

READING COMPREHENSION IN PRIMARY SCHOOL: TEXTBOOKS, CURRICULUM, AND ASSESSMENT

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Abstract. This study describes the reading comprehension processes present in the most widely sold textbooks at the fourth grade level in Portugal and discusses how they compare to international assessments of reading literacy. We adopted the *Progress of International Reading Literacy Study* framework to categorize the questions in the textbooks. Our analyses revealed that they focus heavily on the retrieval of explicitly stated information to the detriment of higher level comprehension skills. Portuguese fourth grade textbooks rarely challenge students to make connections between their knowledge and the ideas in the texts and to adopt a critical and evaluative reading stance. This is in sharp contrast to what students are asked to do in the *Progress of International Reading Literacy Study*, conducted every five years since 2001, and it may help explain the poor results Portuguese students have in national assessment and in PISA. The findings are discussed in light of the curriculum frameworks currently adopted in Portugal and suggestions are made as to how we can improve reading literacy achievement.

Keywords: reading comprehension, literacy, assessment, curriculum, textbooks, primary school

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Chinese

[Translation Shek Kam Tse]

小学阅读理解：课本，课程与评价

摘要：本研究描述葡萄牙最畅销的四年级课本中陈述的阅读理解过程，同时讨论这些课本如何比较国际上有关阅读能力的评价。研究者采用*国际阅读能力研究的发展理论框架*对相关课本的问题进行归类。研究分析显示这些课本过分强调显性陈述信息的提取以致有害于更高层次理解技能。葡萄牙四年级课本很少激励学生把自己的知识和课文意图联系起来并以批判性评价性的角度阅读，这与自2001年以来每隔五年执行一次的*国际阅读能力研究的发展*中对学生的要求形成鲜明对比，也帮助解释了葡萄牙学生在国家的和在比萨的评估中不理想的结果。研究者从目前葡萄牙采用的课程框架角度讨论了研究发现，并就如何提高阅读能力成绩提出了建议。

关键词：阅读理解，读写能力，评价，课程，课本，小学

Dutch

[Translation Tanja Janssen]

TITEL. Begrijpend lezen in het basisonderwijs. Schoolboeken, curriculum en toetsing

SAMENVATTING. Dit onderzoek beschrijft de begrijpend leesprocessen die behandeld worden in de meestverkochte schoolboeken voor het vierde leerjaar in Portugal en bespreekt hoe deze zich verhouden tot internationale peilingen van geletterdheid. We kozen als raamwerk het *Progress of International Reading Literacy Study* en categoriseerden daarmee de vragen in de schoolboeken. Onze analyses wezen uit dat de vragen zich sterk richten op het vinden van informatie die expliciet in de tekst staat, ten nadele van hogere orde leesvaardigheden. Portugese schoolboeken voor het vierde leerjaar vragen zelden van leerlingen om verbanden te leggen tussen hun eigen kennis en de ideeën in de tekst en ook zelden om een kritisch en evaluatieve leeshouding aan te nemen. Dit is in scherpe tegenstelling tot wat aan leerlingen gevraagd wordt in de *Progress of International Reading Literacy Study*, dat sinds 2001 iedere vijf jaar wordt uitgevoerd. Dit zou een verklaring kunnen zijn voor de zwakke resultaten van Portugese leerlingen in nationale peilingen en in PISA. De bevindingen worden besproken in het licht van curriculum raamwerken die nu in Portugal gebruikt worden. Er worden suggesties gegeven over hoe we de leesprestaties kunnen verbeteren.

TREFWOORDEN: tekstbegrip, geletterdheid, peiling, curriculum, schoolboeken, basisonderwijs.

Finnish

[Translation Katri Sarmavuori]

TITTELI. LUKEMISEN YMMÄRTÄMINEN PERUSKOULUSSA: OPPIKIRJAT, OPETUSSUUNNITELMA JA ARVIOINTI

ABSTRAKTI. Tämä tutkimus kuvaa Portugalissa eniten myytyjen neljännen luokan oppikirjojen tekstinymmärtämisprosesseja ja selvittää niiden suhdetta kansainväliseen lukemisen arviointiin. Käytimme *Progress of International Reading Literacy Study*n viitekehystä luokitellessamme oppikirjojen kysymyksiä. Analyysimme paljasti, että ne kohdistuvat vahvasti eksplisiitisti todetun tiedon muistamiseen korkeamman tason ymmärtämisen sijasta. Portugalilaiset neljännen luokan oppikirjat eivät juurikaan haasta oppilaita yhdistämään tietojaan tekstin ideoihin ja omaksumaan kriittistä ja arvioivaa lukemistilaa. Tämä on jyrkässä kontrastissa siihen, mitä oppilailta kysytään *Progress of International Reading Literacy Study*ssa, joka on tehty joka viides vuosi vuodesta 2001 lähtien, ja se auttaa selittämään portugalilaisten oppilaiden huonoja tuloksia kansallisessa arvioinnissa ja PISAssa. Havainnoista keskustellaan opetussuunnitelmatyössä Portugalissa ja tehdään ehdotuksia siitä, kuinka lukemista voidaan parantaa.

AVAINSANAT: lukemisen ymmärtäminen, luku- ja kirjoitustaito, arviointi, opetussuunnitelma, oppikirja, peruskoulu

French

[Translation Laurence Pasa]

TITRE. LA COMPRÉHENSION EN LECTURE A L'ÉCOLE PRIMAIRE : MANUELS, PROGRAMME ET ÉVALUATION

RÉSUMÉ. Cette étude décrit les processus de compréhension en lecture privilégiés dans les manuels de 4^{ème} année les plus largement vendus au Portugal et les met en perspective avec les évaluations internationales. Nous avons adopté le cadre d'analyse de l'enquête internationale *Progress of International Reading Literacy Study* pour catégoriser les exercices des manuels. Nos analyses ont révélé qu'ils privilégient largement la restitution d'informations explicitement exposées, au détriment des compétences en compréhension de plus haut niveau. Les manuels de 4^{ème} année portugais incitent rarement les élèves à faire des liens entre leurs connaissances et les idées contenues dans les textes et à adopter une posture de lecteur critique et évaluative. Ceci est en contradiction très nette avec ce que l'on demande aux élèves dans l'enquête internationale *Progress of International Reading Literacy Study*, conduite tous les cinq ans depuis 2001, ce qui peut expliquer en partie les résultats médiocres des élèves portugais aux évaluations nationales et PISA. Les conclusions sont discutées à la lumière des instructions officielles actuelles et des propositions sont faites sur la manière dont il est possible d'améliorer les acquisitions en lecture.

MOTS-CLÉS : compréhension en lecture, entrée dans l'écrit, évaluation, programme, manuels, école primaire

German

[Translation Ulrike Bohle]

TITEL. Leseverstehen in der Primarschule: Lesebücher, Curriculum und Assessment

ZUSAMMENFASSUNG. Die Studie beschreibt, wie Leseverstehensprozesse in einem der meistverkauften Lesebücher für die vierte Klassenstufe in Portugal angeregt werden und diskutiert sie im Vergleich zu internationalen Tests der Lesefähigkeit. Zur Klassifikation der Fragen im Lesebuch übernehmen wir das Raster der „Progress of International Reading Literacy Study“. Unsere Analysen zeigen, dass der Schwerpunkt auf dem Abrufen explizit gegebener Informationen liegt - auf Kosten höherrangiger Verstehensleistungen. Portugiesische Lesebücher für die vierte Klassenstufe fordern die SchülerInnen selten dazu heraus, ihr Wissen mit den Ideen im Text zu verbinden und eine kritische, bewertende Lesehaltung einzunehmen. Dies steht in scharfem Gegensatz zu den Aufgaben in der Internationalen Studie zur Lesefähigkeit, die seit 2001 alle fünf Jahre durchgeführt wird, und mag das schlechte Abschneiden portugiesischer Schüler bei nationalen Vergleichsstudien und bei PISA erklären. Die Ergebnisse werden vor dem Hintergrund der aktuellen Curriculumentwicklung in Portugal diskutiert, und es werden Vorschläge zur Verbesserung der Leistungen im Bereich der Reading literacy entwickelt.

SCHLAGWÖRTER: Leseverstehen, Schriftlichkeit/literacy, Assessment, Curriculum, Lesebücher, Primarschule

Greek

[Translation Panatoya Papoulia Tzelepi]

Τίτλος. Η κατανόηση της ανάγνωσης στα εγχειρίδια του δημοτικού: Εγχειρίδια, αναλυτικό πρόγραμμα και αξιολόγηση

Περίληψη. Αυτή η μελέτη περιγράφει τις διαδικασίες κατανόησης ανάγνωσης του πιο διαδεδομένου εγχειριδίου της 4ης τάξης στην Πορτογαλία. Τις συγκρίνει με τη διεθνή αξιολόγηση της ανάγνωσης. Υιοθετήσαμε το πλαίσιο της διεθνούς μελέτης PIRLS (Progress of International Reading Literacy Study) για να κατηγοριοποιήσουμε τις ερωτήσεις στα εγχειρίδια. Οι αναλύσεις μας αποκάλυψαν ότι αυτές κυρίως εστιάζονται στην εύρεση των άμεσα εκφραζόμενων πληροφοριών και όχι στις δεξιότητες υψηλότερης κατανόησης. Τα Πορτογαλικά βιβλία της Τετάρτης τάξης σπάνια προκαλούν τους μαθητές να συνδέσουν τις γνώσεις τους με τις ιδέες του κειμένου και να υιοθετήσουν μια κριτική και αξιολογική στάση. Αυτό βρίσκεται σε έντονη αντίθεση με αυτό που ζητήθηκε από τους μαθητές να κάνουν στα πλαίσια της έρευνας PIRLS, η οποία πραγματοποιείται κάθε πέντε χρόνια από το 2001, και ίσως βοηθά στην ερμηνεία των φτωχών αποτελεσμάτων των μαθητών στις εθνικές αξιολογήσεις και στην αξιολόγηση PISA. Τα αποτελέσματα συζητούνται σε σχέση με το πλαίσιο αναλυτικού προγράμματος που πρόσφατα υιοθετήθηκε στην Πορτογαλία και γίνονται προτάσεις ως προς το πώς θα μπορούσε να βελτιώσουμε την επίδοση στην ανάγνωση.

Λέξεις κλειδιά: κατανόηση της ανάγνωσης, γραμματισμός, αξιολόγηση, αναλυτικό πρόγραμμα, εγχειρίδια, δημοτικό σχολείο

Italian

[Translation Manuela Delfino, Francesco Caviglia]

TITOLO. Comprensione della lettura nella scuola primaria: libri di testo, curriculum e valutazione
SOMMARIO. Questo studio descrive i processi di comprensione della lettura nei libri di testo più venduti nelle classi quarte della scuola primaria in Portogallo e discute come tali processi si confrontino rispetto alle valutazioni internazionali della literacy in lettura. Abbiamo adottato il quadro di riferimento dell'indagine *Progress of International Reading Literacy Study* (PIRLS) per categorizzare le domande proposte nei libri di testo. Le nostre analisi hanno rivelato che tali domande si basano in grande misura su individuazione e ripetizione di informazioni esplicitamente riportata nel testo, a detrimento delle abilità di comprensione di livello più alto. I libri di testo portoghesi per il quarto anno raramente richiedono agli studenti di fare connessioni tra la loro conoscenza e le idee riportate nel testo e di adottare un atteggiamento di lettura critica e valutativa. Ciò appare in deciso contrasto con ciò che viene richiesto agli studenti nell'indagine PIRLS, condotta ogni cinque anni a partire dal 2001, e può aiutare a spiegare i mediocri risultati degli studenti portoghesi nelle valutazioni nazionali e nell'indagine PISA. Questi risultati sono discussi alla luce dei quadri di riferimento curricolari correntemente adottati in Portogallo, e sono proposti suggerimenti su come migliorare i risultati nelle competenze di lettura.

PAROLE CHIAVE: comprensione della lettura, literacy, valutazione, curriculum, libri di testo, scuola primaria

Polish

[Translation Elżbieta Awramiuk]

TITUŁ. Rozumienie tekstu czytanego w szkole podstawowej:

podręczniki, program i ocenianie

STRESZCZENIE. Niniejszy artykuł opisuje metody kształcenia czytania ze zrozumieniem prezentowane w najczęściej sprzedawanych podręcznikach do czwartej klasy w Portugalii i porównuje je z międzynarodowym systemem oceny umiejętności czytania. Punktem odniesienia do kategoryzacji pytań w podręcznikach uczyniliśmy *Międzynarodowe badanie postępów biegłości w czytaniu*. Nasza analiza potwierdza, że podręcznikowe pytania koncentrują się głównie na pozyskiwaniu informacji wprost zawartych w tekście ze szkodą dla wyższego poziomu umiejętności rozumienia. Portugalskie podręczniki do czwartej klasy rzadko zachęcają uczniów do odnajdywania powiązań między ich wiedzą a poglądami prezentowanymi w tekście oraz do przyjmowania wobec czytanego tekstu krytycznej i wartościującej postawy. Ten stan kontrastuje z badaniami prezentowanymi w *Międzynarodowym badaniu postępów biegłości w czytaniu*, prowadzonymi co pięć lat od 2001. Może to pomóc wyjaśnić słabe wyniki portugalskich uczniów w badaniach międzynarodowych i PISA. Rezultaty badań są dyskutowane w świetle zapisów programowych przyjętych właśnie w Portugalii. Formułujemy też kilka sugestii, jak poprawić osiągnięcia w czytaniu.

SŁOWA-KLUCZE: rozumienie czytanego tekstu; umiejętność czytania i pisania; ocenianie; program; podręczniki; szkoła podstawowa

Portuguese

[Translation Sara Leite]

TÍTULO. COMPREENSÃO DA LEITURA NO ENSINO BÁSICO: MANUAIS, CURRÍCULO E AVALIAÇÃO

RESUMO. Neste estudo descrevem-se os processos de compreensão leitora presentes nos manuais escolares mais utilizados no quarto ano do ensino básico em Portugal e discute-se a sua relação com as avaliações internacionais da literacia na leitura. Adoptámos o quadro metodológico do *Progress of International Reading Literacy Study* para categorizar as perguntas nos manuais. As nossas análises revelaram que estas se centram fortemente na compreensão de informações explicitamente fornecidas nos textos, em detrimento de aptidões de compreensão mais elevadas. Os manuais portugueses para o quarto ano do ensino básico raramente levam o aluno a estabelecer ligações entre os seus conhecimentos e as ideias expressas nos textos, ou a ler de forma crítica e avaliativa. Isto contrasta fortemente com o que se espera dos alunos no *Progress of International Reading Literacy Study*, que é levado a cabo de cinco em cinco anos desde 2001, e talvez ajude a explicar por que motivo os alunos portugueses obtêm resultados tão fracos nas avaliações nacionais e no PISA. Os resultados são discutidos à luz das orientações curriculares em vigor actualmente em Portugal e deixam-se sugestões sobre formas de otimizar a compreensão leitora.

PALAVRAS-CHAVE: compreensão leitora, literacia, avaliação, currículo, manuais escolares, ensino básico.

Spanish

[Translation Ingrid Marquez]

TÍTULO. LA COMPRESIÓN DE LECTURA EN LA ESCUELA PRIMARIA: LIBROS DE TEXTO, PLANES DE ESTUDIO Y EVALUACIÓN

RESUMEN. Este estudio describe los procesos de comprensión de lectura presentados en los libros de texto más vendidos para primer grado en Portugal, y discute cómo se comparan con las evaluaciones internacionales sobre habilidades de lecto-escritura. El marco que usamos para categorizar las preguntas que aparecen en los libros de texto fue el *Estudio Internacional de Progreso en las Habilidades de Lecto-escritura*. Nuestros análisis revelaron que el enfoque principal de esos textos es la reproducción de información explícitamente declarada, pasando por alto el desarrollo de las habilidades de comprensión de mayor nivel. Para cuarto grado, los libros de textos portugueses retan poco al estudiante para que haga conexiones entre su conocimiento y las ideas planteadas en los textos, actividad que le permitiría adoptar una perspectiva crítica y evaluadora al leer. Esto contrasta marcadamente con los retos planteados en el *Estudio Internacional de Progreso en las Habilidades de Lecto-escritura* conducido cada cinco años desde 2001, lo que puede explicar los pobres resultados de los estudiantes portugueses en las evaluaciones nacionales y en el PISA. Los resultados se discuten tomando en cuenta el marco del plan de estudios que actualmente maneja Portugal, y se incluyen sugerencias sobre cómo podríamos mejorar el desempeño en el campo de las habilidades de lecto-escritura.

PALABRAS CLAVE: Comprensión de lectura, habilidades de lecto-escritura, evaluación, plan de estudios, libros de texto, escuela primaria.

1. INTRODUCTION

Much international research has been carried out on the development of reading skills at the primary school level. Aspects related to beginning reading instruction and to the skills necessary to break alphabetic codes have been thoroughly investigated while research on the processes and strategies of reading comprehension has, in comparison, received less attention (Dewitz & Dewitz, 2003). The predicting power of phonological awareness and word decoding accuracy to the success of reading development has been well established in beginning reading research (Stanovich, 2000). Moreover, studies that address the relationship between these aspects and reading comprehension consistently show that students who read words accurately and automatically (oral speed) demonstrate better text comprehension than students who have difficulties in these areas (NAEP, 2002). Thus, there seems to be good reason to implement, in the first years of primary education, reading strategies that reinforce word recognition abilities that lead to fluency.

According to Stahl (2004), for reading to be fluent it should be accurate, be done at a reasonable rate and respect the prosodic aspects of oral language. However, Schwanenflugel, Kunh, Meisinger, Bradley, and Stahl (2004) have suggested that oral reading accuracy may be a good predictor of reading comprehension only in the early grades. After second or third grade, vocabulary knowledge and comprehension strategies assume greater importance and begin to have an impact on reading comprehension. In fact, Chall and Jacobs (2003) found that children with poor comprehension skills at the fourth grade level lack grade-appropriate vocabulary knowledge. In a more practical version of schema theory and prior knowledge, Hirsch (2003) contends that knowledge of words and the world become increasingly important as reading content in school becomes more complex. Sénéchal's (2006a; 2006b)

studies also show that the informal literacy experiences children have with their parents before school starts become indirectly associated with reading comprehension in third grade through their relation to vocabulary learning.

Still, other researchers point out that comprehension processes/strategies need to be taught to primary school children because it is only a subset of children who exhibit problems with word accuracy and vocabulary knowledge. Many others seem to have problems in inference making ability, in creating situation models and in constructing creative responses to text (Cunningham, 1987; Perfetti, Landi & Oakhill, 2005; Yuill & Oakhill, 1999). Different instructional programs have targeted these aspects of text comprehension by making students aware of their own thought processes – comprehension monitoring - and have achieved good results (Palincsar & Brown, 1984; Klingner, Vaughn & Schumm, 1998). Indeed, the findings of the National Reading Panel (NICHD, 2000) provide strong evidence that teaching comprehension strategies can improve students' comprehension.

One way to encourage teachers to develop reading strategies that improve students' comprehension is to establish curriculum guidelines that address the teaching of comprehension skills. Indeed, the results of the 2001 International Reading Literacy Study (PIRLS 2001) suggest that curriculum guidelines may partly explain the performance of fourth grade students in different countries. Most of the participating English-speaking countries – New Zealand, Canada, the United States, and England – had higher performance on the interpreting, integrating and evaluating processes of reading comprehension, but so did a number of Eastern European countries – Romania, Macedonia, Hungary, and Moldova. As the report states, "This result suggests that curriculum or instructional approaches may also influence students' relative achievement in these processes (Mullis, Martin, & Gonzalez, 2004, p.24)." These findings are in line with the notion that professional materials; curriculum publications and textbooks, may contain few suggestions for teachers to promote higher/order comprehension skills and critical thinking (Lenski, 1998; Segev-Miller, 1990). And it may be that the lower-performing countries do not follow professional publications and instructional approaches that emphasize the comprehension of ideas that are not explicitly stated in the text and thus require students to move beyond its surface meaning.

2. REVIEW OF THE LITERATURE

Research on comprehension instruction began in the late 1970s and, with the ensuing growing knowledge about cognitive processes, by the late 1980s there was a large body of evidence suggesting that teachers should demonstrate the strategies involved in comprehension (Kamil, 2004). Reading comprehension strategies are specific cognitive procedures that guide individuals as they make meaning from text. Leading students to develop self-awareness of cognitive procedures, specifically through the teacher's modeling of mental processes, has proven a successful instructional procedure. One of the most influential reading comprehension studies conducted to date stresses the importance of four cognitive procedures; summarizing, clarifying, questioning, and predicting (Palincsar & Brown, 1985).

Subsequent research looked at the relationship between the types of questions that can be generated from texts and the types of responses they call for (Raphael, 1986). As a result, studies of question-answer relationships began to distinguish literal comprehension from inferential comprehension and teachers were advised to teach students “that answering a question does not always depend on finding the answer in the text and that they can combine information from the text with their prior knowledge (Kamil, 2004, p.224).” In addition, intervention programs started to focus on getting the students to ask and answer their own questions as a way to become independent, active readers. In fact, a meta-analysis of the research on question generation by students concluded that it is a good strategy for improving reading comprehension (Rosenshine, Meister & Chapman, 1996).

These developments in comprehension research reflect a theoretical view of reading as a constructive and interactive process as well as a transactional one (Anderson & Pearson, 1984; Rosenblatt, 1978; Ruddell & Unrau, 2004). The reader interacts with the text to construct meaning by connecting his knowledge and aptitudes with the characteristics of the text: “The reader brings a repertoire of skills, cognitive and meta-cognitive strategies, and background knowledge. The text contains certain language and structural elements and focuses on a particular topic (Mullis, Martin, & Gonzalez, 2004, p.4).”

Importantly, this view of reading recognizes the processes by which the reader is able to retrieve information from the text and to infer implied meanings, but it also recognizes that inference making is very much constrained by the text and by the prior knowledge of the reader. Considering the type of questions that can be asked about a given text, several researchers have developed classification schemes that distinguish different comprehension processes (Cunningham, 1987; Giasson, 2000; Raphael, 1986). Cunningham (1987), for example, proposes the following definitions: 1) Literal or explicit questions are those that call for retrieval of information that is explicitly stated in the text, 2) Logical inference questions are text-based, but require attention to implicit information, and 3) Pragmatic inference questions are those that are based on the knowledge of the reader.

Regardless of the degree of specificity with which different classification schemes are adopted, reading programs and curricula throughout the world have clearly embraced the notion that the processes of reading comprehension should be taught to students. This tendency is particularly clear from the 1990s on. For example, a recent review of the five most widely used basal reading programs in the United States reveals a strong focus on the teaching of comprehension skills, namely by asking students “to rehearse skills such as sequencing, classifying, inferring, or finding the main idea (Walsh, 2003)”. Similarly, a study of five first grade manuals conducted in France by the National Observatory of Reading identified main idea, literal meaning, and drawing inferences as the main reading comprehension activities explored in the manuals (ONL, 2003). Various curricula, such as the *English National Curriculum*, also emphasize similar skills. In fact, the reading strand of the *English National Curriculum* for Key Stage 1 (ages 5-7) states that students should be taught to “use inference and deduction and to look for meaning beyond the literal” (<http://www.nc.uk.net>).

It is apparent that curricula, and to a lesser extent textbooks, recognize that the same processes of reading comprehension apply to different types of texts and that informational texts have been gaining more visibility in primary school. For example, the *California English-Language Arts Content Standards* states that students should be able to retell the central ideas of simple expository texts beginning in first grade (<http://www.cde.ca.gov/be/st/ss/enggrade1.asp>). Similarly, the *South Australia Curriculum* states that, at the end of third grade, students should be able to identify the main points in a news article (http://www.sacsa.sa.edu.au/index_fsrc.asp?t=LA). In the United States studies show that in the 1920s textbooks had no informational texts and that well into the 1990s their presence was insignificant compared to the literature selections present in basal readers (Smith, 1986). A hallmark study of six reading series at the second grade level, for example, found that they included only about 16 percent of selections that could be classified as informational (Moss & Newton, 1998).

In contrast, researchers have found that standardized reading tests at the primary school level include 38 percent of informational or expository text selections (Flood & Lapp, 1986). Informal reading inventories are more in line with this degree of representation of informational texts and put emphasis on testing the same comprehension processes in different genres, narrative and expository. Importantly, they distinguish literal comprehension from inferential comprehension and present question types that move from a literal, or factual level, to a higher level, inferential and evaluative in nature (Burns & Roe, 1999; Woods & Moe, 2003). Thus, there seems to be a recognition that “To read both informational and narrative texts, the reader must activate background knowledge, supply inferences to fill what the author doesn’t say, and simply reflect upon what is being read (Konold, Juel & McKinnon, 1999).” Nonetheless, the comprehension of informational texts may rely more on the prior knowledge of the reader, since knowledge of the topic and of related specific vocabulary assume greater importance (Hirsch, 2003).

International assessments such as The Progress in Reading Literacy Study (PIRLS), carried out every five years at the fourth grade level, and PISA, which tests the reading literacy competences of fifteen year-old students, identify two main purposes for reading: reading for literary experience, and reading to acquire and use information. According to these equally weighted purposes, the PIRLS assessment defines four common reading comprehension processes: 1) Focus on and retrieve explicitly stated information, 2) Make straightforward inferences, 3) Interpret and integrate ideas and information, and 4) Examine and evaluate content, language, and textual elements (Mullis et al., 2006).

3. PURPOSE OF THE STUDY

This study describes how the purposes and processes of reading comprehension are implemented in the textbooks most widely adopted at the fourth grade level in Portugal. Portugal has a national curriculum and national tests of educational progress, and has participated in international assessments. Thus, in addressing textbook de-

sign, we looked at the relationship between curriculum standards for reading comprehension and national and international reading assessments.

In the 1991 Study of Reading Literacy, a precursor of PIRLS conducted by the International Association for the Evaluation of Educational Achievement, Portuguese fourth graders performed below the international average in reading comprehension (Elley, 1992). The results of this study showed that there were no statistically significant differences in students' performance according to the three domains tested: reading narratives, expository texts and documents.

National assessments of educational progress implemented every year since 2000 show that Portuguese fourth grade students have difficulty in moving beyond literal meanings and in making inferences and interpreting texts (Ministério da Educação, 2001, 2002, 2003 and 2004). However, these assessments do not distinguish relative achievement by text types and have changed considerably over the years in terms of their degree of difficulty (readability level and length of texts) and scoring rubrics (the number of items that test specific comprehension skills vary considerably). This situation and the fact that Portugal did not participate in PIRLS 2001, or 2006 does not provide the kind of reliable longitudinal data necessary to assess students' progress and identify areas of strength and weakness. Nonetheless, the few indicators we have at the fourth grade level and the more recent PISA results obtained from fifteen year-old students suggest that Portuguese students have specific difficulties interpreting texts. For example, PISA 2003 and PISA 2006 results show that most students are able to retrieve explicit information and to develop text-based interpretations, but have difficulties connecting information in the text to knowledge from other sources and reflecting on the content and form of a given text (OECD, 2004, 2007).

Thus, an investigation of the types of reading comprehension students are asked to engage in through the main means of curriculum delivery - the textbooks - seems warranted to us, especially since countries that have better results in international assessments include specific comprehension goals and strategies in their curricula.

4. METHODS

We selected the three most widely used fourth grade textbooks with basis on information obtained from the Ministry of Education and from the Webboom Editorial site (<http://www.webboom.pt>), which provide information for teachers and school administrators about purchasing textbooks. In the manuals, we analyzed the comprehension processes inherent in the texts' questions for narratives alone. This choice was motivated by the fact that narratives constitute the overwhelming majority of all texts in the manuals and by the findings of the Study of Reading Literacy, which indicate that Portuguese students' performance on reading comprehension does not differ according to text types. However, in order to address the purposes of reading we also describe the design of the manuals as to the frequency of each type of text and their length. In sum, in portraying the overall design of the manuals we took into account the diversity of texts, whereas in describing the comprehension processes the manuals call for we focused on narrative texts. Thus, we offer a more

detailed view of reading for enjoyment and for participation in school activities than one more closely linked to reading to learn (Chall & Jacobs, 2003). This contrasts with the more global definition of reading literacy adopted by PIRLS in 2006:

“For PIRLS, reading literacy is defined as the ability to understand and use those written language forms required by society and/or valued by the individual. Young readers can construct meaning from a variety of texts. They read to learn, to participate in communities of readers in school and everyday life, and for enjoyment (Mullis, Kennedy, Martin, & Sainsbury, 2006, p.3).”

We adopted the PIRLS 2001 framework for assessing reading comprehension processes because it incorporates a view of reading literacy as an interactive process and thus reflects the latest approaches to measuring reading literacy. Perhaps more importantly, PIRLS was developed by an international team of researchers that agreed on how to assess the reading achievement of international students following sound reliability and validity criteria (Sainsbury & Campbell, 2003). In addition, the PIRLS assessment framework was developed to assess the comprehension of texts with different structural features and content within the same genre, narrative and informational. Specifically, the same framework was used in PIRLS 2001 and PIRLS 2006 for five narratives and five informational texts.

4.1. Procedures

To describe the manuals according to text types, their length, and the number of questions per narrative text we used descriptive statistics and utilized the t-Test for Independent-Samples to determine the similarities and differences between the manuals.

The PIRLS assessment framework describes “... four specific processes of reading comprehension, which vary in the degree of inference or interpretation required and in the focus on text content or structural features of the text (Sainsbury & Campbell, 2003, p.16)”. Accordingly, we coded textbook questions hierarchically as follows:

- 1) Focus on and Retrieve Explicitly Stated Information: Locate and understand relevant information or ideas that are explicitly stated in text.
- 2) Make Straightforward Inferences: Move beyond surface meaning to make straightforward, text-based inferences.
- 3) Interpret and Integrate Ideas and Information: Draw on understanding of the world, experience, or other knowledge to find connections between ideas and information in the text.
- 4) Examine and Evaluate Content, Language, and Textual Elements. Critical consideration of the text; reflect on and evaluate text content; consider and evaluate text structure, language use, literary devices, or author’s perspective and craft.

These categories were used to code the questions in twenty-four narrative texts in each of the three manuals. This number reflects the total number of narrative texts followed by questions in one of the manuals. For the other two, we randomly selected texts every five pages and, if the fifth page did not fall into the narrative genre, we continued flipping pages until a narrative was found and started the five

page interval sampling again. Two independent raters coded a total of 491 questions in the three textbooks and reached an average reliability coefficient of .75 according to the Cohen's Kappa test for inter-rater reliability.

5. FINDINGS

Although narratives are the predominant genre in all three textbooks, there are significant differences between the three with respect to the texts included, their length and the number and type of questions that follow the texts. *Amiguinhos* (Rocha, Lago & Linhares, 2006) is the textbook that includes the widest variety of texts - from narratives and informational texts to poems and recipes, whereas *Giroflé* (Marques, Santos & Gonçalves, 2006) focuses heavily on fiction in the form of narratives and poems. *Pasta Mágica* (Pereira, Borges & Azevedo, 2006) also favors fiction, but includes a fair amount of informational texts and documents.

Table 1 - Distribution of text types per manual

	<i>Amiguinhos</i>	<i>Giroflé</i>	<i>Pasta Mágica</i>
Narratives	28	37	27
Poems	19	10	9
Informational / Descriptive texts	11	3	9
Documents; tables, flow charts, forms, brochures	4		10
Recipes	1		
Comics and riddles	3		1
Total number of texts	66	50	56

In accordance with program content and objectives for mother tongue education in Portugal, *Amiguinhos* is clearly the textbook that supports reading for different purposes. The program of study and a specialist's report published in the 1990s both stress that students should read for enjoyment by reading riddles, narratives, fairy-tales, adventures, poetry and magazines; and read to learn by reading time-tables, maps, calendars, phone books, tickets, encyclopedias, recipes, itineraries and informational texts in science and history (Ministério da Educação, 1997; Ministério da Educação, 1991). The more recent National Curriculum, published in 2001 and encompassing nine years of compulsory education, does not refer to different purposes for reading and does not offer a detailed account of attainment levels or standards for reading at the different educational cycles (1st Cycle corresponds to the end of fourth grade).

Conversely, the older program of study sets as a goal for fourth grade students the selection and reading of extended texts. Even though this goal may be achieved by having students select books from the school or classroom library, the difference between the textbooks in relation to the length of the texts is striking. They all pre-

sent texts with substantial adaptations and many of the narratives are excerpts from longer texts.

With respect to the number of lines and words in the narrative texts and number of comprehension questions, we found statistically significant differences between Amiguinhos and Giroflé in the number of lines ($p=0,000$; $t= -4,023$; $df=46$) and in the number of words ($p=0,040$; $t= -2,117$; $df=46$), with Giroflé registering significantly more text lines and words. This comparison revealed no significant differences between the number of comprehension questions in the two manuals ($p=0,68$; $t=1,870$; $df=46$). Between Amiguinhos e Pasta Mágica we found statistically significant differences in the three variables, number of lines ($p=0,002$; $t= -3,220$, $df=46$), number of words ($p=0,015$; $t= -2,522$; $df=46$), and number of comprehension questions ($p=0,000$; $t= 10,164$; $df=46$). Pasta Mágica includes significantly more lines and words than Amiguinhos, but poses significantly fewer comprehension questions than Amiguinhos. The third comparison we ran, between Giroflé e Pasta Mágica, showed no statistically significant differences in the number of lines ($p=0,358$; $t=0,928$; $df=46$) and in the number of words ($p=0,951$; $t=-0,062$; $df=46$), but significant differences with respect to the number of comprehension questions. Giroflé includes more questions than Pasta Mágica ($p=0,000$; $t=6,057$; $df=46$).

Table 2 - Descriptive statistics for number of lines, words and questions

		Manuals		
		Amiguinhos N=24	Giroflé N=24	Pasta Mágica N=24
Number of lines	Minimum	7,00	16,00	17,00
	Maximum	26,00	39,00	40,00
	Mean	18,87	25,62	24,04
	Std. Deviation	5,46	6,15	5,66
Number of words	Minimum	99,00	173,00	172,00
	Maximum	369,00	439,00	416,00
	Mean	236,33	282,00	283,21
	Std. Deviation	71,85	77,48	55,91
Number of questions	Minimum	5,00	3,00	4,00
	Maximum	11,00	10,00	6,00
	Mean	8,12	7,29	4,96
	Std. Deviation	1,33	1,73	,75

In short, this analysis shows that Pasta Mágica is the manual with significantly fewer questions and that Amiguinhos is the manual with significantly fewer lines and words per text. Thus, it is clear that the textbook that includes lengthier texts is also the one that includes fewer comprehension questions. The vast majority of questions in all three manuals require sentence or phrase level text processing and typically include identifying the setting of a story (e.g., time, place), searching for definitions

of words or phrases and identifying the main idea. Again, this finding reveals that the textbooks are in accord with program specifications in what concerns reading goals. Specifically, fourth grade goals include the identification of the main idea in a text, the retrieval of information in a text, the identification of the time and place of the plot, and the discovery of the meaning of unknown words or phrases (Ministério da Educação, 1990, p.161, Ministério da Educação, 1993, p.59).

The 2001 National Curriculum lacks this specificity, setting instead very general goals for reading. It states that fourth grade students should learn to extract meaning from written material by decoding automatically to locate written information and to learn the meaning of a short text (Currículo Nacional, 2001). Thus, whereas the curriculum offers a rationale for textbooks to include short texts, the older program of study values extended texts but refers only to low level comprehension processes. In fact, against this background and in comparison with the reading comprehension processes in the PIRLS assessment framework, the textbooks seem to go beyond what curriculum and program guidelines call for but fall short of the demands of high level text processing. Table 3 presents the distribution of questions according to the PIRLS categorization of reading processes.

Table 3 - Percentage of questions per reading comprehension process

	Focus on and Retrieve Explicitly Stated Information	Make Straightforward Inferences	Interpret and Integrate Ideas and Information	Examine and Evaluate Content, Language, and Textual Elements
Amiguinhos	60	24	15	1
Giroflé	56	26.5	17	.5
Pasta Mágica	44	30.7	25	.3
PIRLS	20	30	30	20

In all three textbooks the overwhelming majority of questions focus on the retrieval of explicitly stated information. *Amiguinhos* registers a percentage of this type of questions three times greater than that adopted in the PIRLS assessment framework. However, in the making inferences category of questions the manuals are very close to the PIRLS specification for this category. This is not surprising since these questions require a basic understanding of the plot and thus focus on cause/effect relationships, on anaphoric references (determining the referent of a pronoun), and on relationships between characters. However, not even these straightforward inferencing skills are addressed in the curriculum, the program of study or the specialists' report. Only in the National Curriculum is inferential comprehension mentioned, but presented as a skill older students (grades 6 through 9) should attain (Currículo Nacional, 2001).

In two of the manuals, the category *Interpret and integrate ideas and information* receives about half the weight attributed to this type of text processing in the

PIRLS assessment framework, while the manual *Pasta Mágica* registers, in this category, a percentage close to that of PIRLS. Unlike with more straightforward inferences, when readers interpret and integrate ideas they move beyond phrase or sentence level processing. Questions that typify this level include inferring a story's mood or tone from multiple text cues, discerning the overall message or theme of a story, and interpreting a real-world application of text information. For example, when asked to give a story a title students need to attend to its overall meaning and when they are asked to explain how a bright sky might remind them of a party they need to draw on their background knowledge and experience.

The inclusion of this type of text processing as well as the development of an evaluative stance with respect to content, language, and textual elements finds no expression in the curriculum or in the program of study. An evaluative or critical stance requires a personal engagement with reading and knowledge of text genres and structure and familiarity with different language conventions and authors' craft. For example, the few questions in this category included in the textbooks might ask students to explain why the author used a certain expression or to evaluate whether the events described qualify a story as fiction or non-fiction.

Clearly, the textbooks analyzed exhibit different orientations toward reading and towards reading comprehension. This study shows that there are considerable differences in textbook design and in the choice of texts and their length, but that all textbooks privilege low level comprehension processes. The great proportion of questions at levels 1 and 2 of the four PIRLS processes and strategies shows that Portuguese textbooks are not designed to help develop higher-order comprehension skills at the fourth grade level.

Furthermore, it is apparent that textbooks seem to go beyond what the program of study and the national curriculum call for. At the same time, they fall short of the comprehension demands placed on students in international assessments. *Pasta Mágica* is the manual with the most diversified distribution of reading comprehension processes similar to the ones adopted in the PIRLS assessment, but it includes only a few questions per text presented.

6. DISCUSSION

The differences in the type of texts included in the manuals and in the emphasis the textbooks place on low-level comprehension processes are likely to be a result of the lack of consistency in curriculum orientations. Since there are currently two different curriculum documents and a specialist's report with different specifications as to what should be taught in terms of content and reading strategies, curriculum delivery is open to different interpretations (Ministério da Educação, 1991, 1997). Considering the poor results Portuguese students have on international assessment, this is indicative of an urgent need to align curriculum and instruction at the primary level.

We believe our findings may help explain the poor performance of Portuguese students on national assessment of educational progress and even on PISA, since the PIRLS comprehension processes are very similar to the ones tested in PISA. Given

the instructional materials students are exposed to, it is not surprising that, as the results of these assessments have shown, students have trouble moving from a literal interpretation to integrating and evaluating text content. However, this study can only offer some exploratory hypotheses about the influence textbook design may have on students' comprehension of texts. It cannot establish a clear-cut causal relationship between the way comprehension is conceptualized in the manuals and students' attainment.

Nonetheless, previous research in other reading domains has indicated that certain text characteristics influence students' learning. For example, studies indicate that the texts children are exposed to early in first grade (e.g., word repetitions and different letter combinations) differentially shape their word identification strategies (Juel & Roper-Schneider, 1985). We also know that specific comprehension instruction strategies improve students' comprehension and that teacher practices may influence students' intrinsic motivation to read. For example, research suggests that teachers that provide choices of reading activities increase students' interest and time spent reading (Guthrie & Humenick, 2004). Thus, it seems plausible to consider that the exposure to certain comprehension processes, and lack thereof, can differentially influence students' attainment.

We are currently conducting a naturalistic observational study that examines the way in which textbook comprehension questions are addressed by different teachers and how teachers' practices may influence students' achievement. Specifically, we hope to be able to describe what really happens in the classroom and link this knowledge to previous investigations.

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