QUESTION-ASKING IN BRAZILIAN PORTUGUESE READING COMPREHENSION TEXTBOOKS

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Introduction

"The proper business of school is to teach students to think!" has been the most widespread cliché in education over the last two decades (Squire, 1983; Paris, Lipson & Wixson, 1983; Spires et alli, 1993; Littlewood, 1996; Collins, 1998; Yang, 1998; Shneiderman, 1998). That is the bad news. In fact, despite all the rhetoric surrounding the major role assigned to education, the reality is that it is still struggling in the midst of a fundamental shift. The good news is that the cliché has a good chance to become more and more tangible among educators, materials designers and policy makers, who are starting to realise that in today's Knowledge Era to think [critically] represents an asset which drastically shifts the traditional paradigms of power. Without a doubt, a learning environment which gives priority to the training of skills aiming at making students become critical thinkers can create and strengthen vantages of independence and autonomy for the students/future citizens belonging to that environment.

It is not difficult to understand the reason for that power shift. Critical thinking is the filter through which knowledge acquirers attend

to information, perceive it, and judge its relevance (Alexander, 1996, p. 89). Under such a perspective, the idea of critical thinking equates somehow with that of the "knowledge construction process" proposed by Cunningham, Duffy and Knuth (as cited inTergan, 1997, p. 5). According to that perspective,

> the individual takes over responsibility by asking questions, constructing interpretations, and appreciating and comparing alternative points of view, multiple contexts, and multiple representational formats of a subject matter. Learners become aware of and are able to manipulate the knowledge construction process itself.

It is, in Gajdusek and vanDommelen's (1993, p. 199) words, "an active attitude toward received data—facts, theories, opinions," including operations such as "comparing, classifying, observing, summarising, interpreting, evaluating/criticising, drawing and supporting inferences, looking for assumptions, predicting, analysing, and synthesising" (p.201). Therefore, as Boekaerts (1997, p. 169) argues, those in control of such operations "can self-scaffold their knowledge acquisition process, allocating sufficient resources to knowledge extraction and to various monitoring processes." Similarly, Stewart and Stoller (as cited inGajdusek & vanDommelen, p.199) draw attention to the fact that "critical thinking skills should be among the most important contemporary academic skills for students to master . . . not as an educational option but as an indispensable part of education."

Critical thinking may be accomplished by several means; questioning (self-questioning or answering teacher's questioning) is one of them. Ample literature has demonstrated the strong, vital, relationship between knowledge and questioning (Pearson & Johnson, 1978; Smith, 1981; de Jong & Ferguson-Hessler, 1996; Ciardello, 1998). Oded and Stavans (1994, p. 498), for example, acknowledge "the contributory effect of questions on reading comprehension and recall."

They further state that "knowledge might be activated by having students focus on comprehension questions as well as the specific information in the text needed to answer those questions." This "contributory effect of questions" can certainly be seen in a variety of disciplines, as Millis and Parker (1996, p. 57) point out:

> Educators use questioning to evaluate and monitor students' understanding of the test domain, psychologists employ questioning to test psychological models, and researchers in artificial intelligence (AI) test the intelligence of their programmes by having them answer questions.

This is not a new issue, though. When Smith (1981, p.124) asserts that "comprehension in reading is a matter of asking and getting answers to questions," he is somehow interpreting or rephrasing Aristotle's words: "those, then, are the . . . kinds of questions we ask and it is in the answers to these questions that our knowledge consists" (as cited in Ciardello, 1998, p.211).

There seems to be a consensus that the task of teaching students to think critically involves "the allegedly mystery called reading comprehension" (Pearson & Johnson, 1978, p. 154). Reading comprehension, in its turn, involves the analysis of a set of related issues. One of them is the central role questioning has assumed in assessing comprehension.

The purpose of this paper is to verify to what extent critical thinking is being fostered by question-asking in Portuguese reading comprehension texts for secondary students. I intend basically to find out whether question-asking in such books keeps, in Gajdusek and vanDommelen's words (1993, p. 205), "with the central critical goal of teaching students to take responsibility" [not only for answering questions but mainly] "for asking the important, relevant questions" that Smith and other researchers refer to.

What's in a question?

Collins Cobuild English Language Dictionary (1987) says that a question "is a problem or a point which needs to be discussed." Being so pervasive in most disciplines, ideally questioning should reflect key concepts such as relevance, appropriateness, and prediction. It should be concerned with "deep-level knowledge," which involves "comprehension and abstraction, with critical judgement and evaluation" (de Jong & Ferguson-Hessler, 1996, p.107). We cannot forget that asking relevant questions in the right way, at the right time, is half way towards fostering insightful judgements on the part of those answering them.

According to Ciardello (1998, p. 212), a good question is related to cognitive and metacognitive processes. He quotes Palincsar and Brown (1984) to clarify these two terms. They argue that a cognitive process has to do with comprehension-fostering, that is, searching or inspecting the text, identifying main ideas, and making connections among ideas. Paul (as cited in Spencer & Angus, 1998, p. 659) also refers to the following cognitive skills: interpretation, analysis, evaluation, inference, explanation and self-regulation. The metacognitive process has to do with comprehension-monitoring, where the teacher monitors whether the content has been understood.

A taxonomy of questions

Pearson and Johnson's (1978) study in the area of reading comprehension includes a taxonomy of questions which, according to the authors, traces the sources of information used by the student when answering questions: information found in the text itself (overtly or not) and information which derives from the student's prior knowledge (scripts and schema). They call these questions *textually explicit, textually implicit* and *scriptally implicit,* respectively. The important aspect to be observed here is the main criterion used by the authors for

determining comprehension categories: "we have been classifying relations that exist between questions and responses: Essentially, our scheme is based upon the data that *must have been used* by the reader to generate that particular response" (pp.162-163).

The textually explicit questions (TE) are those ones where the **answers are right in front of the readers' eyes**. They are the traditional literal questions. In textually implicit questions (TI), **answers can be found on the page but do not require verbatim knowledge:** "both question and answer are derivable from the text *but* there is no logical or grammatical cue tying the question to the answer *and* the answer given is plausible in light of the question" (Pearson & Johnson, 1978, p. 163). The scriptally implicit questions (SI) have their answers **in the respondent's background knowledge**.

Having adapted Manzo's ReQuest approach for questioning training procedures, Ciardello (1998, p. 214) also introduces what he calls "procedural prompts in the form of signal word," making use of Gallagher and Aschner's (1963) questioning taxonomy in his instructional program for training students. The taxonomy seems close to Pearson and Johnson's :

> **memory based questions** (Pearson & Johnson's textually explicit questions)
> Signal words: *who, what, where, when*
> Cognitive operations: naming, defining, identifying, designating, *yes* or *no* responses
>
> **convergent thinking questions** (Pearson & Johnson's textually implicit questions)
> Signal words/short question stems: *why, how, in what ways*?
> Cognitive operations: explaining, stating relationships, comparing and contrasting

divergent thinking questions (Pearson & Johnson's scriptally implicit questions)
Signal words/short question stems: *imagine, suppose, predict, if . . . then, How might . . .?, Can you create . . . .?, What are some possible consequences . . .?*
Cognitive operations: predicting, hypothesising, inferring, reconstructing

evaluative thinking question (Pearson and Johnson's scriptally implicit questions)
Signal words/short question stems: *defend, judge, justify/ What do you think . . . , What is your opinion . . . ?*
Cognitive operations: Valuing, judging, defending, justifying choices

However, whereas Pearson and Johnson's (1978) criterion for classification was the source the respondent searches for the answer (either in the text, between the lines or in his/her previous knowledge), Ciardello's is more like a "wh-list" to help training students identify the types of question he/she may ask.

Raphael (1984, pp. 304-305) presents a taxonomy that is also similar to Pearson and Johnson's. She classifies questions into:

1. **Right There** - words used to create the question and words used for the answer are in the same sentence;

2. **Think and Search** - the answer is in the text, but words used to create the question and those for an appropriate answer would not be in the same sentence;

3. **On My Own** - the answer is not found in the text.

However, her investigation has a different direction as she centres on students' sensitivity to the different information sources.

A final piece of research into the issue of learning from text is that of Just and Carpenter (1987). According to them (p. 420), questions are one feature of the text (together with summaries and headings) that are intended to improve learning by helping the student to select and organise information. They are called **adjunct questions** because, as the authors justify, they are provided by the text and not generated by the student. They can come between segments of the text, precede it or come after it (each position implies a different *selective function*) and may vary from factual to high-level abstraction. In this respect, the authors, based on Watts & Anderson (1971), argue that "high-level abstraction (such as the application of a principle) produces more learning than factual questions" (p.420).

Method

Working hypotheses

The purpose of this study was to find evidence that Brazilian Portuguese reading comprehension textbooks for secondary schools tend to give priority to textually explicit questioning. Additionally, I was interested in verifying whether scriptally implicit questioning was of low occurrence in those textbooks.

As there seems to be no investigation in the field of questioning in the Brazilian context which could scaffold the present study, the hypotheses on which the study was based derived only from my teaching experience with reading students at the university. In almost two decades of teaching, I have noticed that many students face a lot of difficulty in using those critical operations mentioned by Gajdusek and vanDommenlen (1993) as well as in distinguishing vital opposing concepts such as "truth vs. opinion, fact vs. knowledge, and fact vs. interpretation."(p.200). In other words, those students do not possess

the minimum requirements to critically evaluate a text, expand information, transfer new information to other contexts and present insightful judgements about most topics in the texts studied as required. I believe that the causes for such poor performance are twofold:

(1) It may be partly due to the emphasis, of reading comprehension instruction during students' previous schooling (primary and secondary school), on training them well enough only in answering plain, superficial questions. Boekaerts (1997, p. 165) calls attention to this problem, stating that "most students need some practice to make their general cognitive strategies instrumental to new domains." Thus, generally speaking, students seem to enter university without the necessary training in making connections among ideas and transferring these ideas to other subjects. As Paris, Lipson and Wixson (1983, p. 300) argue, "a large body of evidence reveals that poor readers do not skim, scan, reread, integrate information, plan ahead, take notes, make inferences, and so forth as more skilled readers." This corroborates the findings of Guszak (1967, as cited in Pearson & Johnson, 1978, p. 154), who point out factual recall (literal questions) as teachers' most often used question type, as well as those of Long and Sato (as cited in Nunn, 1999), who "found a far greater proportion of display questions[1] than referential questions[2] in the classroom data of six teachers."

(2) In addition, students seem not to have acquired metacognitive knowledge. Educational psychologists reported in Boekaerts (1997, p. 168) have come to the consensus that "students who have more metacognitive knowledge in relation to a subject-matter domain, demonstrate superior strategy use and are better problem solvers."

Thus, the hypotheses that guide the present study are the following:

- **Hypothesis 1**: Textually explicit questioning represents the most used type of question-asking to be found in Portuguese reading comprehension textbooks
- **Hypothesis 2**: Scriptally implicit questioning has a low level of occurrence in Portuguese reading comprehension textbooks.

The corpus

The corpus for the study consisted of sixty questions altogether, which accompanied six texts chosen randomly from six different Brazilian Portuguese reading comprehension textbooks for secondary school, published between 1974 and 1996. I used Pearson and Johnson's (1978) taxonomy as I was interested in identifying the sources of information demanded by the texts dealt with here. The only constraint made on the selection of texts was that they should be authentic (i.e. not written specifically for teaching purposes).

The following were the texts analysed.

1. Dóia. In *Cultura, Literatura e Língua Nacional* (vol. 3), by Marina da Glória Sá Rosa & Albana Xavier Nogueira. Ed. do Brasil, 1974.

2. Soneto da Fidelidade. In *Língua e Literatura* (vol. 1), by Cloder Rivas Martos & Roberto Melo Mesquita. Ed. Saraiva, 1981.

3. Umas e Outras. In *Língua e Literatura* (vol. 1), by Carlos Emílio Faraco & Francisco Marto de Moura. Ed. Ática, 1992.

4. O engraçado arrependido. In *Português: Literatura, Gramática, Redação* (vol. 3), by Beth Griffi. Ed. Moderna, 1994.

5. Apólogo brasileiro sem véu de alegoria. In *Curso Prático de Português*, by Luiz Agostinho Cadore. Editora Ática, 1995.

6. Burro sem rabo. In *Texto em Construção*, by Agostinho Dias Carneiro. Editora Moderna, 1996.

Results and discussion

The data gathered from the texts selected were rated according to Pearson and Johnson's (1978) taxonomy: (a) textually explicit questions (TE); (b) textually implicit questions (TI); (b) scriptally implicit questions (SI). As depicted in Table 1, the hypotheses I raised were confirmed. Of the sixty questions analysed, 28 (46,6%) were TE, 21 (35%) TI and only 11 (18,3%) were scriptally implicit. Thus, texts presented almost three times more TE questions than S questions.

How can one account for this remarkable disproportion between TE and S occurrences? It could be argued that such a disproportion is not at all remarkable if one considers the traditional paradigms on which Brazilian education has always been based. No doubt, educational paradigms are closely related to the political ideology of a country. In fact it has been only in the last thirty years that the concept of democracy started to take roots in our society. The teacher-centred approach, very much used in traditional pedagogy, has, as one of its features, the use of factual questions because the preoccupation is with the delivery of instruction, not with learning; with the teacher's point of view, not the student's; with plain answering, not justifying/explaining; with the text as a finished product, not with the text as the trigger of new ideas; with information IN the text only, not AROUND it. That is why, I believe, the shift to learner-centred approaches which occurred in pedagogical circles all over the world ultimately meant also a qualitative shift of teachers' questioning. The students now are INVITED to participate, to co-opt, to construct and reconstruct their own learning experiences through the internalisation of those operations the literature related to critical thinking deals with. The finding that textually implicit questioning presented an expressive number of occurrences, as I hypothesised in the beginning of this study, might show an ambivalent tendency of our educational environment, as far as instruction is concerned. It seems that the Brazilian instructional model is going through a transition period between the traditional (not so democratic)

teacher-centred approach (where literal questions are so common) and a more democratic learner-centred one (which favours inferential, scriptally implicit, divergent questions).

Table 1. Distribution of types of question-asking accompanying six Portuguese texts.

	Question-asking Level	TE	TI	SI	Total
Text 1	2º grau-Vol. 3 (1974)	03	06	01	10
Text 2*	2º grau-Vol. 1 (1981)	08	02	-	10
Text 3	2º grau-Vol. 1 (1992)	07	02	-	09
Text 4	2º grau-Vol. 3 (1994)	05	02	04	11
Text 5	2º grau-one vol. (1995)	02	04	04	10
Text 6*	2º grau-one vol. (1996)	02	06	02	10
TOTAL		**28**	**21**	**11**	**60**

Note: TE = textually explicit; TI = textually implicit; SI = scriptally implicit

The ideas put forward above are also an attempt to explain the low occurrence of scriptally implicit questioning that I mention as my second hypothesis. For the purpose of illustration, I will present the analysis of 20 questions accompanying two of the texts selected: Text 2: "Soneto da Fidelidade" by Vinícius de Moraes and Text 6: "Burro sem Rabo", by Fernando Sabino. The classification of the questions appears in parentheses, as well as some occasional comments about expected answers.

In "Soneto da Fidelidade" there are eight textually explicit questions and 02 textually implicit questions, but no scriptally implicit questions:

Texto 2: **Soneto da Fidelidade** (Vinícius de Moraes)

1. Qual a promessa que o autor faz? (TE)

2. Diante de um maior encanto, o poeta
( ) abandonará seu amor.
(√) ficará mais encantado com o seu amor. (TE)

3. Como você entendeu o verso: "Quero vivê-lo em cada vão momento"? (TI)

4. Qual é o canto do poeta? (TI)

5. Quando a amada estiver alegre, o poeta ficará .....
E quando a amada estiver triste, o poeta ficará ..... (TE)

(Students have to find evidence in the following lines: E rir meu riso e derramar meu pranto/ao meu pesar ou seu contentamento.)

6. Por quem o poeta espera ser procurado mais tarde? (TE)

(quem sabe a morte . . . quem sabe a solidão . . .)

7. Quando procurado pela morte e pela solidão, o poeta
( ) ainda estará ao lado da amada. ( ) estará só.

(Here the author should have written ou and not e (. . . pela morte e pela solidão). This can lead to a wrong answer.)

8. Segundo o texto, o poeta acredita que
( ) o amor não tenha fim no tempo
(√) o amor não tenha fim na intensidade. (TE)

9. O texto está escrito na ..... (1ª; 3ª.) pessoa. (TE)

10. A idéia principal do poema é:
( ) o amor não deve ter fim.
(√) o amor deve ser o mais intenso possível, pois não é eterno. (TE)

Now let us have a look at text 6: "Burro-sem-rabo". In comparison with the questions above, the questions which accompany this text demonstrates a greater preoccupation with justification, explanation, inference and transferring.

Text 6: "**Burro-sem-rabo** (Fernando Sabino)

1. O carreto foi contratado para trazer ou levar as coisas do narrador? Justifique sua resposta. (TE)

2. Pelas coisas do narrador podemos saber muitas coisas sobre ele. O que podemos deduzir por meio de seus pertences, indicados a seguir?

1. mesa, cadeira, arquivo, estante, livros, máquina de escrever
2. desenho de Portinari, outro de Pancetti
3. cinzeiro
4. quatro retratos de crianças emoldurados

(SI)

3. Qual deve ser o motivo da mudança? Justifique sua resposta com informações do texto. (TI)

4. O que o narrador quer dizer com meia dúzia de livros? (TI)

5. De quem deve ser "a outra fotografia"? (TI)

6. Qual o tema do segundo segmento? (TI)

7. Quais as fases do narrador ligadas à mesa? (TE)

8. Que palavra do segundo segmento—por ser um termo que hoje não mais se usa—mostra que o narrador não é uma pessoa muito jovem? (TI)

9. No final do segmento, quais adjetivos empregados para descrever a mesa que são mais adequados à descrição de pessoas? (TE)

10. (No terceiro segmento) qual a ambiguidade da frase "que também me acompanha desde a infância"? (SI)

Obviously text 6 is more centred on thinking. Expressions like *justifique, o que podemos deduzir, qual deve ser mais adequado*, etc. lead us to think of a more participatory (more democratic) context. Questions in Text 2, on the other hand, are more 'bureaucratic,' demanding, most of the time, bureaucratic answers.

Implications for teaching

The paradigmatic power shift the world has been going through, especially over the last decade, is forcing professionals in the area of education to adapt and develop curricula, methods, assessment system and perspectives of instructional accomplishment, in order to create and nurture knowledge so that the challenges of the new millennium can be faced effectively. In a sense, the (imposed) cannibalisation of the old paradigm is an imperative in our country as it has proved its complete obsolescence. Thus, knowledge, mental agility, interrelationships, and content connections are certainly the resources prevalent in the new and complex paradigm of power and the ones our students will be required to attain.

If we consider more specifically classroom work, reading and writing seem to be the first skills to take advantage of the fostering of critical thinking. Ollman (1996, p. 576), for example, argues that "physical evidence that students were actively responding to text" is not enough. She considers essential the creation of higher level thinking in students' written responses [to literary texts], which accounts for "(a) personal connections with the text; (b) textual analysis of plot, characters, and literary techniques, and c) metacognition—thinking about thinking."

Based on the comments made up to now, it is plausible to say that good asking leads to good answering. However, we should not stop there. Higher level thinking should lead students further, to what Wiggins (as cited in Ollman, 1996, p. 577) calls "a cycle of question-answer-question". He says:

> We can teach students to think by introducing them to a cycle of question-answer-question instead of merely question-answer. **Students rather than the teacher should initiate the questions**. Posing a question can be a powerful first step in discovering meaning. (My highlighting).

I would add that it is a way of nurturing and refining their critical thinking.

In short, it is the teachers' responsibility to help their students to take full advantage of this new paradigm, promoting a environment conducive to a world of unlimited connectivity. Thus, students should be led "to see text processing as an active, creative process rather than as a cold and impersonal process used to support recall of details, ideas, or events" (McCombs,1997, p. 127).
Relevant, appropriate questioning plays a major role in the building of such a perception.

Conclusions

In the introduction to this paper, the importance of critical thinking in today's Knowledge Age was pointed out. In fact, countries that want to prosper among the uncertainties that the next century seems to surmise have to rethink their entire educational framework, promoting substantial changes in their national curricula, emphasising this new problem-solving perspective by the use of a set of essential skills such as transference, interpretation, inference, and so many others of high-level order. As textbooks tend to reflect the academic demands of the

learning environment, perhaps those constituting Brazilian educational environment (teachers, policy makers, materials designers, as well as parents and students themselves) are beginning to realise the necessity of going further and deeper in the question-asking issue in order to foster higher-order reasoning and comprehension.

Taking into account the results of the present paper, it can be suggested that Portuguese reading comprehension textbooks are still very much related to the traditional teacher-centred pedagogy, giving priority to textually explicit questions. Yet, the expressive number of occurrences of textually implicit questions might demonstrate the threshold of the fostering of critical thinking via questioning. In other words, the cliché mentioned in the very beginning of this study may be effectively starting (though slowly) to become a reality.

Notes

1 A concept very close to that of textually implicit questions.

2 A concept very close to that of scriptally implicit questions.

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