

METADISCOURSE IN LECTURE COMPREHENSION: DOES IT REALLY HELP FOREIGN LANGUAGE LEARNERS?¹

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Although research on metadiscourse has traditionally focused on written texts, attention has also been paid to the presence of metadiscourse elements in lecture comprehension.

This study aims to find out to what extent the presence or absence of metadiscourse affects lecture comprehension. Two groups of students listened to two different versions of the same lecture—one contained metadiscourse whereas the other did not. The students' notes, together with the results of a questionnaire requiring them to reflect on their comprehension process, were compared. Results suggest that there are two key factors to be considered, namely students' proficiency in English, and the different types of metadiscourse items present in lectures.

1. INTRODUCTION

The general background against which this paper has been written includes two main kinds of studies. The first type comprises those analyses of lecture discourse (Murphy and Candlin 1979; Dudley-Evans and Johns 1981; Goffman 1981; Chaudron 1988; Olsen and Huckin 1990; Nattinger and DeCarrico 1992; Flowerdew and Miller 1992; Shing Chiang and Dunkel 1992; Flowerdew 1994; Allison and Tauroza 1995) where factors like speech rate, cultural differences, note-taking practices, listening strategies and discourse organization, among others, are considered. The second set of studies refers to research on metadiscourse in particular, which has traditionally focused on written texts (Meyer et al 1980; Schiffrin 1980; Crismore 1984, 1989; Vande Kopple 1985a; Nash 1992; Cheng and Steffensen 1996; Hyland 1998, 1999). Different classifications have been proposed, most of them sharing a functional, Hallidayian approach in that metadiscourse is divided into textual and interpersonal items. Metadiscourse has been studied from different viewpoints and for different purposes. From a contrastive rhetorical viewpoint, cultural and educational differences in the use of metadiscourse have been pointed out by Mauranen (1993) Crismore, Markkanen and Steffensen (1993)

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and Connor (1996), for example. The use of metadiscourse is also known to vary when different audiences are addressed. Thus, when comparing the use of metadiscourse in written texts addressed to an expert audience as opposed to those aimed at laypeople or students, studies point to a higher number of textual markers in non-specialist texts and a more important presence of attitudinal metadiscourse in specialist texts. From another perspective, research into the role of metadiscourse elements in reading and writing reveals different and sometimes intriguing results. On the one hand, studies like that of Sloan (1984) claim that most explicit markers are unnecessary and dispensable, and other research (Vande Kopple 1985b; Meyer et al 1980) concludes that some metadiscourse items do not always result in higher reading comprehension or achievement, sometimes because other factors may interact with metadiscourse and affect comprehension—degree of repetition, students' profile, or differences in the types of reading strategies employed by native and non-native students. On the other hand, the facilitating role of metadiscourse has obviously been acknowledged: metadiscourse is known to be an effective technique for improving writing and enhancing critical reading, and a means to render textbooks more considerate and reader-friendly (Cheng and Steffensen 1996, Crismore 1984, 1989; Hyland 1998, 1999). Yet, little has been said regarding the role of metadiscourse in listening comprehension. For example, in their study of the effect of markers on lecture comprehension, Chaudron and Richards (1986) conclude that micro markers help more than micro-and-macromarkers together and more than macro markers alone in second language students' understanding and recall of lectures.

Particularly inspired by Chaudron and Richards' research, this paper reports on an exploratory study focusing on the effect of metadiscourse on learners' comprehension of lectures. By metadiscourse we refer to any means the speaker uses to shape discourse or to express his attitude. The aim of our research was twofold: to find out to what extent the presence or absence of such elements affects comprehension, and to assess whether or not students perceive its effects in a lecture: i.e. do they notice the presence or absence of metadiscourse items in a lecture? Do they consider metadiscourse when evaluating the quality or difficulty of a lecture?

In the light of the above objectives, we framed the following research questions: (i) whether students perceive metadiscourse items and to what extent they use them to interpret the input, and (ii) whether they can articulate their knowledge of these items when asked to reflect on their comprehension process.

The reason why we focused on listening comprehension is because this skill has proved to be especially difficult for foreign students. In our context, where English is a foreign language, EST (English for Science and Technology) courses focus basically on written texts, so students do not have much access to spoken discourse. Furthermore, the lack of adequate strategies is often a barrier for them to understand speech. Our opinion is that paying attention to metadiscourse, as part of these important strategies, should be addressed in the pedagogy of listening.

We were also interested in doing research into the above questions because of their connection to the syllabus in our language programme, which includes a course on oral communication. This course aims to develop listening and speaking skills in academic and professional contexts and to practise different types of language functions used in those contexts. Especially relevant to this study are two sections of the course, which focus on lecture comprehension and oral presentations, where the role of metadiscourse elements is stressed through examples of use. Given the importance of metadiscourse elements in academic lectures, our aim with this study was to enquire into students' use of such elements in speech comprehension.

Our initial hypothesis was that if metadiscourse elements have an effect on the comprehension of written texts, then it is even more the case in spoken discourse. As speech is the only source of input, the listener has to rely on these items to reconstruct the structure of the lecture and to process the message. From this starting point, three subsidiary hypotheses can be derived:

1. Metadiscourse markers will have an effect on students' understanding of the structure of the lecture, especially as such elements are intended to help listeners distinguish fact from opinion, or discriminate main from supporting ideas.
2. As a corollary of the previous hypothesis, the absence of such markers will make it more difficult for the listener to process the message.
3. Having taken a course in oral communication, students will be able to perceive the presence or absence of such elements, which will be reflected in their notes and in their assessment of both the difficulty of the listening task and the quality of the lecture.

2. METHODOLOGY

2.1. Subjects

The subjects that took part in our study were university students of engineering who had just completed the course mentioned above. We chose two equivalent groups of students aged 18-28, corresponding to two class groups that were about to take the final examination on this subject. They were administered a placement test to assess their level of proficiency in English, which ranged from intermediate to advanced (see table 1). The results of the placement test showed no difference in terms of proficiency of English between the two groups. However, the wide range of levels within each group was expected to have an effect on students' performance in lecture comprehension. In fact, such disparity reflects the heterogeneous nature of foreign language classes in our university, a problem that needs to be addressed in our everyday teaching practice.

As university students, they were assumed to possess highly developed academic skills, which include some schematic knowledge of the genre of lectures

as well as extensive practice in note-taking. The topic chosen for the lecture used in this study ("The higher educational system in the USA and in Spain") was neither unfamiliar to the students nor highly specialized, so that they could use their prior knowledge to interpret the lecture; this way it was ensured that none of them had a significant advantage.

	GROUP 1 LECTURE WITH	GROUP 2 LECTURE WITHOUT
Number of students	21	16
Sample mean	57,3	51,3
Standard deviation	14,6	17,1

Post-hoc Tukey's test (HSD): $F(1,25) = 0.98$ $P < 0,33$

Table 1. Distribution of groups and results of the placement test

2.2. Procedures

Two versions of the same lecture were used, which had been specifically designed for the study. An assistant lecturer from the U.S. was asked to prepare a talk on the topic suggested by the researchers. The version submitted, which included metadiscourse, served as the baseline, and another version was elaborated in which metadiscourse was removed. In order to control the use of metadiscourse, the lecture was scripted, although we took special care to make it resemble speech. From the two final versions —labelled *Lecture-with* and *Lecture-without*— the speaker delivered both talks, reading aloud at a normal speech rate, without using any visual aids. Group 1 listened to *Lecture-with* whereas Group 2 listened to *Lecture-without* and the students were told to take notes of the lecture to which they listened once. Afterwards, their notes were collected and a questionnaire (see Table 2) was passed requiring them to reflect on the listening activity. The students were asked: (1) to assess the perceived level of difficulty of the lecture, (2) to evaluate both the quality of the lecture and the speaker, and (3) to name which strategies they used for comprehension and to identify those elements in the lecture which, in their view, facilitated or hindered comprehension. Most questions were framed in such a way as to elicit both quantitative and qualitative data since students were asked to justify their answers by adding their own comments. Our aim was to gain a better insight into students' views on listening comprehension. For this purpose, the students' first language was used in order to elicit as much information as possible.

To prepare the two versions of the lecture, we devised an *ad hoc* classification of metadiscourse elements based on functional criteria, drawing both on the analysis of the lecture and on the study of different classifications proposed from a functional perspective, particularly those developed by Crismore, Markannen and Steffensen (1993), and Hyland (1999). However, considering that these classifications have

CATEGORY	FUNCTION	EXAMPLES
Textual		
Logical connectives	express semantic relationship between main clauses/ sentences	<i>and, therefore, however, still</i>
Frame markers	mark main transitions between different stages (e.g. sequence material, indicate topic shift)	<i>first, second ; now, let's turn to...; before delving into...;</i>
Illocutionary markers	naming the act the speaker performs or announcing the speaker's intention	<i>I am allowing myself to make sweeping generalizations ; I'd like to discuss; I shall highlight; I have attempted to compare;</i>
Reminders	refer back to other sections of the lecture	<i>As I mentioned before; As I think back over what I have said thus far...Throughout this lecture ;</i>
Attributors	provide support for the speaker's arguments, including quotes	<i>Because of increasing evidence....;</i>
Code Glosses	clarify, explain, rephrase, or exemplify propositional meaning	<i>for example, that is, such as, in other words,</i>
Interpersonal		
Hedges	withhold full commitment to the statement	<i>normally, perhaps, for the most part, may, might, in many cases, give or take..., it appears that..., I think...</i>
Certainty	express full commitment to the statement	<i>of course, plain and simply, there is no such thing as...</i>
Emphatics	to highlight aspects of propositional content or mark salience	<i>do in fact...;most importantly; [fronting]</i>
Attitude	to express the speaker's attitude towards propositional content	<i>X might knock you out of your seat, the more interesting topic of..., it is my opinion that...</i>
Relational markers	to establish and maintain rapport with the audience (including rhetorical questions, direct appeals to the audience,etc.)	<i>You might be wondering what...; To a European student... [refer to a characteristic of the audience] Can we learn from...? de buen rollo , discotecas [code-switching] "you", "including-we"</i>
Person markers	to explicitly refer to the speaker	<i>"I"</i>

Table 2. A classification of metadiscourse elements

From this same perspective, an element which in isolation would not be regarded as metadiscourse turned out to be used by the speaker to perform a metadiscourse function. For example, "*so that*" —not usually included in metadiscourse— was used as a code gloss signalling exemplification.

... the philosophy of education is more inclusive of all disciplines, *so that* as a student of English I would still have to take a few science and math courses, some religion or psychology or music theory, etcetera.

In analyzing the original version of the lecture for the presence of metadiscourse elements, it was noted that some metadiscourse functions were not performed by a specific marker, but by a syntactic structure. In the following examples, markedness was used as a criterion to classify these phrases as metadiscourse, e.g., fronting used for emphasis:

... *what counts most is* that you receive a degree..

... *it is not uncommon* for a student at an American university ...

...that little piece of paper that you receive saying Bachelor of Arts or Bachelor of Science *is what allows you to*...

There is a reason for this inflated price: smaller classrooms...

Apart from fronting, another typical resource used to perform a metadiscourse function was bracketing:

The education offered by large state-run public universities is, *in many cases*, the same or superior to private education.

...students graduate from school at the age of eighteen, *give or take a year*, after having completed...

Once the original version of the talk was analyzed independently by the two researchers, the final classification was produced. As said before, the version *Lecture-with* was used as the baseline. When elaborating the *Lecture-without*, we removed those devices that did not affect the understanding of propositional content.

LECTURE-WITH:

For many American college students, their education is financed by the parents. For the majority, *however*, money for college comes from many sources; *for example*, private scholarships, federal financial aid from the government ...

LECTURE-WITHOUT:

For many American college students, their education is financed by the parents. For the majority, money for college comes from many sources—private scholarships, federal financial aid from the government...

We also decided to omit those passages performing only a metadiscourse function like the ones below:

Today I would like to discuss the contemporary higher education system in the United States.

I believe that now would mark an appropriate point in my lecture to bring to light a brief comparative analysis of American and European systems, in order to further underscore the main difference between the two.

In those cases in which this was not feasible, we opted for a less overt or for an unmarked structure:

LECTURE-WITH:

... it is not uncommon for a student to have to...

... what counts most is that you receive a degree...

LECTURE-WITHOUT:

... a student at an American university may have to...

... receiving a degree counts more than anything else ..

3. ANALYSIS

The data from both the notes and the questionnaire were analyzed with quantitative and qualitative methods. The quantitative data, which constitute the basis of the study, were complemented with some qualitative data, providing us with a more accurate picture of the results.

The notes taken by the students were assessed on the basis of the following aspects:

i) the amount of information retrieved: length of notes and information density (the ratio between the number of lexical words carrying key information and the total number of words);

ii) the extent to which they reflected the structure of the talk, allotting one point for each correct idea and another one for discriminating between different ideas in terms of their hierarchical position—e.g. main from subsidiary ideas, fact from opinion, etc. We also noted the number of incorrect ideas, including information which did not appear in the talk.

To assess the notes a benchmark was prepared, which also served to ensure inter-rater reliability in an otherwise potentially subjective analysis. This model set of notes contained a total of 11 main ideas and approximately 25 supporting details and asides.

As for the analysis of the data from the questionnaires, the answers to the closed questions were quantified and a key-word analysis of the answers to the open-ended questions was carried out. This key-word analysis allowed us to

interpret the qualitative data by providing categories which emerged from the ideas mentioned by the students in their comments.

4. RESULTS

The data obtained from the notes yielded the results summarized in table 4. When interpreting these results, one needs to consider that by no means does any of these parameters alone serve to determine the quality of the lecture, but that only by combining them can the construct *listening comprehension* be operationalized.

Parameters	Group 1		Group 2		F (1.33)	
	mean score	standard deviation	mean score	standard deviation		
Length (n° words)	144.09	44.05	143.35	78.92	.00	< .9719
Information density (%)	36.49	11.56	60.46	15.62	33.15	< .0001
Number of correct ideas (1 point each)	9.66	5.91	18.64	9.86	11.37	< .0019
Number of incorrect ideas (1 point each)	1.71	2.28	2.14	2.1	.31	< .5788
Hierarchy for correct ideas (1 point each)	9.23	5.87	14.35	10.32	3.50	< .0702
Total = correct ideas + (hierarchy x 2 points)	28.14	17.64	47.35	30.39	5.61	< .0239

Post-hoc Tukey's test (HSD)

Table 4. Summary of the results from the ANOVA analysis of the notes

In addition to those scores, each set of notes was assigned an aggregate mark based on the number of correct ideas and how these ideas were hierarchized. Because of the focus of this study, distinguishing main from supporting ideas and fact from opinion, we allotted two points to an idea in the correct hierarchical position. We preferred not to use information density in the formula since the number of lexical words used to express a single idea varied greatly among students. Thus, information density is only included in this table for informative purposes.

As table 4 shows, the overall results obtained by group 2 (*Lecture without*) are significantly better than those obtained by group 1 (*Lecture with*), in terms of the parameters considered. The high standard deviation in both cases cannot be overlooked since having mixed-ability groups must have had an effect on the overall scores. The better scores obtained by group 2 may appear counter-intuitive with respect to the hypotheses presented at the beginning of this study. However, when correlating the results for individual marks in the placement test with students' performance in note-taking (as shown in the last row of table 4), it was found that for the results obtained by the students in group 2—not exposed to metadiscourse—there was a fairly high positive correlation (0.68), whereas for group 1 there was an absence of correlation (0.1):

<i>Group 1</i>	<i>Group 2</i>
0.1	0.68

Table 5. Correlation between individual scores in the placement test and the number of total ideas in the notes for both groups.

These results seem to indicate that in group 2, the students who were better in terms of proficiency in English also performed better in note-taking than those with a lower score in the placement test. It also appears that proficient students from group 1 did not obtain the expected scores, whereas proficient students from group 2 obtained much higher scores. On the other hand, less proficient students from group 1 performed much better than less proficient students from group 2.

The questionnaire consisted of two sections, each focusing on a particular aspect of the comprehension of the talk. In the first section, when students were asked to assess the difficulty of the task, the quality of the talk and speaker's performance, the following results were obtained:

	<i>Group 1</i>		<i>Group 2</i>		<i>F</i>	<i>P</i>
	mean	std. deviation	mean	std. deviation		
Difficulty (1-5)	2.69	0.67	3.03	0.82	(1.35) = 1.9	< .1733
Quality (1-10)	7.42	1.16	7.3	0.89	(1.34) = .07	< .7927
Speaker (1-10)	7.85	0.79	8.06	0.88	(1.34) = .56	< .4611

Table 6. Quantitative results from the questionnaire (ANOVA analysis: Post-hoc Tukey's test (HSD))

From the table, it can be seen that the responses for both groups were very similar, with the only differences (although not statistically significant) found in the students' perception of the difficulty of the talk and their assessment of the speaker. On the difficulty scale (1-5), the mean for group 1 was 2.69 whereas for group 2 it was 3.03. When assessing the speaker (1-10), group 1 students rated him lower (7.85) than group 2 (8.06). As for the qualitative data, consisting of the students' comments on their answers, both groups reported that the difficulty of the talk lay in their lack of proficiency in English, speech rate and pronunciation. It is worth noting that 50% of the students in group 2 mentioned information density as a factor which made the lecture difficult to understand, whereas density was not mentioned by students who had listened to the lecture containing metadiscourse. In their evaluation of the lecture, students in both groups made similar comments. Most respondents mentioned topic interest, while 23.8% of the students in group 1 also mentioned the structure of the lecture as an element which contributed to its quality. When assessing the speaker, students made similar remarks on the clarity of the ideas presented, and mentioned a variety of factors like speech delivery, body language, pronunciation and the like.

understood the gist, 18.7% isolated ideas, and 25% reported to have understood main ideas only. Furthermore, the qualitative comments made by the students seem to support these findings—i.e. students in group 1 said that the lecture was well structured and that the main ideas were clear, while some students in group 2 reported that they had left out some important ideas or that they had only been able to grasp unrelated points. When asked about the difficulty in summarizing the talk, 42.8% of students in group 1 replied that the task was not difficult as opposed to only 31% of respondents from group 2. It is also worth mentioning that 76.1% of group 1 students reported that their notes reflected the train of thought presented in the talk, while only 49.9% of group 2 students claimed so. It is perhaps also significant that 25% of the students who were not exposed to metadiscourse gave a negative answer to that question, while no one from group 1 reported that perception.

CONCLUSIONS

Such considerations regarding the relationship between metadiscourse elements and students' lecture comprehension need to be explored in further research. The analysis of the notes shows that, in the parameters used to measure students' performance in lecture comprehension, group 2 obtained slightly higher scores, although the high standard deviation for both groups cannot be ignored. Our results are in accordance with those obtained by Chaudron and Richards (1986), who found that the combination of micro-macro markers did not seem to help students understand the lecture. However, in our study, the high correlation between the students' level of proficiency in English and the results of the note-taking task in group 2 (i.e. *Lecture-without*), together with the absence of correlation in group 1, may suggest that the effect of metadiscourse items on comprehension is related to the students' level of proficiency in English.

The fact that more proficient students from group 2 (lecture without) performed better than more proficient students from group 1 (lecture with) may seem counter-intuitive. However, if one looks at less proficient students, it appears that they were helped by the use of metadiscourse, as less proficient students who were exposed to metadiscourse performed better than less proficient students who were not. These results indicate that metadiscourse seems to be redundant to proficient students, while it helps those with a lower level of English.

In order to account for this apparent contradiction, we need to examine carefully the notion of metadiscourse proposed in this study. On the one hand, our classification of metadiscourse includes both interpersonal markers (which add shades of meaning) and textual ones (which help to structure discourse). The presence of these two categories makes us wonder whether a general statement can be made, saying that metadiscourse helps students understand the lecture—thus assuming that both types operate similarly—or rather, whether a distinction should be made in which each category is addressed separately. On the other hand, it should also be borne in mind that the metadiscourse elements identified range from simple markers (e.g. *"for example"*, *"to begin with"*, *"however"*) to more complex linguistic

structures (e.g. fronting, bracketing, idiomatic expressions). Whereas simpler markers can be expected to help students understand the lecture, these more complex structures, certainly beyond the reach of our foreign language students, will hardly act as an aid—as opposed to what may happen with native speakers. In our context, a message delivered by means of canonical structures is more likely to be understood. The factor of linguistic complexity suggests that metadiscourse may have distracted proficient students from group 1, whereas proficient students from group 2 may have benefited from a condensed, straightforward, and therefore, shorter version of the message. However, in the light of the low scores obtained by less proficient students from group 2, it could also be presumed that less proficient students from group 1 were helped by the simpler textual markers contained in the lecture. Actually, they might have performed worse without their presence.

A possible reason for the low scores obtained by proficient students who listened to the lecture containing metadiscourse elements may be a lack of strategies for dealing with metadiscourse which may appear to them as redundant or even as noise. The analysis of the notes showed that students do not use metadiscourse elements to interpret the message. This result seems to be confirmed by the answers to the questionnaire, where there was only scant mention of the use of metadiscourse elements in the talk, basically of the textual type, which could help students construct their notes. It is worth noting that no mention was made of linguistic devices to perform interpersonal functions.

It is clear that students' perceptions (see table 7) do not coincide with their actual performance in note-taking (see table 4). In fact, when asked to reflect on their comprehension of the talk, students exposed to metadiscourse reported to have better grasped the overall structure of the lecture, which would point to the importance of textual markers in students' perceptions of their own performance. Therefore, it seems that despite the absence of explicit mentions of metadiscourse elements as a factor contributing to the quality or difficulty of the talk, these elements may have had an effect on students' perceptions of their understanding of the lecture.

Although the preliminary results obtained in this study need to be confirmed with a larger group of students, it seems clear, however, that further research needs to consider the effects of both types of metadiscourse items (textual and interpersonal) separately. Besides, if we conclude that foreign learners may find it difficult to cope with complex or marked syntactic structures that can otherwise help native speakers, pedagogy should then take those elements into consideration. The degree of explicitness with which such elements should be taught deserves careful attention and falls beyond the scope of this study.²

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