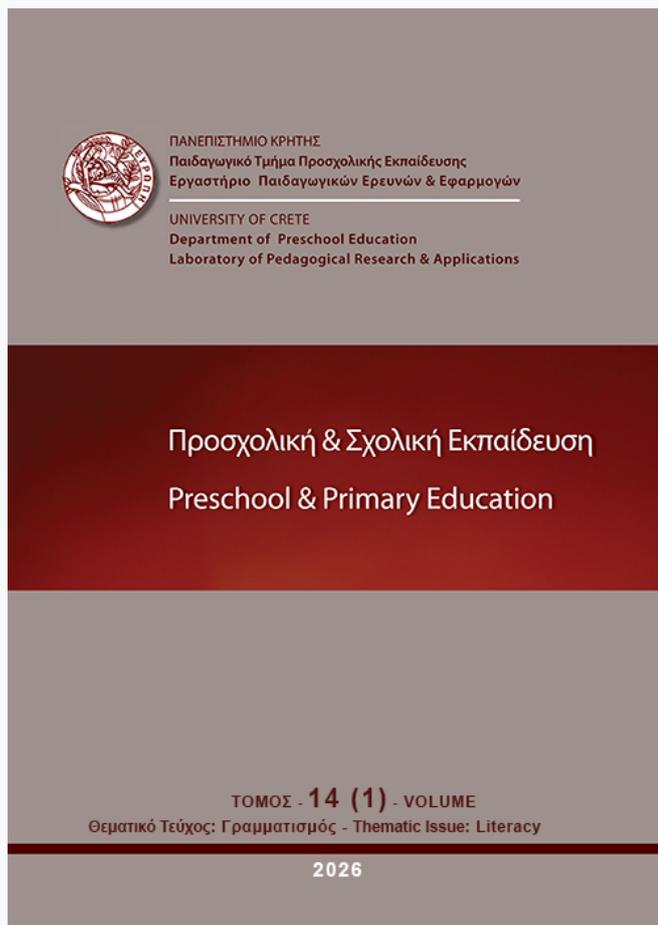


## Preschool and Primary Education

Τόμ. 14, Αρ. 1 (2026)

Θεματικό τεύχος: Γραμματισμός



### Opportunity to learn in reading comprehension: insights from PIRLS 2021 results.

*Virginie Dupont, Schillings Patricia, Pressia Fabian, André Marine*

doi: [10.12681/ppej.40304](https://doi.org/10.12681/ppej.40304)

Copyright © 2025, Virginie Dupont S.I., Schillings Patricia, Pressia Fabian, André Marine



Άδεια χρήσης [Creative Commons Attribution-NonCommercial-ShareAlike 4.0](https://creativecommons.org/licenses/by-nc-sa/4.0/).

### Βιβλιογραφική αναφορά:

Dupont, V., Patricia, S., Fabian, P., & Marine, A. (2026). Opportunity to learn in reading comprehension: insights from PIRLS 2021 results. *Preschool and Primary Education*, 14(1), 1-18. <https://doi.org/10.12681/ppej.40304>

# Opportunity to learn in reading comprehension: insights from PIRLS 2021 results

Virginie Dupont  
*University of Liège*

Patricia Schillings  
*University of Liège*

Fabian Pressia  
*University of Liège*

Marine André  
*University of Liège*

**Abstract:** For several years, the question of equity within education systems has been the subject of debate. From this perspective, it is essential to question how all students, regardless of their personal characteristics or level of competence, receive (or do not receive) the same chances to develop their skills. This refers directly to the concept of opportunities to learn (OTL), defined in terms of curricular coverage, but also of teaching practices. This article focuses on the content emphasis dimension of the OTL concept as measured through the PIRLS 2021 survey in the Wallonia-Brussels Federation. Through 16 items of this survey, we investigated whether teaching practices differ according to the average level of students within classes. The analyses carried out show that, in lower-level classes, teachers modify their teaching practices, exposing students less frequently to long, resistant texts and inviting them less often to engage in complex tasks or tasks that work on high-level cognitive processes. These differences in terms of OTL according to the level of the pupils do not enable the weakest among them to develop their reading skills in the best possible way, and run counter to the compensatory justice perspective that is so popular in education systems (as provided).

**Keywords:** Opportunity to Learn - Teaching practices - Equity - Large-scale studies

## Introduction

The question of the effectiveness of education systems arises not only in terms of quality, but also in terms of equity (Nachbauer & Kyriakides, 2020). Indeed, beyond knowing "what works" for education, it is necessary to ask "what works for whom" and "under what conditions" (Kyriakides & Creemers, 2018). *The Educational Effectiveness Research (RER)* has focused primarily on the question of quality. It is more recently that studies in this have turned their attention to the equity dimension (Kyriakides & Creemers, 2018; Nachbauer & Kyriakides, 2020).

Several studies have highlighted major inequalities in achievement based on social origin at international level, although these vary significantly from one country to another (Caro & Mirazchiyski, 2012; Mons, 2007; Monseur & Lafontaine, 2012). These inequalities arise at different levels: family, systemic, but also more local, within the classroom. Indeed, teaching practices within the classroom can contribute to maintaining or even accentuating initial inequalities, notably through the existence of misunderstandings between students and

---

Correspondent Author: *Virginie Dupont*. University of Liège, Quartier Agora, Place des Orateurs, 2 (B32) 4000 Liège, Belgium, e-mail: [virginie.dupont@uliege.be](mailto:virginie.dupont@uliege.be)

e-publisher: *National Documentation Centre, National Hellenic Research Foundation*  
URL: <http://ejournals.e-publishing.ekt.gr/index.php/education>

teachers regarding the tasks carried out in class (Bautier & Goigoux, 2004; Bautier & Rayou, 2009), or following an adjustment of practices according to the students in the classroom, i.e., a difference in terms of opportunity to learn (Schmidt & Maier, 2009).

This paper focuses on this last level. More specifically, in the French-speaking Belgium context marked by low achievement in the PIRLS survey and significant social inequalities (Schillings et al., 2023), this paper questions whether students attending “low-reading skill” classrooms benefit from the same opportunity to learn as their peers attending “advanced-reading skill” classrooms.

To answer this question, secondary analyses of the PIRLS 2021 data were carried out. Considering the reading skill levels of the students in the classroom, their teaching practices to develop reading competencies were analyzed from a descriptive and comparative perspective.

## **Literature review**

### *The notion of equity in education*

The notion of equity is not new. However, demographic changes, migratory crises and climate change are leading to an increase in diversity within societies, raising questions about the ability of education systems to promote equitable education (OECD, 2023).

To fully understand the notion of equity, we must first differentiate it from the notion of equality. Equality is defined by UNESCO-UIS (2018, p. 17) as "the state of being equal in terms of quantity, rank, status, value or degree". In the case of education, this means giving all students the same opportunities regardless of the conditions in which they were born. The concept of equity is more ambitious, since it takes account of individual starting points and needs: "all children should be given the education they need to achieve certain outcomes" (Nachbauer & Kyriakides, 2020). Thus, equitable education systems are those where "the achievement of educational potential is not the result of personal and social circumstances, including factors such as gender, ethnic origin, Indigenous background, immigrant status, sexual orientation and gender identity, special education needs, and giftedness" (OECD, 2023). This definition involves an egalitarian view of equity (Van Damme & Bellens, 2017), since it is not based on student merit (meritocracy) but on society and, more specifically, in the case of education, on the ability of education systems, schools and teachers to promote teaching that reduces learning differences due to background characteristics.

### *Social background and school performance*

The link between social origin and academic success is well established (Sirin, 2005). As early as the 50s, a wealth of research and literature began to focus on the problem of social inequality. In Belgium (De Coster & Hotyat, 1970), France (Bourdieu & Passeron, 1970), Canada (Fotheringham & Creal, 1980), the United States (Coleman et al., 1966), or Sweden (Husén, 1967), the findings were the same: socio-economically disadvantaged pupils had lower indicators of academic success than their peers from advantaged backgrounds. More recently, the Programme for International Student Assessment (PISA) attests to significant differences in performance at age 15 according to socio-economic background (OECD, 2019). The 2015 OECD report also noted that social inequality in OECD countries was at its highest level since 1980. In 2018, the trend is still the same: between 2009 and 2018, few countries are characterized by a decrease in the socio-economic gap in reading (OECD, 2019). In the French-speaking Belgium, these inequalities are already present at age 10. The PIRLS 2021 survey highlights an achievement gap of 85 points between the most and least advantaged students

(Schillings et al., 2023a). While this gap between the most and least advantaged pupils is not among the widest (Bulgaria, for example, has a gap of 122 points), some countries manage to maintain smaller differences, such as the Netherlands (with a gap of 67 points).

These social inequalities in educational success result from a combination of several factors (Felouzis, 2014): the context of socialization (Bourdieu & Passeron, 1964; 1970), the organization of the education system (Mons, 2007; Monseur & Lafontaine, 2012; OECD, 2019) but also classroom practices (Bautier & Goigoux, 2004; Gustafsson et al., 2018).

The first source of inequality is linked to the hierarchical and stratified nature of our society. Students do not all grow up in the same family environment, which gives them different backgrounds in terms of knowledge of what is expected at school and institutionalized cultural capital (Bourdieu, 1979). In this respect, Bourdieu and Passeron's habitus theory (1970) is illuminating: the dispositions (in terms of language, relationship to knowledge and mental reflexes) acquired during primary socialization will enable some pupils to acquire school knowledge without difficulty, while others will be hermetic to it (Felouzis, 2014).

Data from international surveys such as PISA have also highlighted the structural dimension of social inequalities, some of which are linked to the way education systems are organized (Mons, 2007; Monseur & Lafontaine, 2012; Caro & Mirazchyski, 2012, OECD 2019). Several structural mechanisms are singled out as amplifiers of social inequalities (Mons, 2007): repetition, early tracks, homogeneous grouping practices in separate schools and negative discrimination (more disadvantaged pupils benefiting from a lower-quality educational environment).

Finally, the construction of inequalities also takes place within the classroom. Based on detailed observations in French classrooms, Bautier and his colleagues (Bautier & Goigoux, 2004; Bautier & Rayou, 2009) have highlighted major misunderstandings between pupils and teachers concerning the tasks proposed and the objectives pursued. Students' understanding of what is expected of them at school requires a process of *secondarization*. Students who *secondarize* are able to elaborate the meaning of school objects and learning content (Bautier & Goigoux, 2024). For Rochex and Crinon (2011), misunderstandings are a source of inequality, since some students with a social and cultural capital are able to "*secondarize*", i.e. understand the learning goals behind school tasks, while others with less social and cultural capital are not. Another source of inequality is the variation in the curriculum used in the classroom, depending on the characteristics of the pupils (Bonnéry, 2007). It refers to the concept of *opportunity to learn* (OTL) which is a fundamental instructional process according to which "what students learn in school is related to what is taught in school" (Schmidt & Maier, 2009, p. 541).

### ***Opportunity to learn***

Far from being new, the concept of *opportunity to learn* (OTL) initially referred to students' exposure time to a task or subject of study (Carroll, 1963). This definition was later broadened to include individual or system characteristics (aptitude, comprehension, quality of instruction, etc.). Thus, in addition to the time allocated for learning content, the idea of the student's effective engagement with the curriculum in relation to learning goals was added. The definition given by Stevens et al. (1998) reflects these changes and a broader vision of the concept. These authors consider OTL along four dimensions:

- *content coverage*, which refers to the proportion of the prescribed curriculum (for a specific grade or subject) that has been covered;
- *content exposure* refers to the fact that students have been exposed to specific content, and that this content has been taught to them. It is therefore mainly a question of the

time teachers have devoted to teaching this content during their lessons, thus echoing the original definition of OTL;

- *content emphasis* indicates the importance attached by the teacher to content within the lessons given to students. Together with content exposure, it distinguishes the prescribed curriculum from the curriculum actually implemented in the classroom;
- *quality of instruction delivery* reflects the way in which teachers present content to students, which influences the way in which they understand what is being taught.

This last variable is directly linked to the way in which OTL will be measured in large-scale surveys. Indeed, attention to OTL is linked to international surveys, notably with the first IEA comparative studies, assessing mathematics and science (Floden, 2002; Schmidt & Maier, 2009; Schmidt & McKnight, 1995), which have repeatedly established a link between OTL and students' performances. Moreover, this research on OTL has also informed researchers about how equitable or inequitable school systems can be. Differences in results between and within countries could be explained by variations in students' exposure to the curriculum (Lafontaine et al., 2015). This therefore leads us to question these disparities between students and their impact on their chances of learning. While these studies have highlighted dysfunctions in certain educational systems, OTLs are nonetheless an effective lever for improving student performance (McDonnell, 1995). The attention paid to OTLs in large-scale studies is therefore linked to questions of equity.

### ***Opportunity to learn and equity***

If we adopt a meritocratic view, the consideration behind OTL will be to consider that the student's responsibility to capture as many learning opportunities as possible in what the school has to offer, and that the school's role is to offer the same thing to everyone. On the contrary, according to a principle of corrective or compensatory justice, it is more appropriate to make up for the inequalities that exist between students by giving them more support. It is therefore the school's responsibility to offer more to those who have less competencies, to ensure that everyone has the same chance of success.

However, with students in difficulty, teachers may be tempted to differentiate teaching by adjusting learning goals and by proposing easier and more fragmented activities.

In French-speaking Belgium, the education system is not equitable (Baye et al., 2009). Exposure to OTL varies greatly from school to school, and even from class to class. It is linked to the socio-economic composition of the schools. Pupils from less advantaged schools are more exposed to diminished OTL (both quantitatively and qualitatively), which contributes to widening academic and social gaps (Hattie, 2009).

### ***Reading comprehension and opportunity to learn***

Reading is a complex and self-regulated cognitive process through which readers actively construct meaning from text in using a range of linguistic (vocabulary, syntax...) and non-linguistic (memory, attention, motivation) abilities (Ziegler & Sprenger-Charolles, 2023). According to cognitive models, understanding consists of developing "a cognitive representation of the events, actions, individuals and general situation evoked by the text" (van Dijk & Kintsch, 1983, pp. 11-12). To construct this mental representation, called a situation model, the reader must actively contribute to the elaboration of meaning (Kintsch, 2013). They must constantly re-establish the coherence of the text: identify the relationships between the ideas stated from one sentence to the next (local coherence) and between the ideas and the general theme of the text (global coherence) (Bianco, 2023; Giasson, 2013). To do this, expert readers use comprehension skills such as formulating and evaluating predictions, inferring, activating prior knowledge, etc. The development of comprehension relies on

students mastering decoding and fluency skills, with automation ensuring that attentional resources are available to focus on comprehension strategies. Even if the work on these skills is often sidelined with older students, it remains essential. Indeed, multi-component interventions that target both word reading/fluency and comprehension have been shown to be most effective for students in grades 4-12 (Capin et al., 2021).

However, reading involves also the elaboration of complex (Delarue-Breton & Bautier, 2019) and singular meanings (Rosenblatt, 1994): expert readers react and reflect on the text and justify their understanding, interpretation and appreciation of it, which they share in rich talk about text between peers or in writing.

To develop this complex process, scientific research tends to show that not all teaching practices are equal. In fact, some seem to have a positive influence on student learning. Effective practices for developing reading comprehension involve a balanced approach that includes both explicit instruction of comprehension strategies and rich discussion about text. Many research (Bilton & Duff, 2021; Filderman et al., 2022; Shanahan et al., 2010) has highlighted the effectiveness of explicit teaching practices that combine think aloud or modeling of cognitive strategies used by expert readers and regular support in implementing them, which gradually reduces, to develop students' independent use. Teaching and the subsequent mastery of strategies have a positive impact on motivation and vice versa (Toste et al., 2020). Numerous studies also highlighted the importance of interaction (with a peer or with the teacher) and collaborative approaches as a lever for improving pupils' comprehension skills (Bilton & Duff, 2021). In-depth interactions contribute to the construction of a reader's identity (Guthrie & Anderson, 1999). Finally, research also underscores the importance of building background knowledge to enhance reading comprehension, particularly for struggling readers.

While quality teaching is essential, it is also important to create a supportive classroom context that encompasses experience reading a range of text genres not only designed for reading instruction (Duke & Pearson, 2009) including multiple perspectives texts. Reading materials, reading purposes, and reading approach must be authentic and resemble the way people normally read by being meaningful and functional (Berardo, 2006).

In line with this definition of reading, PIRLS questions teachers' practices in developing reading literacy skills. In French-speaking Belgium, the PIRLS data shows that there is a gap between the practices that teachers say they put in place and the practices considered effective by scientific research. Indeed, they tend to propose numerous activities aimed at practicing and assessing comprehension, without teaching the processes that enable meaning to be constructed (Schillings et al., 2017, 2023b). More generally, there is little adoption of explicit teaching by professionals in favor of constructivist approaches that emphasize the construction of learning contents by students based on complex situations (Schillings & André, 2019). In OTL terms, this would mean that some students are exposed to teaching practices that do not target the full range of essential reading skills (quantity) or are not evidence-based practices (quality).

## **Purpose of the study**

The aim of this study is to examine the extent to which teachers in French-speaking Belgium adapt (in quality or in quantity) their learning content and reading teaching practices according to the level of students' reading skills in their class. While this adaptation may be well-intentioned, it raises questions in terms of equity because it does not offer students the same opportunities to progress.

Few studies have been carried out on this subject in the field of reading. What is more, few studies have addressed differences in teaching practices between classes. Previous studies

have focused on differences between schools (Gau, 1997), between countries (Lafontaine et al., 2015), between students in the same classroom (Rowan & Correnti, 2009) or between educational pathways (Scherff & Piazza, 2008).

In this context, the PIRLS survey offers an opportunity to analyze these differences between classrooms based on teachers' declared reading teaching practices. Our research question is: "Do teachers adapt their reading teaching practices to the classroom composition and how? Are effective practices used with all types of pupils? Are all reading skills taught to all students?"

## **Methodology**

### ***Data***

This study utilized data from the 2021 Progress in International Reading Literacy Study (PIRLS) directed by the International Association for the Evaluation of Educational Achievement (IEA). In 2021, 57 countries and 8 benchmark countries took part in this large-scale study aimed to measure pupils' reading skills at grade 4. For this article, only data collected in the French-speaking Belgium are used. It concerns a representative sample of 4,274 pupils from 261 grade 4 classes. These classrooms came from 158 schools. In addition to the reading comprehension tests administered to the students, the teachers of evaluated classrooms were asked to complete a questionnaire. This consisted of 43 multiple-choice questions divided into 8 themes: the school's achievement policy, the school and its environment, teachers' job satisfaction, teaching reading to the PIRLS class, reading in the school, libraries and digital resources, reading homework and reading assessment. Data on pre-service and in-service training as well as seniority in teaching are also collected. A total of 242 teachers responded to the questionnaire. This represents a participation rate of 93%.

### ***Instrument***

In this article, we focus more specifically on teachers' responses concerning the teaching of reading to the PIRLS classroom, i.e. the tested classroom. The analyses presented below focus on a selection of 16 items from the questionnaire sent to the teachers (Table 1). Two items relate to the texts' type used by teachers during reading instruction or reading activities in the classroom. Three items focus on decoding skills. Six items relate to the tasks proposed to students in order to develop their reading comprehension skills. Finally, five items relate to the frequency with which teachers propose challenging tasks to their students.

### ***Analysis***

The aim of this paper is to analyze the extent to which reading teaching practices differ significantly or not according to classroom profile in terms of students' performance in reading comprehension. To this end, the analyses were carried out in 3 stages. First, classrooms were categorized according to the percentage of students in the class at each level of the international achievement scale. This four-level achievement scale is specific to the PIRLS survey. It was established based on the 2021 results (von Davier, et al., 2023). In fact, the PIRLS average results are summarized on the PIRLS achievement scale for reading comprehension in the fourth grade. Achievement is cut at four points along the scale as International Benchmarks:

- Advanced International Benchmark: student's achievement is higher than 625 - at this point students could be considered as expert readers. They are able to integrate and

interpret events spread throughout a difficult text in order to analyze information or support a point of view.

- High International Benchmark: student's achievement is between 550 and 625 - students are good readers. They are able to make inferences and interpretations and justify their answers with reference to the text. This benchmark can be considered as the attended level for grade 4 students.
- Intermediate International Benchmark: student's achievement is between 475 and 550 - students are low readers. They have poor reading comprehension skills. They are able to make direct inferences by linking two or more pieces of information close into the text.
- Low International Benchmark: student's achievement is between 400 and 475 - at this point, students are struggling readers. They are able to locate and reproduce explicitly stated information from different parts of a text.

Two types of classrooms were considered in the analysis. First, classrooms where 50% or more of the students are at the low international benchmark or below. This means that, in these classrooms, the majority of students are experiencing major reading difficulties. We will refer to these classes as "low level classrooms" in the remainder of this article. This classroom category accounts for 26.2% of the students assessed in the survey. The second classroom category is where 50% or more of the students are at the high or advanced international benchmarks. In these classrooms, the majority of students are good or even expert readers. These classrooms are referred to in this paper as "high level classrooms". This category accounts for 9.4% of all students.

The second stage of the analysis consists of a Mann-Witney U test for non-parametric data as Likert Scale (Creswell & Guetterman, 2024). For each item, this test allows us the opportunity to study if the distribution between the two groups is significantly different or not.

The third stage of the analysis entailed descriptive analyses, and more specifically the calculation of the percentage of students whose teachers claim to implement the practices identified as significantly different according to the type of classroom. In this case, significance of percentage differences was calculated considering measurement errors, using SAS 9.4 software.

## Results

### *Types of texts*

Since PIRLS 2011, the first cycle in which French-speaking Belgium took part in the large-scale study, short stories have remained the most frequently used medium in the classroom, with 67% of students reading short stories at least once a week. In 2021, however, there was a promising increase in the percentage of students regularly (once a week) exposed to fiction books divided into chapters. Although still low, this percentage rose to 19% in 2021, compared with 13% in 2016 (Schillings et al., 2023b).

The analysis of the frequencies distribution (table 2) according to the two types of classrooms shows that there is no difference concerning the use of short stories in both classrooms. In contrast, there is a significant difference in the use of long fiction books.

**Table 1** Questions and items used in this paper

Types of text	<p>When you have reading instruction and/or do reading activities with the students, how often do you have the students read the following types of text (in print or digitally)?</p> <p><i>Every day or almost every day, once or twice a week, once or twice a month, never or almost never.</i></p>	<p>Short stories (e.g., fables, fairy tales, action stories, science fiction, detective stories)</p> <p>Longer fiction books with chapters</p>
<p>Tasks to automate words identification and free up attention for reading comprehension</p>	<p>When you have reading instruction and/or do reading activities with the students, how often do you do the following?</p> <p><i>Every day or almost every day, once or twice a week, once or twice a month, never or almost never.</i></p>	<p>Teach students strategies for decoding sounds and words</p> <p>Provide opportunities for students to develop fluency</p> <p>Teach students new vocabulary systematically</p>
<p>Tasks to develop reading comprehension skills or strategies</p>	<p>How often do you ask the students to do the following things to help develop reading comprehension skills or strategies?</p> <p><i>Every day or almost every day, once or twice a week, once or twice a month, never or almost never.</i></p>	<p>Explain or support their understanding with text evidence</p> <p>Compare what they have read with experiences they have had</p> <p>Compare what they have read with other things they have read</p> <p>Make predictions about what will happen next in the text they are reading</p> <p>Make generalizations and draw inferences based on what they have read</p> <p>Self-monitor their reading (e.g., recognize when they don't understand)</p>
<p>Challenging tasks</p>	<p>How often do you do the following in teaching reading to this class?</p> <p><i>Every or almost every lesson, about half the lessons, some lessons, never.</i></p>	<p>Link new content to student's prior knowledge</p> <p>Encourage students to deepen their understanding of the text</p> <p>Encourage student discussions of texts</p> <p>Encourage students to challenge the opinion expressed in the text</p> <p>Encourage students to read texts with multiple perspectives</p>

**Table 2** Results of the Mann-Witney U Test

	Statistic	<i>p</i>
How often students read short stories	196426.0	0.2321
How often students read long fiction books with chapters	172636.0	<.0001

More precisely (table 3), only 18% of students in “low-level” classrooms read longer fiction books at least once a week, and 38% never read it at all. Conversely, in “high-level” classrooms, although students read short texts on a regular basis, more of them are also confronted with longer stories (30%). Yet reading authentic texts, such as longer ones, is necessary for the development of some reading strategies and skills, such as integrating information and critically assessing a text. These strategies, which involve distancing oneself from the text, will be discussed in the next section.

**Table 3** Percentages of students exposed to different types of text by type of class.

How often do you have the students read the following types of text (in print or digitally)?			
Long fiction books with chapter			
		Low level classroom	High level classroom
Every day or almost every day	% (s.e)	4.7 (2.6)	3.7 (0.9)
	Diff. (s.e.)		+1 (0.62)
Once or twice a week	% (s.e)	13.3 (4.6)	26.3 (11.1)
	Diff. (s.e)		+13 (2.4)***
Once or twice a month	% (s.e.)	44.1 (7.7)	44.5 (13.1)
	Diff. (s.e.)		+0.4 (3.3)
Never or almost never	% (s.e.)	38 (7.3)	25.5 (10.7)
	Diff.		-12.5 (2.9)***

*P* value : \*\*\* <.001 ; \*\*<.01 ; \*<.05

### Tasks to automate word identification and free up attention for reading comprehension

The items in this section concern reading activities that affect the development of written word identification. Distributions are significantly different regarding two items: “How often does the teacher provide opportunities for students to develop fluency” and “How often does the teacher teach students new vocabulary systematically” (table 4).

**Table 4** Results of the Mann-Witney U Test

	Statistic	<i>p</i>
How often does the teacher teach students strategies for decoding sounds and words	196862.0	0.3073
How often does the teacher provide opportunities for students to develop fluency	176842.0	<.0001
How often does the teacher teach students new vocabulary systematically	178014.5	<.0001

In “high-level” classrooms, students are more frequently exposed to activities that develop their speed and accuracy in identifying words. In fact, 29.1% of good readers have daily opportunities to develop their fluency, compared with only 8.1% in “low-level” classrooms, with these students having opportunities to do so only once or twice a week. Concerning the systematic teaching of new vocabulary, 60.2% of pupils in “low-level”

classrooms were exposed to it at least once a week, compared with 86.2% in “high-level” classrooms.

**Table 5** Percentages of students who automate words identification and free un attention.

<b>How often do you have the students read the following types of text (in print or digitally)?</b>			
<b>Opportunities for students to develop fluency</b>			
		<i>Low level classroom</i>	<i>High level classroom</i>
Every day or almost every day	% (s.e)	8.1 (3.6)	29.1 (11.7)
	Diff. (s.e.)		+21 (2.7)***
Once or twice a week	% (s.e)	53.5 (7.3)	33.7 (12.5)
	Diff. (s.e)		-19.8 (3.3)***
Once or twice a month	% (s.e.)	37.2 (7.3)	37.2 (12.1)
	Diff. (s.e.)		+0
Never or almost never	% (s.e.)	1.2 (0.1)	0
	Diff.		
<b>Teaching new vocabulary</b>			
Every day or almost every day	% (s.e.)	31.7 (6.6)	43.5 (13.0)
	Diff. (s.e.)		+11.8 (3.2)***
Once or twice a week	% (s.e.)	28.5 (6.7)	42.7 (14.0)
	Diff. (s.e.)		+14.2 (3.4)***
Once or twice a month	% (s.e.)	34 (6.5)	13.8 (6.8)
	Diff. (s.e.)		-20.2 (2.1)***
Never or almost never	% (s.e.)	5.9 (4.2)	0
	Diff. (s.e.)		

*p* value : \*\*\* <.001 ; \*\*<.01 ; \*<.05

### ***Developing reading comprehension skills and strategies***

The questions selected here focus on which tasks teachers assigned students to help them develop their reading comprehension skills or acquire new reading strategies. These activities are linked to development of their ability to interpret and integrate ideas and information, in other words the construction of a situation model (Kintsch, 2013). Generally, the task of linking reading with students' experiences and knowledge is not very common in French-speaking Belgium (Schillings at al., 2023b). The same applies to distanciated reading.

Regarding differences in teaching practices depending on the skill level of the students in the classroom, the U Mann Witney analysis (table 6) shows significant differences in the distribution for the item “explain or support their understanding with text evidence” and “make generalizations and draw inferences based on what they have read”.

In “low-level” classrooms, students are more often exposed to low-level strategy like explaining or supporting their understanding with text evidence (table 7), this teaching practice can be likened to a comprehension assessment by the teacher using a questionnaire which is not helpful to enhance reading skills (Schillings et al., 2023b). In fact, 46% of students in classes with a higher proportion of low-level students are required to explain or demonstrate their understanding of what they have read every day or almost every day. Only 29% of students in classes with a higher proportion of better readers do so. Conversely, students in “high level” classrooms are more frequently exposed to tasks that train high-level strategies like making generalizations and drawing inferences. Even if these tasks are rarely asked of students on a daily basis, whatever the class. In high-level classrooms, more students work on this strategy on a weekly basis.

**Table 6** Results of the Mann-Witney test

	Statistic	<i>p</i>
Explain or support their understanding with text evidence	237444.5	<.0001
Compare what they have read with experiences they have had	192578.5	0.2074
Compare what they have read with other things they have read	196725.0	0.4255
Make generalizations and draw inferences based on what they have read	217575.5	0.0018
Make predictions about what will happen next in the text they are reading	204410.5	0.6540
Self-monitor their reading (e.g., recognize when they don't understand)	210292.0	0.1192

**Table 7** Percentages of students who develop these reading strategies by type of class.

<b>How often do you ask the students to do the following things to help develop reading comprehension skills or strategies?</b>			
<b>Explain or support their understanding with text evidence</b>			
		<i>Low level classroom</i>	<i>High level classroom</i>
Every day or almost every day	% (s.e.)	45.9 (7.7)	29 (12.5)
	Diff. (s.e.)		-16.9 (3.2)***
Once or twice a week	% (s.e.)	38.6 (6.8)	57.9 (12.9)
	Diff. (s.e.)		+19.3 (3.4)***
Once or twice a month	% (s.e.)	12.3 (4.5)	7.8 (5.6)
	Diff. (s.e.)		-4.5 (1.6)***
Never or almost never	% (s.e.)	3.2 (0.4)	5.3 (1.3)
	Diff. (s.e.)		-2.1 (0.3)***
<b>Make generalizations and draw inferences based on what they have read</b>			
Every day or almost every day	% (s.e.)	7.5 (3.4)	0.7 (0.2)
	Diff. (s.e.)		-6.8 (0.8)***
Once or twice a week	% (s.e.)	54 (6.7)	71.4 (11.3)
	Diff. (s.e.)		+17.4 (3.00)***
Once or twice a month	% (s.e.)	35.9 (6.7)	23.8 (10.6)
	Diff. (s.e.)		-12.1 (2.8)***
Never or almost never	% (s.e.)	2.7 (1.9)	4 (3.9)
	Diff. (s.e.)		+1.4 (1.00)

*p* value: \*\*\* <.001 ; \*\*<.01 ; \*<.05

### **Challenging tasks**

Regarding tasks with greater difficulty, which help to develop more expert reading skills, differences in practice can also be observed according to classroom level (table 8). Distributions are significantly different regarding the item relative to deepening their understanding of the text and the one focusing on reading texts with multiple perspectives.

**Table 8** Results of the Mann-Witney U test

	Statistic	<i>p</i>
How often does the teachers encourage students to deepen their understandings of the text	165075.5	<.0001
How often does the teachers encourage students to challenge the opinion expressed in the text	196666.0	0.3795
How often does the teachers encourage students to read texts with multiple perspectives	166487.5	<.0001
How often does the teachers link new content to student's prior knowledge	186691.5	0.2517
How often does the teachers encourage student discussions of texts	183894.5	0.0967

More precisely (table 9), students in high-level classrooms are more frequently encouraged than others to deepen their understanding of a text. Indeed, 73.8% of students in "high level" classrooms do so every or almost every lesson, whereas only 55.5% of students in "low level" classrooms do so at this frequency. Similarly, students in low-level classrooms are very rarely encouraged to read texts with multiple points of view: 40.1% do so at some lessons and 41.3% never do. Conversely, in high level classrooms, 45.1% of students do so in at least half the lessons. However, these two types of tasks are essential for building expert reading skills, since they require the reader to contribute a part of themselves in constructing the meaning given to the text.

**Table 9** Percentages of pupils whose teachers say they offer challenging tasks, by frequency and type of class.

<b>How often do you do the following in teaching reading to this class?</b>			
<b>Encourage students to deepen their understanding of the text</b>			
		<i>Low level classroom</i>	<i>High level classroom</i>
Every or almost every lesson	% (s.e.)	55.5 (5.9)	73.8 (10.7)
	Diff. (s.e.)		+18.3 (2.9)***
About half the lessons	% (s.e.)	26.9 (6.0)	20.1 (9.9)
	Diff. (s.e.)		-6.8 (2.6)***
Some lessons	% (s.e.)	14.5 (4.8)	6.1 (5.6)
	Diff. (s.e.)		-8.5 (1.7)***
Never	% (s.e.)	3.1 (0.4)	0
	Diff. (s.e.)		
<b>Encourage students to read texts with multiple perspectives</b>			
Every or almost every lesson	% (s.e.)	1.9 (1.35)	22.2 (12.2)
	Diff. (s.e.)		+20.3 (2.8)***
About half the lessons	% (s.e.)	16.7 (3.9)	22.9 (10.8)
	Diff. (s.e.)		+6.3 (2.5)***
Some lessons	% (s.e.)	40.1 (7.7)	24.2 (9.8)
	Diff. (s.e.)		-15.9 (2.8)***
Never	% (s.e.)	41.3 (6.9)	30.7 (12.7)
	Diff. (s.e.)		-10.7 (3.0)***

*p* value: \*\*\*<.001 ; \*\*<.01 ; \*<.05

## Discussion

When it comes to equity in education, different approaches are possible. Today, the principle of corrective justice is the most popular (OECD, 2023). One of teachers' roles is to try to bridge the initial inequalities by providing more support to students who need it. One way of doing this is to adapt teaching practices. However, this adaptation must not result in depriving students of opportunities to develop even their most advanced skills.

This paper aims to document the issue of OTL in the field of learning and teaching reading comprehension. More specifically, based on PIRLS 2021 data from French-speaking Belgium, the aim was to see to what extent OTL differ according to the skill level of the students in the classroom. More specifically, teachers' responses to sixteen content emphasis items were analyzed.

First, our results reaffirm limited OTL concerning effective practices for the development of expert reading, particularly in terms of in-depth discussions about texts and work on prior knowledge (Bilton & Duff, 2021; Shanahan et al., 2010). The quality of OTL is therefore lower for all French-speaking Belgian students. At the heart of this paper, the results according to the level of the classroom show differences in terms of quality and quantity between struggling and good students. The results on types of text supports the hypothesis that Grade 4 reading instruction practices in French-speaking Belgium provide few opportunities to develop expert reading skills in the face of long texts, especially for poor readers. However, long texts are important because they are the medium for reading outside school (Duke & Pearson, 2009). They are also better supports for developing the skills described below, as are texts with multiple perspectives. In addition, the results show that poor readers, who often have difficulty at identifying words, are given few opportunities to develop this skill by working either on the speed and accuracy of decoding (fluency), or on immediate recognition through mastery of new vocabulary. Indeed, these competencies are essential to train, even with older readers, to consolidate their reading skills. (Capin et al., 2021). Similarly, poor readers are more exposed to activities that develop low-level strategies than to activities that develop higher-level strategies. Our results show that the teaching of skills enabling the development of a dynamic and complex mental representation of the text read is lacking among the pupils who need it most, the poor readers. Instead, they are subjected to regular assessment of their comprehension, which does not allow them to develop their reading skills. They are also less exposed to challenging tasks. While the results of this section and the previous one show that the most effective practices for developing expert reading, including interpretation and appreciation of texts, are not very common in French-speaking Belgium (Schillings et al., 2023b), the results concerning challenging tasks show that poor readers are, even more than others, deprived of opportunities to contribute a part of themselves to the construction of texts they read, either by deepening their own understanding or by reading texts with multiple perspectives.

Thus, reading teaching practices adjust to the level of reading skills of the most vulnerable students, which, through a cumulative effect, risks limiting their opportunities to learn to read expertly. The source of this adjustment may lie at various levels. Firstly, Rubbie-Davies (2007) has highlighted the fact that teachers have lower expectations of low-level classes. Another source of adjustment is linked to one of the seven capital misunderstandings set out by Goigoux (1998) for kindergarten (also applicable in the early years of the core curriculum). This consists in avoiding placing pupils in a position of failure by simplifying the tasks proposed to them. This tendency to place pupils in a position of success may also stem from the injunction to success that teachers may feel. This injunction may lead teachers to do things that are easy to place students in a position to succeed, instead of developing high-level skills in the latter or offering additional learning time for these skills. Finally, this adjustment could be explained by a statist vision of learning reading comprehension, leading

teachers to consider, for example, that reading fluently must be taught before working on comprehension strategies.

Whatever the reasons, these adjustments lead to the avoidance of dealing with the complexity of the situations and notions manipulated. Yet scientific studies in the field of reading unanimously stress the importance of making expert comprehension approaches visible, which implies diversifying and covering a range of text difficulties (CNESCO, 2016; Shanahan et al., 2010). Consequently, at this level of compulsory schooling, encouraging students to read texts presenting multiple points of view (and making them visible) is, for example, one of the keys to expert reading.

While the principle of corrective justice (OECD, 2023) encourages teachers to adjust their instruction to meet the needs of lower-achieving students, such differentiation should not result in a diminished quality or quantity of learning opportunities (OTL). Although upholding high expectations for all learners is a commendable goal, it remains a complex undertaking given the diversity and variability present within classrooms. To mitigate the disparities in student achievement – which can pose significant instructional challenges – it may be beneficial to adopt a preventative approach to addressing learning difficulties, as advocated by the Response to Intervention model (Fuchs and Fuchs, 2006). By narrowing these achievement gaps, the aspiration to maintain high expectations for all students – through the implementation of tasks that foster the development of expert reading skills – can become not only feasible but self-evident.

While these results are interesting, it is important to point out several limitations associated with the data used. Firstly, these measures are based on self-reported data. While some authors report a high correlation (over 0.70) between data collected in a large-scale cross-sectional study and those derived from teachers' daily self-reports (Smithson and Porter, 1994, cited by Schmidt and Maier, 2009), this correlation decreases when we go into greater detail. In addition, as Likert scales are involved, responses may be subject to biases linked to response styles. Response styles are systematic and stable patterns of response that cannot be explained by the content of a question, nor by what it is designed to measure. For example, the tendency to acquiesce, the choice of extremes, the choice of intermediate levels, erratic behavior or social desirability (Lafontaine, 2017).

For these reasons, it's difficult to know exactly what teachers are doing in the classroom. These initial analyses should be supplemented by classroom observations to understand how teachers adapt their expectations, learning objectives and tasks. These observations could be complemented by interviews with teachers to understand their vision of teaching in terms of equity and how they explain their pedagogical choices.

## References

- Bautier E., & Rayou, P. (2009). *Learning inequalities. Programmes, pratiques et malentendus scolaires*. Presses Universitaires de France.
- Bautier, E., & Goigoux, R. (2004). Difficultés d'apprentissage, processus de secondarisation et pratiques enseignantes : une hypothèse relationnelle. *Revue Française de Pédagogie*, 148, 89-100. <https://doi.org/10.3406/rfp.2004.3252>
- Baye, A., Fagnant, A., Hindryckx, G., Lafontaine, D., Matoul, A., & Quittre, V. (2009). Les compétences des jeunes de 15 ans en Communauté française en sciences, en mathématiques et en lecture. Results from the PISA 2006 survey. *Cahiers des Sciences de l'Education*, 29-30, 3-245.
- Berardo, S. A. (2006). The use of authentic materials in the teaching of reading. *The reading matrix*, 6(2), 60-69. <https://readingmatrix.com/articles/berardo/article.pdf>

- Bianco, M. (2023). La compréhension de l'écrit et son développement : de multiples habiletés en interaction. *A.N.A.E.*, 182, 75-84.
- Bilton, C., & Duff, A. (2021). *Improving literacy in key stage 2 : Guidance report*. Education Endowment Foundation. <https://educationendowmentfoundation.org.uk/education-evidence/guidance-reports/literacy-ks2>
- Bonnéry, S. (2007). *Comprendre l'échec scolaire : Élèves en difficultés et dispositifs pédagogiques*. La Dispute.
- Bourdieu, P. (1979). The three states of cultural capital. *Actes de la recherche en sciences sociales*, 30(1), 3-6. <https://doi.org/10.3406/arss.1979.2654>
- Bourdieu, P., & Passeron, J.-C. (1964). *Les héritiers. Les étudiants et la culture*. Éditions de Minuit.
- Bourdieu, P., & Passeron, J.-C. (1970). *La reproduction*. Éditions De Minuit.
- Capin, P., Cho, E., Miciak, J., Roberts, G., & Vaughn, S. (2021). Examining the reading and cognitive profiles of students with significant reading comprehension difficulties. *Learn Disabil Q*, 44(3), 183-196. <https://doi.org/doi:10.1177/0731948721989973>
- Caro, D. H., & Mirazchiyski, P. (2012). Socioeconomic gradients in eastern european countries: evidence from PIRLS 2006. *European Educational Research Journal*, 11, (1), 96-110. <https://doi.org/10.2304/eej.2012.11.1.96>
- Carroll, J.B. (1963). A model of school learning, *Teachers College Record*, 64, 723-733. <https://doi.org/10.1177/016146816306400801>
- CNESCO (2016). *Lire, Comprendre, Apprendre : comment soutenir le développement de compétences en lecture ? Recommandations du jury*. [https://www.cnesco.fr/wp-content/uploads/2016/09/CCLecture\\_recommandations\\_jury.pdf](https://www.cnesco.fr/wp-content/uploads/2016/09/CCLecture_recommandations_jury.pdf)
- Coleman, J. S, Campbell, E.Q., Hobson, C.J., McPartland, J., Mood, A.M., Weinfeld, F.D., & York, R.L. (1966). *Equality of Educational Opportunity*. Printing Office.
- Creswell, J.W., & Guetterman, D. (2024). *Educational research: Planning, conducting and evaluating quantitative and qualitative research (Seventh Edition)*. Global Edition.
- De Coster, S., & Hotyat, F. (1970). *La sociologie de l'éducation ?* Éditions de l'Institut de Sociologie.
- Delarue-Breton, C., & Bautier, É. (2019). Littératie scolaire : ambitions exigeantes, difficultés de mise en œuvre. *Pratiques*, 183-184. 1-13. Doi : <https://doi.org/10.4000/pratiques.7011>
- Duke, N. K., & Pearson, P. D. (2009). Effective practices for developing reading comprehension. *Journal of Education*, 189(1-2), 107-122. <https://doi.org/10.1177/0022057409189001-208>
- Felouzis, G. (2014). *Les inégalités scolaires*. Presses Universitaires de France.
- Filderman, M. J., Austin, C. R., Boucher, A. N., O'Donnell, K., & Swanson, E. A. (2022). A meta-analysis of the effects of reading comprehension interventions on the reading comprehension outcomes of struggling readers in third through 12th grades. *Exceptional Children*, 88(2), 163-184. <https://doi.org/10.1177/00144029211050860>
- Floden, R. E. (2002). The measurement of opportunity-to-learn. In A. C. Porter & A. Gamoran (Eds.), *Methodological advances in cross-national surveys of educational achievement*. (pp.231-266). National Academies Press.
- Fotheringham, J. B. & Creal, D. (1980). Family socioeconomic and educational-emotional characteristics as predictors of school achievement. *Journal of Educational Research*, 73, (6), 311-317. <https://psycnet.apa.org/doi/10.1080/00220671.1980.10885258>

- Fuchs, D., & Fuchs, L. S. (2006). Introduction to RTI: What, why and how valid is it? *Reading Research Quarterly*, 41(1), 93-99. <https://psycnet.apa.org/doi/10.1598/RRQ.41.1.4>
- Gau, S. (1997, March). *The distribution and the effects of opportunity to learn on mathematics achievement*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.
- Giasson, J. (2013). *La Lecture. De la théorie à la pratique*. De Boeck.
- Goigoux, R. (1998, January 28). *Sept malentendus capitaux* [Conference Session]. Forum pour l'école maternelle, Paris, France.
- Gustafsson, J.-E, Nilsen, T., & Hansen, K.Y. (2018). School characteristics moderating the relation between student socio-economic status and mathematics achievement in grade 8. Evidence from 50 countries in TIMSS 2011. *Studies in Educational Evaluation*, 57, 16-30. <https://doi.org/10.1016/j.stueduc.2016.09.004>.
- Guthrie, J., & Anderson, E. (1999). Engagement in reading: Processes of motivated strategic, knowledgeable, social readers. In J. Guthrie & D. Alvermann (Éds.), *Engaged reading: Processes, practices and policy implications* (pp. 17-45). Teachers College Press.
- Hattie, J. (2009). *Visible learning. A synthesis of over 800 meta-analyses relating to achievement*. Routledge.
- Husen, T. (1967). *International Study of Achievement in Mathematics, Volume II*. Almqvist & Wiksell.
- Kintsch, W. (2013). Revisiting the construction-integration model of text comprehension and its implications for instruction. In D.E. Alvermann, N.J. Unrau, & R.B. Ruddell (Eds.), *Theoretical models and processes of reading* (6th ed., pp. 807-839). Newark, DE: International Reading Association.
- Kyriakides, L., & Creemers, B.P.M. (2018). Investigating the quality and equity dimensions of educational effectiveness. *Studies in Educational Evaluation*, 57, 1-5. <https://doi.org/10.1016/j.stueduc.2017.12.005>
- Lafontaine, D. (2017). Évaluations à large échelle : prendre la juste mesure des effets de contexte. In P. Detroz, M. Crahay, A., & Fagnant (Eds.), *L'évaluation à la lumière des contextes et des disciplines* (pp. 21-51). Louvain-La-Neuve, De Boeck. <https://hdl.handle.net/2268/207443>
- Lafontaine, D., Baye, A., Vieluf, S., & Monseur, C. (2015). Equity in opportunity-to-learn and achievement in reading: A secondary analysis of PISA 2009 data. *Studies in Educational Evaluation*, 47, 1-11. <https://doi.org/10.1016/j.stueduc.2015.05.001>
- McDonnell, L. M. (1995). Opportunity to learn as a research concept and a policy instrument. *Educational Evaluation and Policy Analysis*, 17(3), 305-322. <https://doi.org/10.2307/1164509>
- Mons, N., (2007). *Les Nouvelles Politiques éducatives*. Presses Universitaires de France.
- Monseur, C., & Lafontaine, D. (2012). Structure des systèmes éducatifs et équité : un éclairage international. In M. Crahay (Eds.), *L'école peut-elle être juste et efficace ? De l'égalité des chances à l'égalité des acquis* (pp.185-219). De boeck.
- Nachbauer, M., & Kyriakides, L. (2020). A review and evaluation of approaches to measure equity in educational outcomes. *School Effectiveness and School Improvement*, 31 (2), 306-331. <http://dx.doi.org/10.1080/09243453.2019.1672757>
- OECD (2023), *Equity and Inclusion in Education: Finding Strength through Diversity*. OECD Publishing <https://doi.org/10.1787/e9072e21-en>.

- OECD, (2019). *PISA 2018 Results (Volume II): Where All Students Can Succeed*. PISA, OECD Publishing. <https://doi.org/10.1787/b5fd1b8f-en>
- Rochex, J.-Y., & Crinon, J. (2011). *La construction des inégalités scolaires. Au cœur des pratiques et des dispositifs d'enseignement*. Presses Universitaires de Rennes.
- Rosenblatt, L. (1994). The Transactional Theory of reading and writing. In R. Dans Ruddell, M. Ruddell, & H. Si Singer (Eds.), *Theoretical Models and Processes of Reading* (4th ed., pp. 1057-1092). International Reading Association.
- Rowan, B., & Correnti, R. (2009). Studying reading instruction with teacher logs: Lessons from the study of instructional improvement. *Educational Researcher*, 38(2), 120-131. <https://doi.org/10.3102/0013189X09332375>
- Rubie-Davies, C.M. (2007). Classroom interactions: exploring the practices of high- and low-expectation teachers. *British Journal of Educational Psychology*, 77(2), 289-306. doi: 10.1348/000709906X101601
- Scherff, L., & Piazza, C. L. (2008). Why now, more than ever, we need to talk about opportunity to learn. *Journal of Adolescent & Adult Literacy*, 52(4), 343-352. <https://doi.org/10.1598/JAAL.52.4.7>
- Schillings, P., & André, M. (2019). S'essayer à l'enseignement explicite d'une démarche d'interprétation: Composer avec des conceptions acquises en formation initiale. *Caractères*, 59, 55-71.
- Schillings, P., André, M., & Dupont, V. (2023). Performances en lecture et pratiques de classe en Fédération Wallonie-Bruxelles : L'urgence d'enseigner des stratégies de régulation, d'interprétation et d'évaluation. *NEXUS*, 3(1), 74-94. <https://doi.org/10.14428/nexus.v3i1.79273>
- Schillings, P., André, M., Matoul, A., & Dupont, V. (2023a). *PIRLS 2021: Note de synthèse*. Service général du Pilotage du Système éducatif. [https://www.pirls-fwb.uliege.be/upload/docs/application/pdf/2023-05/note\\_de\\_synthese.pdf](https://www.pirls-fwb.uliege.be/upload/docs/application/pdf/2023-05/note_de_synthese.pdf)
- Schillings, P., Géron, S., & Dupont, V. (2017). Étude comparative des pratiques d'enseignement de la lecture en 4e primaire : Des questions de didactique pointées par l'étude internationale PIRLS 2011. *Forumlecture suisse*, 3, 1-18. <https://doi.org/10.58098/lffl/2017/3/613>
- Schmidt, W. H., & Maier, A. (2009). Opportunity to learn. In G. Sykes, B. Schneider, & D.N. Plank (Eds.), *Handbook of Education Policy Research*, (pp. 541-559). New York: Routledge.
- Schmidt, W. H., & McKnight, C. C. (1995). Surveying educational opportunity in mathematics and science: An International Perspective. *Educational Evaluation and Policy Analysis*, 17(3), 337-353. <https://doi.org/10.3102/01623737017003337>
- Shanahan, T., Callison, K., Carriere, C., Duke, N. K., Pearson, P. D., Schatschneider, C., & Torgesen, J. (2010). *Improving reading comprehension in kindergarten through 3rd grade: A practice guide* (NCEE 2010-4038). National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. [https://ies.ed.gov/ncee/wvc/Docs/PracticeGuide/readingcomp\\_pg\\_092810.pdf](https://ies.ed.gov/ncee/wvc/Docs/PracticeGuide/readingcomp_pg_092810.pdf)
- Sirin, S. R. (2005). Socioeconomic status and academic achievement: A meta-analytic review of research. *Review of Educational Research*, 75(3), 417-453. <https://doi.org/10.3102/00346543075003417>
- Stevens, F. I., Wiltz, L., & Bailey, M. (1998). *Teachers' evaluations of the sustainability of opportunity to learn (OTL) assessment strategies. A national survey of classroom teachers in*

- large urban school districts*. Temple University, Laboratory for Student Success/Center for Research in Human Development and Education.
- Toste, J. R., Didion, L., Peng, P., Filderman, M. J., & McClelland, A. M. (2020). A meta-analytic review of the relations between motivation and reading achievement for K-12 students. *Review of Educational Research*, 90(3), 420-456.
- UNESCO-UIS, (2018). *Handbook on measuring equity in education*. UNESCO Institute for Statistics Publishing.
- Van Damme, J., & Bellens, K. (2017). Countries strive towards more quality and equity in education: Do they show success or failure? Evidence from TIMSS 2003 and 2011, for Grade 4. In Rosén, M., Hansen, Y.K., Wolff, U. (Eds.) *Cognitive Abilities and Educational Outcomes. Methodology of Educational Measurement and Assessment*. Springer, Cham. [https://doi.org/10.1007/978-3-319-43473-5\\_7](https://doi.org/10.1007/978-3-319-43473-5_7)
- Van Dijk, T. A., & Kintsch, W. (1983). *Strategies of discourse comprehension*. Academic Press.
- von Davier, M., Mullis, I. V. S., Fishbein, B., & Foy, P. (Eds.). (2023). *Methods and procedures: PIRLS 2021 Technical Report*. Boston College, TIMSS & PIRLS International Study Center. <https://pirls2021.org/methods>
- Ziegler, J., & Sprenger-Charolles, L. (2023). Apprendre à lire : du décodage à la compréhension écrite. *A.N.A.E.*, 182, 45-54.

Received: 31.1.2025, Revised: 8.5.2025, Approved: 8.5.2025