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ABSTRACT

A discussion of classroom communication looks at the function of questions, particularly teacher-initiated pedagogical questions but also other classroom questions, either teacher- or student-initiated. Two fourth grade science lessons, conducted in Brazil by different teachers, are analyzed. Analysis focuses on the relative effects of the teachers' different styles of teaching, one textbook-centered and the other teacher-centered, on the pedagogical question, a form of interaction unique to the classroom context. Discourse examples for the analysis are given in Portuguese. The degree of teacher control over lesson content and the quality of the interactions (openness to dialogue, informative or cognitively stimulating nature, relevance, and intent to explore the student's experience) are examined. It is concluded that the more the teacher is in control, the more successfully he or she can switch from a control to a cooperative mode of interaction. While the cooperative mode is not seen as an ideal, it is considered better than the alternatives and is much more likely to emerge in the teacher-centered approach. A 14-item bibliography is included. (MSE)

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Cooperation and control in teaching:
the evidence of classroom questions

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The role of questions in classroom discourse has been studied from the viewpoint of their pedagogical function and of the type of interaction they represent. From a functional point of view, pedagogical questions have the functions of either transmitting knowledge (Ehlich, 1986) or permitting the students to display knowledge (Long and Salo, apud Gales, 1983). Questions which have the first function have been called "didactic questions". Their equivalent would be the assertion, because through them, the teacher makes knowledge accessible to the students, just as when one asserts something (Ehlich, 1986). Questions which have the second function have been called "display questions"; their purpose is to elicit ~~from~~ the students information already covered in class (Gales, 1983; also called 'test questions', Dillon, 1983) In this paper, we use the term "pedagogical question" to refer to teacher initiated questions which have both didactic and display functions, and we reserve the term "classroom question" for all types of questions asked in the classroom setting, including those which are student initiated.

From an interactional viewpoint, pedagogical questions are specific to the school institution, defining classroom structure (cf. Cazden, 1988). They are considered by some authors as the only linguistic form that is exclusive to classroom discourse. They occur, therefore, in asymmetric forms of interaction, and they are always initiated by the teacher. Because of the status and roles of teacher and students in the situation, they represent, in this light, a shift from the control mode, socially sanctioned in the context, to a cooperative mode. Goody (1978) observed a

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similar phenomenon in questions in Gonja, where there was a reversal of participants' roles along the status dimension: in what she called a *deference mode*, parents could give children a chance to make a decision instead of simply issuing a command. In this way they accomplished two things : they masked their own power to control the child and managed to engage the child in the enterprise, thus making him responsible for the consequences of the reply. In Goody's words (1978:32), " A question, by at least seeming to ask information, implies ignorance by the questioner of the answer.(...) If knowledge is power, then to admit ignorance, by asking, is to disclaim power. Furthermore, if to answer involves accepting responsibility, then to defer to another person's answer is to acknowledge that person's right to take responsibility for the choice or decision which the answer conveys."

In the classroom context, the student would accept responsibility for his learning through his answer. The institutional context, however, prevents any interpretation of the teacher's actions where questioning would imply ignorance on the part of the questioner. There is no option or choice on the part of the student either, since he must answer or suffer punitive actions. Thus, we cannot say that there ever is a true shift to a *deference mode* in the classroom situation, since the teacher cannot disclaim power within that context; therefore the function of this mode, as defined by Goody, i.e., avoiding assumption of the dominant role, is unattainable.

What is mutable within the context is the manner in which the teacher exercises his authority. Rather than control, which is coercive, he can, through the use of pedagogical strategies, lead the students to cooperate. Such cooperation does not imply choice on the part of the students, for, in our view, a student's choice to accept responsibility for learning

requires that he participate actively in the teaching process (Freire, 1976), which the institution, as it functions in the Brazilian setting, does not permit. Cooperation with someone, on the other hand, means acceptance of the other's goals, because they seem to coincide with our own (cf. Mey, 1985, 1987). In our society, where literacy and schooling are highly valued, most people, even those who are outside the cultural and economic system, believe in the power of education to promote social mobility, so it becomes natural to accept the goals of those who are in charge of education. It is also easy to enter the cooperative mode, because it implies adherence to pedagogical strategies which are highly valued, strategies which come to us from the Greek Socratic tradition and all the values it implies for Western civilization, and are reinforced by modern thoughts regarding the active role of children in their learning process, through interaction.

The broad division of pedagogical questions into didactic and display questions is not sufficient to capture the several types of question and answer sequences one can distinguish in teacher-student interaction. In this paper we analyse the types of questions that get asked in two classroom settings. We will show that microlinguistic aspects of the interaction, i.e., types of pedagogical questions, are partly determined by macrostructural elements of context, i.e., the socially dominant forces that shape those forms of interaction. We will look at the role of both teacher and textbook author, the absentee participant, whose role in shaping the interaction will become evident from the analysis of questions in classroom discourse.

We analyse two lessons, from two different grade school teachers, both of them teaching science in the fourth grade. The topic of the lesson is, in both cases, *Funguses*.

The roles of teacher and textbook in the

Brasilian context

Textbooks, in the Brazilian context, are the most widely read type of book. According to the last census taken (Molina, 1987), primary and secondary school textbooks constitute 33,5% of the total book production of the country, and take up 99% of the Brazilian editorial market; furthermore, they constitute the only type of book ever read by a great segment of the population, where 30 million, or 20%, have no schooling, and another 30 million after leaving the school, might never have a book in their hands again. In such a literacy context, the influence of the school textbook is felt not only at the level of the editorial market; more important, it becomes extremely influential in the class, determining lesson structures and procedures, and affecting the students' perception of classroom activity.

Too often the classroom activities are centered around the textbook: Not only does the textbook determine the topic, but it also determines the manner in which the topic will be presented, since the teacher chooses to have the students read from the book rather than listen to her explanations.

For example, in a fifth grade science class (this and subsequent examples were recorded by Lopes, 1981) the teacher describes the teaching activity that is about to take place, as a reading activity which will consist of a 'global reading' (leitura global) of three paragraphs, to be followed by a word-by-word analysis of the first paragraph ("...vocês vão voltar no primeiro paragrafo e vão a-na-li-sar¹ palavra por palavra, isto é, de cada parágrafo"). Her description is fulfilled for two long hours.

The fact that the teaching profession, because of the low salaries it pays, does not any longer attract members of those

classes which fully share the cultural and literacy values the school reproduces contributes to the changing role of the teacher, from bona fide representative of the mainstream culture to mere mouthpiece of those values. From observations of classroom activity (Lopes, 1981) it is possible to determine the importance that the textbook assumes in the classroom setting: in addition to providing the stories, it is read, not just once but several times by different students, it serves as the basis for question and answer activities, and finally, its stories are copied. Quite a few literacy activities center around the textbook.

We illustrate below a very common pattern of interaction, only to be expected in a context where teachers have to teach in two or three different schools in order to make ends meet, travelling from one school to another in a continuous fight against the clock, with hardly ever any time for preparing a class before they face the students. Therefore, for most of them their only option is the textbook approach, that is, opening the book and reading the lesson along with the students, interweaving comments and questions as they go along:

T(teacher): As quatro hã... ficaram assim, quatro leis, tá? Chamadas de leis de Dalton. O Ricardo vai ler a primeira. Ricardo lê a primeira lei. Depois o Ricardo vai explicá, tá? Todo mundo presta atenção (the four hmm ...they were four laws, right? Called the laws of Dalton. Ricardo is going to read the first one. Ricardo, read the first one. Afterwards Ricardo will explain, okay? Everybody pay attention).

S(student) R: *Todos os materiais da natureza são formados por partículas infi...infinitamente pequenas* (sounding out) *de-no-minadas átomos* (All materials in nature are formed by infinitely small particles denominated atoms)

T: Isso! Muito bem Reinaldo, Ricardo! Reinaldo, me explica o que o Rei...o...Ricardo falou. (That's it! Very well, Reinaldo, Ricardo. Reinaldo, explain what Rei... Ricardo said)

SRe: Que todas as coisas... as...as...os materiais da natureza hã... (That all things... materials from nature hm...)

T: Todas as coisas da natureza eram formadas de...? (All things from nature were formed by...?)

SRe: *São formadas de partículas ...* (are formed by particles...)
 T: De partículas (By particles ...)
 SRe: *Infinitamente* (infinitely)
 T: *Infinitamente...?* (infinitely...?)
 SO: *Pequena* (small)
 SRe: *Denominadas átomos* (denominated atoms)
 S: *Infinitamente pequena, né?, denominada átomo. Isso quer dizer o seguinte: tudo o que existe na natureza é formado daquelas partículas pequenininhas chamadas átomos. (Infinitely small, right?, denominated atoms. That means the following: everything that exists in nature is formed by those tiny particles called atoms).*

There are, however, teachers who opt for presenting a new topic through an exposition, thus avoiding the textbook mediation and fulfilling more closely our expectations about school and classroom events. In such lessons, the students listen to the teacher, who talks about a topic. The lessons are very traditional, with the students fulfilling a very passive role, more like a sounding board for the teacher's monologues, rather than actually interacting with the adult. His participation in the interaction is generally reduced to one word answers, showing the following sequence of turn allocation: T-S-T-S-T-S and sometimes even T-S-T-T-T-S-T-S (see Cazden, 1988, Dillon, 1983).

We asked ourselves if these two styles of teaching had consequences for the one form of interaction which is considered unique to the classroom context, the pedagogical question. The relevance of the research question rests on our belief that differences in the ways of teaching, and, most important, in the ways of interacting, determine different learning outcomes. (cf. Cazden, 1988)

A question of teacher control

In the textbook centered approach, the teacher adopts not just the contents of the textbook, but the organization of the contents as well. The immediate, most noticeable effect is

an apparent lack of, or diminishing of teacher control over matters of relevance. This relinquishing of control does not mean, however, that the students, the only other bodily present participants, assume this control.

To make this point clearer, let us compare the two lessons under analysis, one of which is textbook centered, and another which is teacher centered. In the teacher centered, or expository, lesson we find, as we would expect, that the teacher has picked some aspects of the subject matter as the most relevant. In the example that follows, the fact that "fungi belong to the vegetable kingdom" is repeated over and over again. The teacher opens the lesson building up to this information, reminding the students about the previous lessons, and therefore activating the relevant previous knowledge:

T: Anteriormente, que assunto nós começamos ver?

(Before, what subject did we begin to study?)

Ss: Bactérias (Bacteria)

T: Anteriormente (Before that)

Ss: Vegetais (Vegetables).

T: Vegetais. Nós vimos, sobre vegetais, o que eles necessitam para germinarem e para se desenvolverem ... (Vegetables. We saw, about vegetables, what they need in order to reproduce and to develop ...)

The teacher further directs the students' attention to the same item of information - by explicitly announcing the point:

T: ...hoje nós vamos ver outro tipo de vegetais ... chamados fungos, bolores, ou mofos. (Today we are going to see another type of vegetable, ... called fungi, or mildew)

Furthermore, she makes predictions about the student's expectations, built on their plant schemata, and takes them into account when she organizes her discourse:

T: Quando a gente ouve falar em bolor ... quando a gente ouve falar a palavrinha bolor ... ou mofo ... o primeiro pensamento

que a gente tem não é de que ele seja um vegetal, né? (When one hears somebody speak about mildew, ... when one hears the word mildew ... or mold ... the first thought that comes to us is not that it is vegetable, right?)

Ss: Não (No)

T: A gente pensa em qualquer coisa, menos que bolor seja um vegetal! Vocês imaginariam que bolor fosse um vegetal? (We think of anything, but that mildew is vegetable. Would you have imagined that mildew was vegetable?)

Even after all that build-up activity in her opening statements, the teacher, when she begins to exemplify, emphasizes again the same fact:

T: Então o bolor mais comum que se conhece é o bolor do pão. Então cria-se ... num pedaco de pão velho que esteja guardado há alguns dias, especialmente se for um lugar úmido ... cria-se sobre ... cria-se, não, nasce, porque é um vegetal, (Then the most common type of mold you know is bread mold. Then it grows on a piece of stale bread that has been put away for some days, specially in a humid place ... there appears on ... not appears, no, ... grows, because it belongs to the vegetable kingdom)

And the fact is repeated once again, just before she begins to provide examples from their everyday experience:

T: Muito bem, aquela camada que se cria sobre o pão, sobre a massa de tomate ... sobre uma laranja, sobre um limão, roupas guardadas, assim em lugares muito abafados ... aquela camada espessa, acinzentada é um vegetal. Aliás são vários vegetais. É um conjunto de vegetais. (Very well, that layer that grows on bread, on tomato sauce, on an orange, a lemon, clothes in a closet, like that in places without ventilation, that thick, grey layer is vegetable. As a matter of fact it is a lot of vegetable. It's a group of vegetable matter)

By the amount of time the teacher spends on just that information, by the numerous and different activities to which it is central (reminding of previously transmitted information, topic announcement, activation of relevant schemata), by the amount of repetition and paraphrasing, it is possible to infer that the teacher assigned high relevance to that item in the overall lesson. It was the point she was

trying to make.

In the textbook centered approach, on the other hand, the teacher does not determine what is or is not relevant in that context, even though she has the socially conferred authority to do so. Certainly the students cannot do so either, since neither their social roles nor the institution have changed. What happens is that the figure of *autoritas*, embodied in the textbook, acquires the most dominant role. In the lesson recorded, the opening remarks consist of a reading of the lesson title by the teacher, who is seconded in this activity by her students:

T: *Bons e maus bolores...?* (*Good and bad funguses...?*)

Ss: *da vida* (*in life*)

T: Bom ... vocês sabem que *bolores*, *mofo*, *orelhas-de-pau*, *chapéus-de-sapo*, *cogumelos* vocês já ouviram falar todos esses nomes, não ouviram? (Well, you know that *mold*, *mildew*, *wooden ears*, *frogs hats*, *mushrooms* ... you've already heard all those names, haven't you?)

Ss: Já! Eu já! (Yes, I have)

T: *Champignons* são nomes populares. Que que dizê nomes populares? (*Champignons* are popular names. What does it mean, popular names?)

S A: Do povo (From the people)

T: O povo. O povo denomina assim, né? (The people. People give those names, right?)

S: E. (Right)

T: He ... *de grande quantidade de vegetais classificados como fungos*. Alguem já viu cogumelo? (Humm ... of a great quantity of vegetables classified as *fungi*. Anybody has ever seen mushrooms?)

If the number of statements about a given topic or subtopic is a measure of the importance of that topic in the overall lesson plan, then there are several topics in this teacher's introduction which seem to be important. Popular names for fungi, the topic in the example above, goes on for several more turns (a total of seven), as can be seen in the statement below, the teacher's eleventh turn:

T: Então o bolor é conhecido também como: mofo, bolores,

10

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orelhas-de-pau, chapéus-de-sapo, cogumelos. Cogumelos, assim que ... nessas árvores, assim, meio apodrecidas, esses troncos, *ceis já viram, não viram?* (Then, mildew is also known as, ... those fungi are also known as: mildew, mold, wooden ears, frogs'hals, mushrooms. Mushrooms, so, in ... those trees so, sort of rotten, those trunks, you have seen them, haven't you?).

Ss: *Eu já, eu já* [inaudible] (I have, I have).

There are several other topics, or subtopics developed: places where mildew grows (4 statements), classification as vegetables (2 statements), great usefulness (2 statements). The fact is that the salience given to any new information depends more on the text structure than on any previous pedagogical decision about relevance on the part of the teacher. Text structure influences because that which is marked as being thematic information gets more attention both from the teacher and from the student: title, subtitles and information that has sentence initial position get repeated more often by the teacher; those parts are also more readily identified by the students, who read along with the teacher, and sometimes even anticipate their teacher's remarks by reading ahead, thus sometimes determining the next subtopic.

In the example below, after a student's reading aloud the subtitle *They can have great usefulness*, the teacher closes the ongoing subtopic ('where one finds mildew') and moves to the one prompted by the student:

1: *E. Então eu vou falar olha, o Carlinhos fez uma boa observação: mas tem alguns que são...? De grande utilidade, né? Então, existem fungos, né, ou seja, bolores, mofos, né, de grande utilidade. ... Isto porque eles são o quê? Você acabou de falar, Carlinhos.* (Yes. So I'm going to talk, look, Carlinhos made a good observation: but there are some which have...? great usefulness, right? Then, there are fungi, right, that is, funguses, mildew, right, of great usefulness. This is because they are what? You just said it, Carlinhos).

S C: *Comestíveis (Edible)*

T: *Co-mes-ti-veis. Que quer dizer comestíveis, gente ? (E-di-ble. What does edible mean, people?)*

A question of quality of interaction

Given a classroom situation where the teacher no longer decides what is relevant in that context, a decision which is essential because of the unequal distribution of knowledge, we might ask what are the consequences of this situation for classroom interaction. In order to answer this we will look at classroom questions so as to determine their form and the ends they are put to in both approaches: the textbook centered approach, where control as to matters of relevance is partially out of the hands of the participants who are present, and the expository class, where the teacher is the participant who decides on matters of relevance.

Open to dialogue?

Considering, in the first place, the allotment of turns in the question asking activity, we find, as we would expect, that in both classes it is the teacher who asks practically all of the questions. There is, however, what we see as one significant difference in the student initiated questions in both groups. In the expository class the students ask questions (four in all) about the contents of the lesson. For instance, after several repetitions of the information that mushrooms belong to the vegetable kingdom, we find the following dialogue:

T: Tem todas as características de uma plantinha. (It has all the characteristics of a plant).

S B: Ele tem folha? (Does it have leaves?)

T: Ele tem raminhos como se fosse plantinhas. Folha não, e ... ele tem ... (It has little stems as if it were little plants. Leaves, no, it is ... it has ...)

Ss: E raizes? (What about roots?)

T: Não. (No.) (switches topic abruptly).

Later on, another student asks:

SJ: [ele respira?] (Does it breathe?)

T: Claro! Se é um ser vivo tem que respirar! Ele só não realiza a fotossíntese, porque ele não tem ...? (Of course, if it is alive it has to breathe. It simply doesn't do photosynthesis because it doesn't have ... ?)

Besides these three questions about the main point, one other question gets to be asked, about a secondary, related topic the teacher also develops in full, i.e., the uses of penicillin, introduced as an example of a useful fungi:

S D: Hã ... Hã ... tem ... se a gente passou alguma vez a pomada ... tem a pomada penicilina, e depois a gente vai tomar a injeção, tem que fazer o teste também? (Hmm ... there is ... if one ever used the unguent, there is the penicillin unguent, and then one goes and takes an injection, do we have to do the test as well?)

In the textbook centered lesson, there is only ONE question asked by a student, which, in spite of its rather ambiguous form is not equivocal, since the teacher immediately interprets it as requiring information about the place in the page that teacher and students are reading:

S: Dona, que lugar a senhora está? Perdi. (Miss, where are you? I got lost.)

I: Eu estou aqui. *Mas existem fungos... mas existem também fungos no-ci-vos* (I'm here. *But there are ... But there are also harmful fungi*)

If the student initiated questions are a measure of the students' interest in a given subject, and the students' interest, in turn, is a measure of quality of classroom interaction (it is the teacher who decides on relevance but she has somehow convinced the students that the subject is indeed relevant or interesting), then we may say that the expository lesson affords greater quality of interaction between teacher and students. The textbook centered approach, on the other hand, fails to spark any sign of student's interest or curiosity about the subject itself.

The apparent lack of interest or curiosity on the

part of the students could be interpreted as a refusal to accept the teaching schema or model that is being imposed. This is evidence, we think, that the student has perceived that the teacher is not the true interagent in that context, but that he is just serving as mediator for an absent participant, the authority to whom the teacher defers, i.e., the textbook author(s), and the strategy is one of resistance (cf. Erickson, 1987). Under this interpretation, such lack of interest should be considered as the one positive characteristic of the ongoing activity, since it shows that the students' perception and insights have not been completely dulled by the nature of the interaction.

Informative and to the point?

We can distinguish a class of teaching questions whose purpose it is to stimulate those mental processes necessary to the building up of knowledge on the basis of verbally transmitted information. We find, in the expository class, several types of questions with that cognitive function:

-Questions to activate the necessary frames for organizing new information. These are instances of display questions, if we view them from the perspective of the students' action, since the student must show knowledge that the teacher can reasonably expect him to have:

'Que assunto nós estamos vendo em Ciências?(What were we studying in Science?),
'Como se chamam as menores plantinhas que a gente conhece?' (What do we call the smallest plants that you know?),
'Ceis conhecem um remédio, muito conhecido por sinal, que se chama penicilina?' (Do you know a medicine, very well known as a matter of fact, that is called penicillin?).

-Questions about previous experience focusing a given aspect of the topic in question so that the student will think of the topic in the manner the teacher wants him to (cf. Ehlich, 1986) :

'Como que vocês observa ... onde é ... que vocês observaram bolor? (How did you see...where is it that you saw mildew?),
'De que cor vocês acham que é?' (What color do you think it is?)

-Questions so that the student will be ready to change existing knowledge structures so as to accommodate new knowledge:

'Vocês imaginariam que o bolor fosse vegetal?' (Would you have thought that mildew was vegetable?),

'Vocês ... que que vocês ... pensaram, no momento que ceis pegaram o cogumelo na mão? Que aquilo lá era o que?' (What did you think when you had a mushroom in your hand. What did you think it was?)

Given a learning situation, where the amount of information about the object being studied could be so much as to simply overwhelm the student, the teacher's questions in the expository class have the purpose of directing the students' attention to a few points the teacher considers important.²

Such pedagogical questions are not found in the textbook centered approach. We found NO questions whose function it was to activate previous, necessary knowledge schemata or to direct the student to display previously acquired knowledge; similarly, there were NO questions to lead the students to think of an object in new, different ways, those the teacher wanted to focus in order to facilitate learning. The learning context was therefore considerably impoverished, as the repertoire of teaching strategies, those which might have helped the student view an object in a new light, and reorganize his previous knowledge in view of the information being presented, was considerably reduced.

Relevant and concerned?

In addition to questions for transmitting information,

2

discussed above, we often find, in the expository lesson, questions whose purpose is that of helping the teacher keep tabs on the students' attention and understanding. If we consider, as Ehlich (1986) does, that it is because he has learnt pedagogy that the teacher can have some form of access, however limited, into the children's learning processes in formal classroom situations, we might consider this type of question central to pedagogical concerns since its function seems to be to engage the students' attention, so as to ensure his comprehension, and therefore his eventual learning.

An example of such type of monitoring question is the outright asking about comprehension, as in "Do you understand?". From a didactic point of view, all teachers' questions have, to a certain extent, a monitoring function since the students' answers provide feedback on this point. There is however, a difference between the questions through which the teacher transmits information, whereby the teacher asks about new, topical information and these monitoring questions, whereby the teacher either asks outright whether the student comprehends or, alternatively, he formulates an incomplete utterance, with the intonation of a question, which the students are expected to complete by guessing the syllable, word or phrase that she has in mind. Such questions, quite distinct by their linguistic form, are not about new topical information but rather involve details and examples plus the students personal experience, as the example below, taken from the expository lesson, shows us:

T: Transformando uma parte do açúcar que entrou na massa do pão, ou do bolo, em gás carbônico, a massa torna-se leve. Tornando-se leve, ela vai ...? (By transforming a part of the sugar that went into the bread dough, or cake, into carbonic gas, the dough becomes light. Becoming light, it will ...?)

Ss: (Voar Ferver Crescer) (Fly Boil Grow)

T: (in admonition) Massa do pão ou do bolo ... (Bread or cake dough)

Ss: Crescer (Grow)

T: ...tornando-se mais leve, ela vai ...? (Becoming lighter it will ...?)

T and Ss: Crescer (Grow)

The monitoring question is also quite common in the textbook centered approach. Unlike the various forms this type of question had in the expository approach, in the textbook centered approach we find that it mostly takes the form of a question about vocabulary comprehension, as in the following:

T: Agora, nos vamos ver os fungos no-ci-vos. Noctivos o que que eles vão fazê? (Now we are going to see the harmful fungi. Harmful what are they gonna do?)

S G: Faz mal prá gente. (They're bad for people)

Because the questions arise as the teacher reads along, at points where she has reason to believe the students might find difficulties, due to the lexicon or the concept involved, the questions give the impression of being random. Unlike the expository class, where the questions are topical, here they cover a much wider range of subjects:

'Que quê dizê nomes populares?' (What does popular names mean?)

'Que quê dizê humo?' (What does humus mean?),

'Que quer dizer comestíveis gente?' (What does edible mean, children?),

'Por que defensores eles vão ... fazer o quê?' (Why defenders? What are they gonna do?),

'não verdes. Então, significa que eles não têm ...?' (Nongreen means that they don't have ...?)

Popular names, humus, edible, defenders, harmful and nongreen resemble more a random collection than related elements in a lesson topic.

Personally interested?

Finally, we would like to comment on one type of question we find in both lessons, although it is much more common in the textbook centered approach: i.e., questions about the students' previous experiences whose function seems to be to

establish the students' familiarity with the object under discussion. Unlike the questions already discussed, however, they are not a form that is unique to the teaching context, for the teacher is not already in possession of the information sought after. Although the questioner may be reasonably sure of the answer because of institutional aspects (for instance, her knowledge of the students and of the context), such questions can have more than one possible answer. As to their form, they are bipolar, thus making the range of possible answers still quite limited: instead of one correct answer, we get two possibilities, a yes or a no answer. In this way, control is still maintained. Let us consider some examples from the textbook centered lesson:

T: Então eles vão causar doenças. Vocês já ouviram falar de ferrugem do café? (They are going to cause diseases. Have you ever heard of coffee rust?)

Ss: (Não! Eu já! Eu já! Dona, que lugar a senhora está? Perdi.) ((No I have, I have Miss, where are you? I got lost)).

T: Eu estou aqui: *Mas existem fungos ... mas existem também fungos no-ci-vos. No-ci-vos, que prejudicam a saúde. Então, Hélio, presta atenção! Ceis já ouviram falar em fungos que atacaram a plantação de café?* (I am here: *But there exist fungos...but there also exist harmful funguses. Harm-ful, that are prejudicial to health. Then Helio, pay attention! Have you ever heard of funguses that attack coffee plantations?*)

Ss: (Já! Eu já! Não). (I have. I already have. No).

Since they ask about the students' previous experience, such questions seem to be motivational: it could be argued that by allowing the students to bring their previous experiences into focus the teacher manages to engage their interest and attention. On the other hand, it might also be argued that the function of these questions is that of activating previous knowledge, therefore not justifying a separate category. However, there are several reasons which justify such a separate category.

In the first place, their linguistic form. They begin

with verbs of perception ('have you ever seen', 'heard', 'touched'), or of other bodily experiences or feelings ('had an injection', 'had such a disease'), thus unequivocally pointing to a personal interpretation which really opens up the possibility for a yes-no answer. It is much less likely that the student will respond to questions about mental states ('do you know', 'have you ever thought', 'have you ever wondered') with a negative answer because of the negative implication that lack of knowledge, or thought, or curiosity might have in the school context.

Secondly, these questions differ in frequency and function from the knowledge activating questions. In the expository approach, personal experience questions are asked when the teacher wants to exemplify an abstract concept. In this lesson, only a fifth of the questions asked (7 out of 33) fall in this category, and they are restricted to examples of the more abstract information being transmitted, the scientific classification of fungi: experience with mildew in everyday foods and objects, experience with yeast and with properties of light objects, experience with mushrooms, experience with fungus diseases, and experience with penicillin.

In the textbook centered approach, on the other hand, almost half the questions (9 out of 19) are 'pseudopersonal'. Such a proportion indicates to us that they have acquired an importance out of line with their exemplificatory function. Since in this approach it is harder to detect a main point, the questions themselves contribute to the impression of dispersion and their purpose is not so easily inferrable. That is, we find that even though their function is mostly to exemplify and make abstract concepts concrete, it becomes harder to pinpoint exactly what they are trying to exemplify, especially if we consider the wide array of topics they cover

(popular names for fungi, mildewed objects, places where mushrooms grow, penicillin, fungi used in processing several types of food , several fungus diseases). Once it becomes harder to infer the pedagogic purpose of such personal experience questions , it will be harder to allow for the teacher's predilection for those questions, given that the context in which they occur makes it hard to believe in true interest.

The fact that they are like true questions regarding the knowledge of the questioner (i.e., the questioner does not know the answer) does not necessarily mean that the questioner wants to know the answer. The institutional rules about classroom questions still prevail, and the student must interpret such questions as a means for achieving some teaching purpose, and not as true, interested questions. It could be argued that the classroom context allows for such pedagogical questions for the sake of a common goal. For such an interpretation to hold, however, the purpose of the questions must be clearly inferrable from the form and the contents of the lesson. If no pedagogic objective is inferrable, as is the case with the' dispersive questions in the textbook centered approach, thus being unjustified on pedagogical grounds, other motives have to be abscribed to the adult who "acts as if he cared".

The fine line between cooperation and unconcern

From the analysis of classroom questions in two different approaches, we end up with an apparent paradox: the more the teacher is in control, the more successfully he can switch from a control to a cooperative mode of interaction. However, there is no paradox if we accept the thesis advanced at the beginning that in the textbook centered approach there is an absentee participant who exercises control over pedagogic

matters. This participant has quite a few negative characteristics: he is much more authoritarian than the teacher could ever be because he comes backed up by a whole set of values about the written word; he is much less informative than the teacher, because he cannot use the immediate context of situation for his purposes, and adapt his discourse to students' needs, interests and previous knowledge. Worst of all, he is absent, and so he must rely on mediators who appear to be irrelevant, insincere and unconcerned since they choose to use his words instead of teaching.

The cooperative mode is no ideal, as Mey (1987) has pointed out, but in the absence of those conditions that would permit students to become subjects instead of mere objects) of their own learning, that mode is far better, because it permits some form of interaction. For the cooperative mode to emerge it is necessary that both authority and dominated group be present in face to face interaction.

Such interaction, in turn, is possible in the type of lesson structure we would expect to occur, based on our own experiences: a lesson built upon the teacher's talk, with occasional participation from the students, regulated by the teacher's right to decide who can talk. In a lesson structured along these lines, a move towards greater participation in the part of the students can happen, for the basic elements of pedagogic discourse are there: an adult who decides on matters of contents and pedagogy (how to present that contents best), interacting, however poorly, face to face with a group of learners. Allowing those learners to engage in richer, more relevant talk in order to learn would mean a change of degree, not of substance. True interaction, although implying more fundamental changes in matters of control and rights of the participants, could also happen, if the power structure was

modified.

Different is the case in the textbook centered approach, where it is the textbook, not the teacher, who has the role of the authority. Instead of this fact characterizing a more open, less authoritarian approach from the part of the teacher, we find the opposite: the student does not even get a chance to answer the teacher's questions (let alone discuss or explore ideas, absent in either of the approaches), because it is not the teacher who asks the questions, just as it was not he who chose a topic and decided on a pedagogical approach. There is no teaching involved in this situation. A shift to a cooperative mode is no longer a matter of degree: the quality of the interaction becomes so impoverished that we hesitate to call it so. It seems clear that the students perceive this to be the case, since they refuse to interact, their contributions being nothing more than forced responses to oral stimuli.

Finally a word about the pedagogy involved, echoing Cazden (1988:51), talking about a very different context where learning was indeed made possible: the examples are reported as discourse, none are advocated as pedagogy.

NOTES

(1) We use the following conventions in the transcriptions (cf. Castilho, Preti & Urbano, 1986-90):
[?]: inaudible talk
[sim]: inaudible talk which has been inferred from context
(Sim. Não.): simultaneous speech
.....: pause
a-na-li-sar: pronunciation with separation of syllables (didactic enunciation)
T-S-T: participants' turns; T(eacher) and S(tudent)
Italics in transcription: material being read aloud

(2) The points being something like "In Science we are studying vegetables and today we will be studying a new type of vegetable, which does not look like a vegetable, fungi, some examples of which are mildew, penicillin, etc."

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