-oriented exercises also.

2. **Problems with teaching discourse intonation**

As discourse intonation is a new field in linguistics, it faces so many difficulties which are discussed below:

2.1 **Difficulty distinguishing tones**: Teaching intonation faces some difficulties, particularly tones. Cauldwell and Allen note that “people vary in their ability to hear intonation patterns, and there are quite often disagreements between trained listeners about what they hear in a speech sample” (1997: 2). If even native speakers have trouble identifying tones in a recorded transcript, we can see the difficulties learners will face not only in distinguishing but also producing them. It may come down to individual aptitude.

2.2 **Subtlety of the given/new distinction**: Dalton and Seidlhofer assert that elements of discourse intonation may be “too subtle to survive in practical teaching” (1994: 63). One such element could be the distinction between given and new information. Levis says that what is given and new is often “not transparent” and there are irregularities and exceptions. For example, learners must understand that new information does not mean all new information but rather the last piece of new information in a phrase (2001: 48). “While new and given information are valuable concepts for analysis,” Levis concludes, “students will often have difficulty applying them.”

2.3 **Planning time**: A linked problem is the need for planning time, which Levis calls a “major limitation for learner” (2001: 49). Speakers engaging in real-time communication have to make decisions as they go about which information to highlight, while at the same time responding to what they hear. For someone interacting in a second language, the burden of intonational, as well phonemic and lexico-grammatical encoding, may overwhelm one’s processing capacity.

3. **PRACTICAL RESEARCH**

3.1 **Paradigm and research questions**

In this research proposal, we will base on the didactic approaches more directly interculture linguistics.

The study we propose focuses on learning English in a university context. It would take for public student Arabic in Algeria. It articulates two main areas: sociolinguistics and didactics. Indeed, we propose to analyze the intersections between representations on languages, perceptible through the speech epilinguistic young Algerian speakers and heterogeneity of their language practice in a learning situation, in that the student navigates ” between the languages.”
Facing a multilingual audience, we might ask:

- How or rather through what (s) language (s) do students approach learning intonation of English in universities? For what (s) means they encounter this language?

- How to install phonetic skills in young Arabic-speaking learners? And how to build the fix model on the basis of studies in phonology?

In general, the pronunciation problems that Arabic-speaking students encounter can be summarized as:

1. rhythm problems: bad placement of the accented syllable which results in an imbalance in the rhythmic and melodic pattern of the statement plus neutralization of unstressed syllables, causing the disappearance or transformation of the stamp of the unaccented vowel.

2. Problems and chaining links, due to the trend towards open syllabification of English.

3. melodic problems: poor reproduction of melodic patterns basic English, misplacement in rhythmic groups and therefore indecisive accented syllables.

3.2 The target audience

Our research proposes to take as audience multilingual students in the first year, English Language and Literature at the University Ouragla, (Berber, Algerian Arabic/Standard Arabic, French) in Algeria 30% of the population. For this audience, learning intonation and rhythm of a third language has proved difficult given the context, including multilingual, necessitating a prosodic rehabilitation, which should be a fundamental step in learning the English. It is, indeed, a real basic structure within which the phonological system will be able to install.

3.3 Methodology

Software used

We propose the use of PRAAT prosodic analysis software that can be downloaded free. This is a computer program that allows to conduct phonetic analysis to synthesis of speech and manipulate data (statistical analysis, grammar construction, etc.). The benefits include:

- To record audio files this can then be analysed;

- To transcribe, label and segmenting audio data (the recordings were made under Praat or they come from other files, for example in WAV format);

- To conduct acoustic and phonetic analyzes segmental level (spectrogram, formant analysis, sonogram, etc.) and suprasegmental level (pitch, intensity and duration);

- From manipulate and modify the speech signal (using filters, changing intonation contours and duration, etc.)

- To make the speech synthesis (create audio stimuli, articulatory synthesis, analysis synthesis of modified data, etc.);

- To build learning tools (Neural network and development of grammar in the context of the theory of optimality: OT, Optimality Theory);

- To make statistical analyzes from the phonetic studies (covariance analysis, etc.).

The advantage of this program is that several of oversimplification intonation curves, ie, the tone and intensity. In terms of our study, we will focus our attention on the intonation curves displaying the use of questions by students.
For analytical purposes, we will use a different tool, language multimedia laboratory that would transform the classroom into an Interactive environment through its audio and video functions that allow the teacher to set up multimedia activities and, in an educational network environment.

It is therefore, in terms of registrations and the realization of intonation curves of an indispensable tool either for experimentation or for the implementation of the methods that we offer.

3.4 Results; After analyzing the diagrams of the software program, results show:

Some of the students did not improve when using tones for Yes/No-questions, whereas some has shown little improvement.

![Native speaker model](image1)

**Pre-test: Did he come? Post test1 Did he come? Post test2 Is he ready?**

*Figure 1: Pitch contour of yes/no questions that were produced by student 1 compared to the native speaker’s model.*

Surprisingly, an improvement in using pitch movement with wh-questions was noticed.

- “How do we say it?”

![Native Speaker model](image2)

**Pre testPost test1Post test2**

*Figure 2: Pitch contour of WH-questions that were produced by Student 1 compared to the native speaker’s model*

- “When will you have to submit?”
For Yes/No questions, 86% of participants’ amongst which Student1, have failed in using the appropriate pitch contour in the pre test.

Non–native speakers have the tendency to start with a rising tone then falling gradually above the Ns model.

For WH-question utterances realized by the students reflect little improvement, after Post-test 1. During Post test 2 a better mastery of both falling and rising tones occurred in post test2 compared to NS model. Such mastery of tone choice and use was clear enough in pronouncing the final syllables.

All in all, most students could improve their pronunciation with appropriate intonation patterns after post test2 using PRAAT program. At the beginning, Students misuse tones and pitch for both Yes/No questions and Wh- questions in which the produce most of the time neutral or level tone. After many uses of PRAAT, recordings proved its usefulness for improving students’ intonation uses by prominent pronunciation of falling and rising tones for both types of questions. (See Figure3 below)

- “Did he come?”

Figure 3: Pitch contour of WH-questions that were produced by Student 1 compared to the native speaker’s model

Figure 3: Pitch contour of WH-questions that were produced by Student 1 compared to the native speaker’s model
Figure 3: Pitch contour of yes/no questions produced by some students compared to the native speaker’s model

The same improvement was remarked with Wh-questions.

Conclusion

Results obtained from CAPL show the importance of using naturally occurring utterances in an interactive way to promote one’s intonation realization. Hence, using PRAAT could bring greater benefits in the future if used within a discourse framework to teach intonation to ESL students. Although some scholars consider the difficulty of Brazil’s model to teach discourse intonation, we hope to implement it in the long term teaching courses namely for adult learners.

References