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THE ROLE OF QUESTIONS IN ENGLISH ACADEMIC LECTURES*

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Abstract

In recent times, researchers have shown an increased interest in the field of English for Academic Purposes (EAP). One outstanding genre within spoken academic English is lectures; whose different linguistic and discoursal features of this discourse have already received the attention of some scholars. One aspect studied in the research of academic lectures is the strategies employed to enhance the speaker-audience relationship. Among them, the use of questions has been a recurrent feature of investigation.

The aim of this study is to make a revision of three previously proposed functional classifications of teacher's questions (Fortanet 2004, Thompson 1998, and Tsui 1992), in an attempt to look for common ground that permits their integration. To achieve this, I have analyzed six lectures from the MICASE (The Michigan Corpus of Academic Spoken English), a total of 51,523 words of two disciplines Biological and Health Science, and Humanities and Arts. The results provide a single taxonomy where the categories proposed by these authors are included, some changes are suggested, and new groups of questions are provided.

1. Introduction

In recent times, researchers have shown an increasing interest in the field of English for Academic Purposes (EAP) (Swales 1990, Mauranen 1998, Fortanet et al. 1998, Hyland 2000, Flowerdew 2002). One of the most important genres within spoken academic English is lectures. Different aspects of lectures have been studied in the last years by researches such as Chaudron and Richards (1986), Strodt-López (1993), Flowerdew (1994), Khuwaileh (1999), or Kerans (2001). One aspect studied in the research of academic lectures is the strategies employed to enhance the speaker-audience relationship. Bamford (2005) defines lectures' style as conversational, stressing the interactive nature of the lecture, the main goal of which according to this author is to establish contact with the students, and the co-option of the students into a discourse community. Crawford (2005: 185) illustrates these strategies for interaction with three examples: personal pronouns, questions, and asides. On the other hand, Fortanet (2004: 87-88) proposes two approaches to the issue, a direct approach and an indirect one. The former is constituted by four devices: the personal pronouns WE and YOU, questions, nominations and asides. The latter approach refers to the use of shared knowledge and geographical references. Finally, Thompson (1998) states that questions seem to generate interactivity, as also do personal narrative elements and the use of metaphors and idioms. The common feature in the three studies on interaction in academic monologues is QUESTIONS.

The aim of this study is to make a revision of previous functional classifications of teacher's questions in academic lectures in English in an attempt to look for common ground that permits their integration.

2. Method

I have based my study on three functional classifications of questions, those of Tsui (1992), Thompson (1998) and Fortanet (2004). Three of them share a common ground in their outcomes. Tsui (1992: 102-109) makes a functional taxonomy adopting the term ELICITATION —first introduced by Sinclair and Coulthard (1975)–, and she analyses 'any utterance which prospects an obligatory verbal response as an "Elicitation" irrespective of its syntactic form'. This author distinguishes six subcategories of elicitation: Elicit:inform, Elicit:confirm, Elicit:agree, Elicit:commit, Elicit:repeat, and Elicit:clarify. Later, Thompson (1998) disregards Tsui's classification for academic lectures since 'questions in monologues typically do not receive a verbal response from the audience at all' (1998: 139). She analyses questions on the basis of their discursive function and syntactic forms establishing two groups: audience-oriented questions and content-oriented questions. Five subcategories make up the whole classification: check, evoke audience response and seek agreement for the audience-oriented group, and raise issues and introduce information the content-oriented one. The third proposal is Fortanet's taxonomy of questions (2004) who distinguishes between questions which call for an answer, and those that expect no reply. The former includes questions answered by students and questions that, after a long waiting pause for a response, are answered by the teacher or are left without any reply. The latter are rhetorical questions, tag and confirmation questions, and invitation to the students' participation.

The data under analysis consist of 6 academic lectures downloaded from the MICASE, with a total of 51,525 words. This on-line corpus permits to establish some parameters for the selection of the sub-corpus. Thus, the lectures share three major features: a) the number of students is between 100 and 150; b) the primary discourse is monologue; and c) student's academic roles are junior, senior, or mixed undergraduates. The lectures are delivered by expert academic speakers of American English, varying in length from 41 to 77 minutes. The corpus is divided into two sub-corpora of equal size attending to two disciplines: Biological and Health Science (LB), and Humanities and Arts (LH), Table 1 gives detailed information of each lecture.

Table 1: Description of the corpus

	Title	Number of speakers	Recording length (min)	Transcript word count
LB1	Race and Human Evolution	8	77	9,395
LB2	Intro Biology First Day Lecture	7	47	6,613
LB3	Biology of Cancer Lecture	2	70	10,964
LH1	History of the American Family Lecture	9	81	10,621
LH2	Twentieth Century Arts	4	41	5,981
LH3	Renaissance to Modern Art History Lecture	2	50	7,951

A manual search was needed to identify all the questions employed in the corpus. After that the corpus was tagged, and the concordancer programme *Worthsmith Tools 4.0* was employed to count the occurrences of the tagged questions and to analyse the relationship between the questions and the surrounding words and tags. The starting point of my analysis was Thompson's classification; therefore, I tagged the corpus into her 5 subcategories of questions: check, evoke audience response, seek agreement, raise issues, and introduce information. However, as the analysis was conducted, the need to incorporate new subcategories and thus new tags appeared. Table 2 shows all tags employed in the analysis: those that describe questions and those used to portrait the speaker's action. In the next section of the paper all the questions found are described.

Table 2: Tags

	Tag	Comments
Questions	<1>	Check
	<2>	Evoke audience response
	<2i>	Evoke audience response: invitation to students' intervention
	<2q>	Evoke audience response: invitation to formulate questions
	<2g>	Invitation to student's intervention
	<2j>	Evoke audience response: students' answer rejection
	<2jhu>	Evoke audience response: students' answer rejection using humour
	<2cl>	Seek for clarification
	<2r>	Evoke audience response: repetition
	<3>	Seek agreement
	<4>	Raise issues
	<5>	Introduce information
	<6>	Rhetorical question
	<7>	Example
	<7r>	Read example
Other tags	<o>	Tell others' thoughts
	<t>	Give time after a question
	<r>	Read
	<h>	Hints to prompt student's answer
	<sa>	Student's answer
	<ta>	Teacher's answer because of the lack of students' answer
	<te>	Teacher's explanation
	<p>	Paraphrase
	<rp>	Repeat
	<w>	Show the student/s is/are wrong

3. Results

The primary classification of the questions identified in the corpus (338 occurrences) corresponds to those questions which call for an answer and are undoubtedly audience-oriented (67%), and questions which expect no reply and therefore are content-oriented (see Table 3 for a full classification).

Table 3: Question types

Question type		N° of occurrences	p. 10,000
1	Audience-oriented: Call for an answer		
1.1	check	129	23,4
1.2	evoke audience response	51	7,6
1.3	corrective feedback	13	2,4
1.4	invitation to formulate a question	11	2,0
1.5	invitation to students' intervention	8	1,5
1.6	seek clarification	2	0,4
1.7	seek repetition	3	0,5
1.8	seek confirmation	4	0,7
1.9	seek agreement	5	0,9
2	Content-oriented: Expect no reply		
2.1	introduce information	61	11,1
2.2	rhetorical questions	38	6,9
2.3	examples	7	1,3
2.4	raise issues	6	1,1

3.1. Audience-oriented: Call for an answer

Audience-oriented questions 'are those in which something appears to be demanded by the presenter of the audience, and which at least symbolically allow the audience an opportunity to provide an actual verbal or non-verbal response' (Thompson, 1998: 140). Fortanet talks about them as questions which 'clearly call for an answer'. These questions are addressed to the whole class or a nominated group or student, and may be answered by all, part of the students or, if it is the case, by the nominated student.

Audience-oriented questions can be subdivided into nine types: check, evoke audience response, invitation to formulate a question, invitation to student's intervention, corrective feedback, seek clarification, seek repetition, seek agreement, and seek confirmation. The functions of these questions are commented on in detail below.

Check

The first subcategory of audience-oriented questions is to use questions to ensure/check that the students perceive and understand the teacher's talk.

(1) can everybody hear me? (LH1)[1]
(2) can you see this? (LB1)

Teachers also use word tags after a declarative to check his/her message is understood OKAY, RIGHT, ALRIGHT.

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[1] Reference to the source see Table 1

(3) it comes along everyday meaning that a day later it's old, and nobody wants old news. right? (LH3)

As Thompson (1998) states, checking questions show the teacher is concerned to guide the students through the presentation and to anticipate possible comprehension problems. S/he offers the opportunity to negotiate with him or her about the procedurals of the talk although the negotiation is symbolic rather than a real invitation to the audience to start interaction.

Evoke audience response

This type of questions, as Thompson herself states, are Tsui's ELICIT:INFORM-type questions. These questions invite the students to supply a piece of missing information.

Since these questions' function is focused on the audience response, I have subdivided them into three types following Fortanet' classification:

• Questions answered by students (28 occurrences),

(4) Pollock, an- do you remember the title? SS: Lavender Mist. (LH2)

• Questions answered by the teacher (7 occurrences)

(5) what do we call it? <P:08>[2] what would you call it? <P:08> the name is there. <P:04> we could call it the hominids right...? (LB1)

• And questions left without any reply (2 occurrences). The examples found in this last group could have received non-verbal answer, but this piece of information is not available in the corpus

(6) they need to be monophyletic groups. <P:04> anyone see a problem with this? <P:05> you might see it later (LB1)

It is worth remarking that there is not a correlation between the number of questions that evoke audience response (51 occurrences) and the total of these three subcategories (37 occurrences). The reason is that eliciting a response does not always follow the structure question-answer (17 occurrences) or question-waiting pause-answer (5 occurrences); sometimes a second question is at least needed (10 occurrences). Normally, there is a difference between the first and the second question, which is twofold: the second question is unusually an exact repetition of the first but adds extra information or paraphrases it, and they alternate personal (11 occurrences) and impersonal requests (9 occurrences), that is questions that have no subject (see example 5) and questions that have subject –you or anybody– (see example 7).

(7) when did, when did Watson and Crick live? anybody know? S: fifties. (LB1)

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[2] <P :08> indicates a pause of 8 seconds

Another strategy employed by the teacher is the use of declarative hints (3) that help students to guess the answer. I have mentioned above questions that are a paraphrase of the questions that precede them, these questions also include hints to shed light on the answers.

It is necessary to point out that the most frequent structure that elicits students response is personal question-answer (13 occurrences out of 28). About questions answered by the teacher, the answer is commonly preceded by two or more questions – personal or/and impersonal– and sometimes by a waiting pause.

(8) and then a third family, which is gorillas, chimps, and humans. what do we call it? <P :08> what would you call it? <P :08> the name is there. <P :04> we could call it the hominids right...? (LB1)

The analysis shows that the function of these questions, that of evoke audience response, is mainly accomplished since most of them are answered by the students.

Corrective feedback

This subcategory of questions aims to elicit a correct answer by the student. A teacher's question, the type that evokes audience response, is followed by a student's answer which the teacher considers is wrong or imprecise, at this point s/he employs a metalinguistic feedback, a question, instead of an explicit correction or other possible ways of correction to elicit student's correct answer. Sometimes humour is included in these questions.

(9) T: what is alive...? okay who's gonna give me a definition of what's alive? somebody better rescue poor Sylvia... i've got a finger and i'm not afraid to use it... S: things that, react and reproduce T: react, and reproduce. do you have a grandmother? S: yeah T: is she reproducing? S: not lately T: is she alive? S: yeah T: so your definition doesn't work. S: so she's dead T: she's you you're happy to redefine her as dead? <SS LAUGH> S: uh... maybe i should've said the possibility of reproducing T: capable of reproducing? at some point in her life cycle? [S3: right] (LB2)

In this example the teacher starts using questions as corrective feedback, then states the student is wrong, but finally it is the student who comes out with the answer.

Invitation to formulate a question

In the fourth most common type of audience-oriented questions the teacher invites students to ask questions about the content to clarify any possible doubt. The analysis of what comes after the question brings about two kinds of response: students' answer, (so they formulate a question), or no answer at all.

(10) anything there? anything you want ask me (LB2)

The corpus has 11 examples of this type of questions, only three of them receive an immediate answer. The rest of the questions are 'useless' since they do not elicit a

question from students. Two possible reasons for this situation are: students have no doubts, or the teacher does not give them enough time to answer. There is no a waiting pause (6 out of 8), thus these questions become false invitations to take part in the discourse and to check the level of understanding so far.

Invitation to students' intervention

This type of questions was already analysed by Fortanet (2004: 88) where 'the only possible answer is the student starting his or her contribution'. This author includes these questions into the category of those which expect no reply. However, contrary to Fortanet's classification and following the criterion that what the students are doing is responding to the teacher's elicitation, I considered them into the group of questions that call for an answer. The most common expression here is:

(11) yeah? [S intervention] (LH2)

Seek clarification and seek repetition

These two subcategories are equivalent to Tsui's elicit:repeat and elicit:clarify which are metadiscoursal, they refer to the discourse itself. After a student's answer the teacher misunderstands it and seeks a clarification or repetition.

(12) S^3: what's the difference in the geologic time scales? T: i'm sorry? S: how how much difference in time scales is there? T: in time scale? S: between the, punctuated equilibrium (LB1)

In this example, the first teacher's question seeks repetition, the second clarification.

Seek confirmation

Tsui calls this type of questions elicit:confirm where the teacher invites the students to confirm his or her assumption. The common form is free standing interrogatives and declaratives followed by a word tag.

(13) what's the name of that Irish movie, Angela's Ashes? (LH1)

(14) you think there weren't any women doctors till the nineteen sixties right? (LH1)

Only in one example of my corpus the teacher receives verbal confirmation. This can be the reason why Fortanet classifies this type of questions into the group of questions that expect no reply; she calls them 'tag and confirmation questions, that is, questions that seek a gesture of attention and the only possible answer to them, which is very rarely provided, is "yes"' (2004: 88). I have followed Thompson's criterion in this

respect considering questions with non-verbal answers into the category of audience-oriented questions, questions that call for an answer although it is not verbalised.

Seek agreement

This is the less frequent subcategory of questions that call for an answer. Both Thompson and Tsui include them in their classifications. These questions invite the students to agree with what the teacher has just stated, in Tsui's words these questions 'invite the addressee to agree with the speaker's assumption that the expressed proposition is self-evidently true' (1992: 107).

(15) seems like a bit of a nihilist no? (LH2)

The two authors agree with the fact that the need to obtain agreement from the students establishes the common ground between speaker and addressee, the power relationship shifts slightly and serves to PROMOTE SOCIAL MUTUALITY.

3.2. Content-oriented questions: Expect no replay

So far I have presented the functions of the called audience-oriented questions or questions that call for an answer on the part of students. The other primary category is the content-oriented questions or questions that are formulated without expecting a reply. These questions are not addressed to the students since it is assumed they do not know the answer, but they are focused on the content, being the teacher who may or may not give an immediate answer. I have adopted Thompson and Fortanet's terminology for this major category trying to adjust my findings to their classifications.

Content-oriented questions can be subdivided into four types: introduce information, rhetorical questions, examples, and raise issues.

Introduce information

These are the most frequent content-oriented questions. Their function is to introduce new information to the discourse. The teacher follows a question-answer pair which is performed by him or herself. Thompson supports the idea that both parts (the question and the answer) are essentially metalinguistic since they signal information to come. She also points out the great power of the teacher in this performance who is able to answer the question immediately, and the formulation of questions which appears to be done on behalf of the students.

(16) what does he do? he abandons the classical past for focus on the real on scenes in the present (LH3)

(17) why does the disease come back? well what happens is (LB3)

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^{3} T stands for teacher, S for student and SS for students

Rhetorical questions

The second type of questions is also included in Fortanet's classification. The analysis of the corpus shed light on three categories of rhetorical questions:
• BIG QUESTIONS, questions that are difficult to answer not only for the teacher but for the science community itself,

(18) who am i? who are you? (LB2)

• Questions with answers are known by students and even by part of the society,

(19) who would want to be in the work force necessarily? (LH1)

• And finally questions which are STUFF TO THOUGHT, there is not an expected answer to these questions but their function is to make students reflect on them,

(20) do you think the economics determines how family life functions? is it the most important thing? or does it work in conjunction with other things? (LH1)

Examples

The third group of questions that expect no response are examples the teacher includes in the discourse, some of them are even read and they start with an introductory phrase.

(21) we used to ask questions like well what did your father do? what did your mother do? did your mother work? (LH1)

Raise issues

The less common content-oriented questions is raise issues 'in which the speaker sets up questions or problems to be dealt with in the coming sections of the talk' (Thompson, 1998: 143).

(22) how do we know that cell populations vary, that they're not all the same? let's go back and think about this experiment again (LB3)

It is not until the revision of the experiment and the introduction of new theory are explained that the answer to the question is yielded.

4. Conclusion and Discussion

This paper revised three classifications of teacher's questions in English lectures according to their discursive function, those proposed by Fortanet, Thompson and Tsui. The results of the study based on the analysis of a corpus of academic spoken English let me draw a single functional classification where the categories and subcategories

proposed by these authors were included; some changes were suggested and new groups were provided.

The two large categories in which teachers' questions were divided correspond to the two primary divisions that Thompson and Fortanet propose in their works; the former calls them AUDIENCE-ORIENTED QUESTIONS and CONTENT-ORIENTED QUESTIONS; the latter refers to them as 'call for an answer questions' and 'expect no reply questions'. A thorough analysis of their definitions and examples allowed me to come to the conclusion that both pairs are essentially the same. Although Thompson focuses on the questions' addressee: the audience or the content of the lecture, a connection can be established with Fortanet's terminology since it is expected that when the addressee is the audience, questions call for an answer (verbal or non-verbal), and when it is the content, no reply is expected from the student. However, Bamford introduces a different perspective which should be considered in further research:

> When a question is asked in spontaneous conversation, an answer is routinely expected. Even in academic lectures when a question is posed the listener normatively expected an answer to be provided. He is on the look out for the second pair part completion. The listener perceives an unanswered question as incomplete and expects the speaker to account in some way for the missing element. Lectures use this strong expectation as an attention getting device, a rhetorical strategy designed to focus the student's attention on the answer. (Bamford 2005: 143)

As it has been commented in previous sections, I adopted Thompson's taxonomy as the starting point of my classification; nevertheless, some additions were made to complete it since her subcategories did not include all the examples of the questions found either in Fortanet and Tsui's works or in mine. On the other hand, I have also found subcategories of questions in these authors that share the same meaning, thus I have tried to simplify them in a single description as it is shown in the table.

Table 4: Summary of questions types

1	Audience-oriented: Call for an answer	
1.1	*check questions*	Thompson
1.2	*evoke audience response*	Thompson and Tsui's *Elicit:inform*
1.3	*corrective feedback*	Querol-Julián
1.4	*invitation to formulate a question*	Querol-Julián
1.5	*invitation to students' intervention*	Fortanet
1.6	*seek clarification*	Tsui's *Elicit:clarity*
1.7	*seek repetition*	Tsui's *Elicit:repeat*
1.8	*seek confirmation*	Fortanet and Tsui's *Elicit:confirm*
1.9	*seek agreement*	Thompson and Tsui's *Elicit:agree*
2	Content-oriented: Expect no reply	
2.1	*introduce information*	Thompson
2.2	*rhetorical questions*	Fortanet
2.3	*examples*	Querol-Julián
2.4	*raise issues*	Thompson

Invitation to students' intervention and seek confirmation questions are proposed by Fortanet in the content oriented group, questions which expect no reply. Contrary to the criterion followed by this author, I have considered them questions that call for an answer since in the first group of questions –the invitation to students' intervention– the students are RESPONDING to the teacher's elicitation, and in the second group –seek confirmation– there is also a response although it is commonly non-verbal. Finally, my contribution to the classification was in the audience-oriented questions: corrective feedback and invitation to formulate a question, and in the content-oriented question: examples.

In the present study, and in those it is based, only a single function has been attributed to each question. However, it is worth mentioning that another perspective would be interesting to adopt in further research, that of multifunctionality. What happens when the intention of the teacher is not unique or when the question has multiple interpretations. On the other hand, three criteria were established to select the lectures in an attempt to compile a representative corpus (number of students, discourse mode, and students' academic roles). However, only three lectures of each discipline met these minimum requirements. This small scale study provides a qualitative analysis of the functionality of teacher's questions. However it will be interesting a cross-checking or comparison to a larger corpus in order to corroborate the findings.

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