Meaning in Reading: Could Romania's PISA 2018 Results Become a Wake-Up Call to Innovate Practices?

Ligia Sarivan[1], Cornelia Novak[2], Angelica Mihăilescu[3], Carmen Pleșa[4]

Center for Policy and Evaluation in Education, Romania[1,2,3]
Tudor Vianu National College, Bucharest, Romania[4]

Abstract

The Romanian students' reading results in the PISA 2018 assessment did not bring a spectacular shift in the trend of the last decade: Romania continues to score below the EU average and below its Eastern European neighbours' levels. While the data from previous cycles were not extensively reported to the wider public, in December 2019, when the results were released internationally, the Romanian Ministry of Education organized a press conference. The published figures were met with highly negative emotions and a fierce attack against the new national curriculum for lower secondary education. But could the official curriculum be the culprit? It had only been implemented at grade 5 level (11 year olds) when the 15 year olds took the PISA test! Where does the reading issue lie, then? Our paper analyses the PISA 2018 data in order to identify the students' actual problems in reading with the aim to capitalize on the poor results and innovate for better outcomes. Our methodology consists in isolating the items with the highest and the lowest scores in the Romanian database and thus identify the reading processes and the item typologies that appear to be difficult for our students. Next, we compare these processes and respective PISA assessment tasks with the Romanian curriculum provision and the reading practices. Finally, we conclude on how to improve the latter on the basis of the evidence PISA offers. Our team has a long term goal to enhancing the students' motivation with meaningful reading texts and contexts and supporting teachers to leave behind the academic grammar – literature approach in reading practices.

Keywords: *Reading practices, motivation for reading, language curriculum, PISA.*

1. PISA – beyond the traditional academic reading

PISA, the OECD's Programme for International Student Assessment, looks into the 15-year-olds' ability to use their reading, mathematics and science knowledge and skills to meet real-life challenges. The programme does not assess school subjects per se but how the students apply what they know in novel situations and demonstrate effective learning strategies [6]. This becomes increasingly important in a fast-paced and unpredictable world. The focus is no longer to replicate what we learn in school but face problems and find solutions that we cannot anticipate today [7]. In this context, the reading literacy refers to the "understanding, using, evaluating, reflecting on and engaging with texts in order to achieve one's goals, to develop one's knowledge and potential and to participate in society" [3, p.28]. PISA measures the reading performance according to 1-6 levels; achievement at level 2 and below indicates functional illiteracy.

Romania has participated in the programme since 2006. The reading stats [4] show: a relative constant overall reading performance along the PISA cycles; results below the OECD and EU respective average; more than 40% of the students at level 2 or below while only 2-3% are at levels 5-6. A comparison with participant countries from the former communist bloc also places Romania in the lower ranks. Similar results and comparisons are to be found in the PIRLS 2011 International Report [1] that focuses on reading at the end of primary education!

The PISA data have been made public since the first participation. Neither the decision makers nor the media have paid a lot of attention to the figures. Consequently, the situation has been a matter of concern among experts, but never impressed a larger audience... until December 2019 when the Ministry of Education organised a press conference as soon as the 2018 international data were released! "The disaster of the school system" was a top item of news for weeks and the search for its roots began. The new national curriculum [9] for low secondary education (11-15-year-olds) was a good "scape goat" candidate since the 15-year-olds constitute the target PISA population. Moreover, the new curriculum had already been contested by many for the changes it had brought about. The problem is that the teens who were represented in the PISA 2018 sample had studied according to the old curriculum [10]. Nevertheless, this piece of evidence was disregarded in the heat of the moment and in the context of a rather poor culture of authentic assessment, subsequent reflection and

evidence-based decision making. Despite the prevalent negative emotions played out in the media, the December 2019 PISA event raised awareness about the students' need to improve reading competence in a world that shifts from continuous to non-continuous texts.

Two main issues concern our discussion:

- how to teach and assess reading comprehension so that many more students reach a functional as well as proficiency levels when they approach the variety of nowadays texts;
- which are the contexts in which students are more inclined to read/ really need to read?

2. Reading comprehension and misrepresentations

On the basis of the common framework, PISA allows a variety of comparisons and rankings but the data in the tables and graphs can determine little if any change in the absence of more in-depth analyses. The fact that Romania is among the last three countries from the former communist bloc in the overall reading hierarchy can raise awareness on the issue of reading comprehension. Nonetheless, the global data cannot support teachers to do any better. Since it is not a flattering image, many actors in education resort to blaming *the otherness* (official curriculum, top down measures, bureaucracy, poor resources, financial crisis, lazy students, uninvolved parents etc.) and no specific action is taken in practice since others are expected to trigger change!

For a specific, detailed insight into the results, we have chosen a research approach previously applied by the Romanian TIMSS and PIRLS team for their analyses [2]. It consists in: categorizing the items according to the cognitive process they focus on, the type of text and context they refer to; then identify the items with the highest and the lowest scores in the Romanian database. We thus flag the reading processes and the item typologies that appear to be the easiest / the most difficult for our students. Essentially, we try to explore how the Romanian students specifically answered each of the categorized questions: Which are the items where the students misrepresent the text? Which are the items where the students successfully grasp the meaning? What are the characteristics of these items in terms of processes, text and context? In this respect, we refer to the typologies summarized in the PISA framework (i.e. processes: scan and locate, represent literal information, integrate and generate inferences, reflect on content and form; texts: single/ multiple, continuous /non-continuous/ mixed; scenarios: personal, public, educational, occupational).

3. Highlights from the process-specific data analysis

In order to answer the questions above, we selected from the database the items with over 75% and under 50% success rate. The graphs below indicate the number of each item and the performance for the Romanian school population. We could not offer examples of the items as such since they are confidential but we subcategorized them for the purpose of our analysis.

3.1 Scan and locate

This process focuses on identifying factual information in the text. Our expectations are that students manage it better than more sophisticated reading processes. Nevertheless, as seen in Fig.1, there are 6 items out of the 18 in this process category where less than half of the students had been successful. In these particular cases, the students have to more rigorously scan for the information in a non-continuous text (i.e the one that combines more than a symbolic code: linguistic and visual or linguistic and numerical or table + graph + text).

In terms of context we detect that all these problematic questions are relevant for better life adaptation. The items refer to the advantages of learning, a practical problem solution, benefits from advertising. This type of text/context is included in the Romanian curriculum but it is less present in the textbooks. Hence it is far less ordinary in the reading practices in the class. This explains the lower scores when the text is from this category.
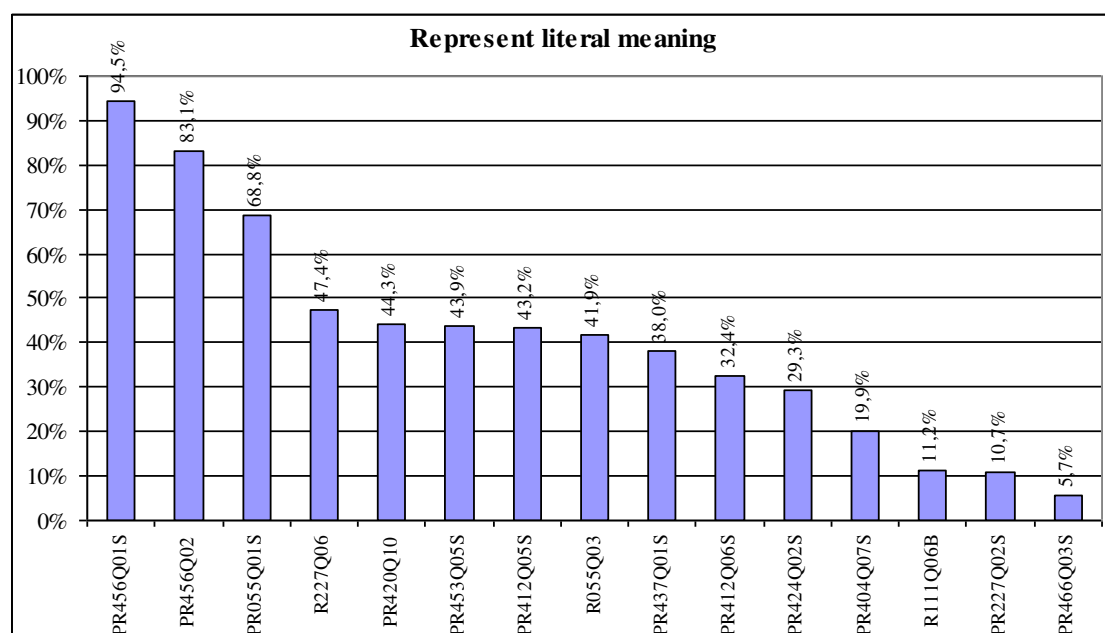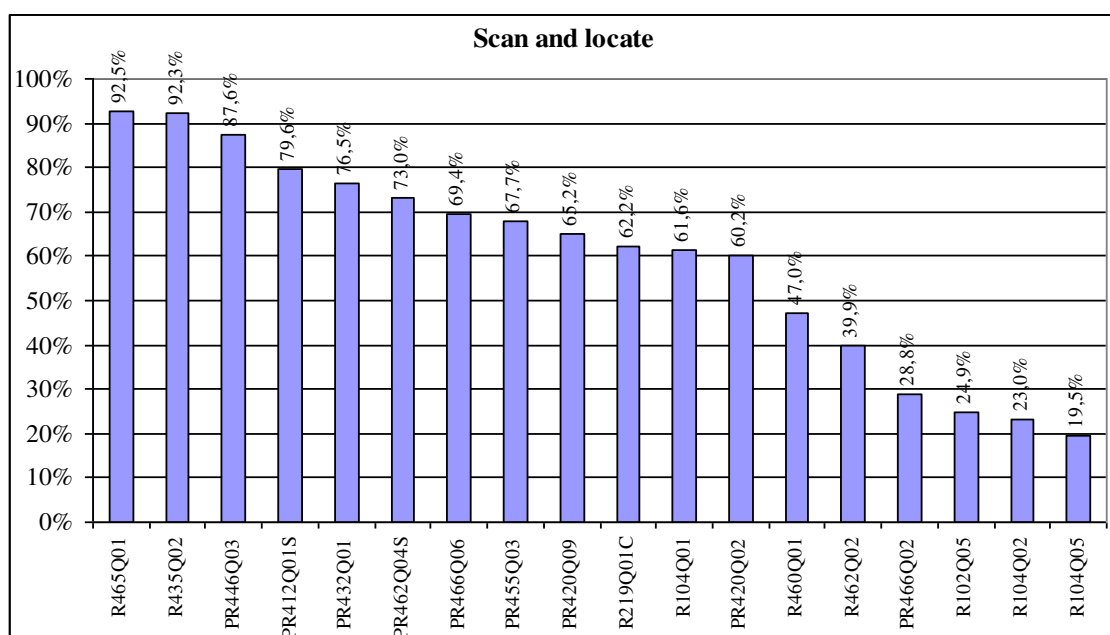
Scan and locate

Item	%
R465Q01	92,5%
R435Q02	92,3%
PR446Q03	87,6%
PR412Q01S	79,6%
PR432Q01	76,5%
PR462Q04S	73,0%
PR466Q06	69,4%
PR455Q03	67,7%
PR420Q09	65,2%
R219Q01C	62,2%
R104Q01	61,6%
PR420Q02	60,2%
R460Q01	47,0%
R462Q02	39,9%
PR466Q02	28,8%
R102Q05	24,9%
R104Q02	23,0%
R104Q05	19,5%

Represent literal meaning

Item	%
PR456Q01S	94,5%
PR456Q02	83,1%
PR055Q01S	68,8%
R227Q06	47,4%
PR420Q10	44,3%
PR453Q05S	43,9%
PR412Q05S	43,2%
R055Q03	41,9%
PR437Q01S	38,0%
PR412Q06S	32,4%
PR424Q02S	29,3%
PR404Q07S	19,9%
R111Q06B	11,2%
PR227Q02S	10,7%
PR466Q03S	5,7%

Fig.1 – The Romanian students' performance in "scan and locate" & "represent literal meaning" items

3.2 Represent literal information

This process refers to comprehending the literal meaning of sentences or short passages, typically matching a direct or close paraphrasing of information in the question with information in a passage.

This form of "reading for meaning" appears to be quite difficult for our students: Two items have a success rate of more than 75%, another item was well answered by more than half of the students, but all the rest present a less than half success rate. The low scores in this category highlight the potential learning difficulties of our students since this process indicate how well the reader understands what it is about in a text.

In terms of text category, the most difficult items appear to be those applying to functional texts that are non-continuous. The multi-layered information that combine linguistic, numerical and visual codes are confusing for our students as previous research shows [8].
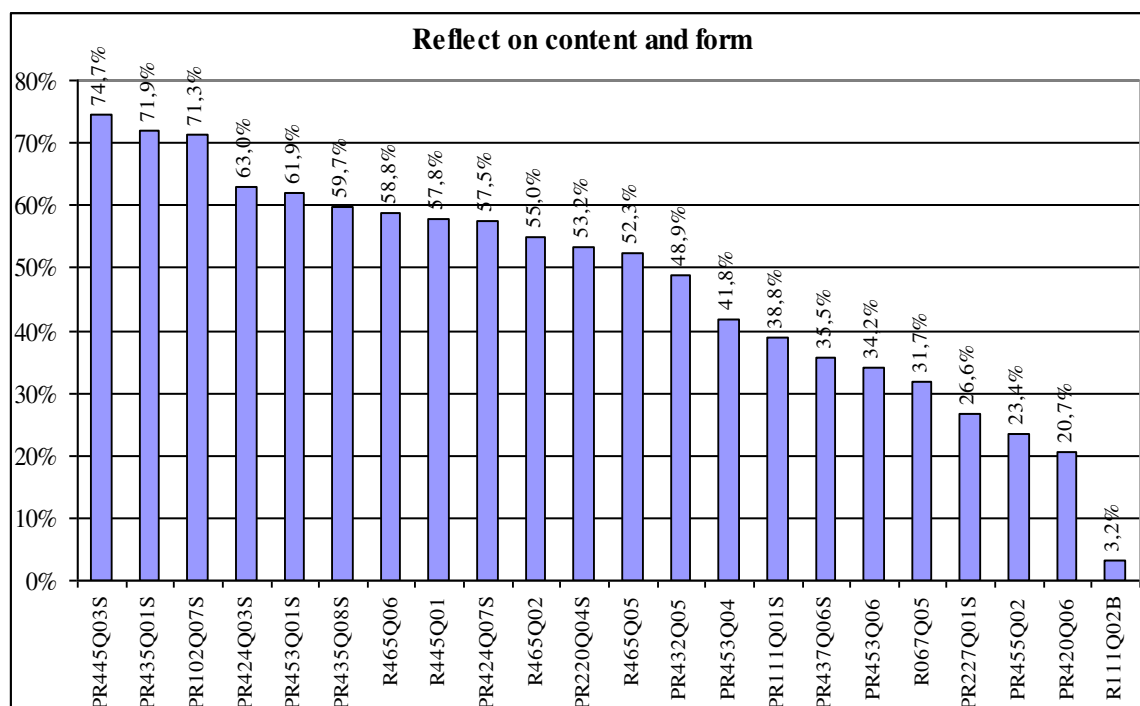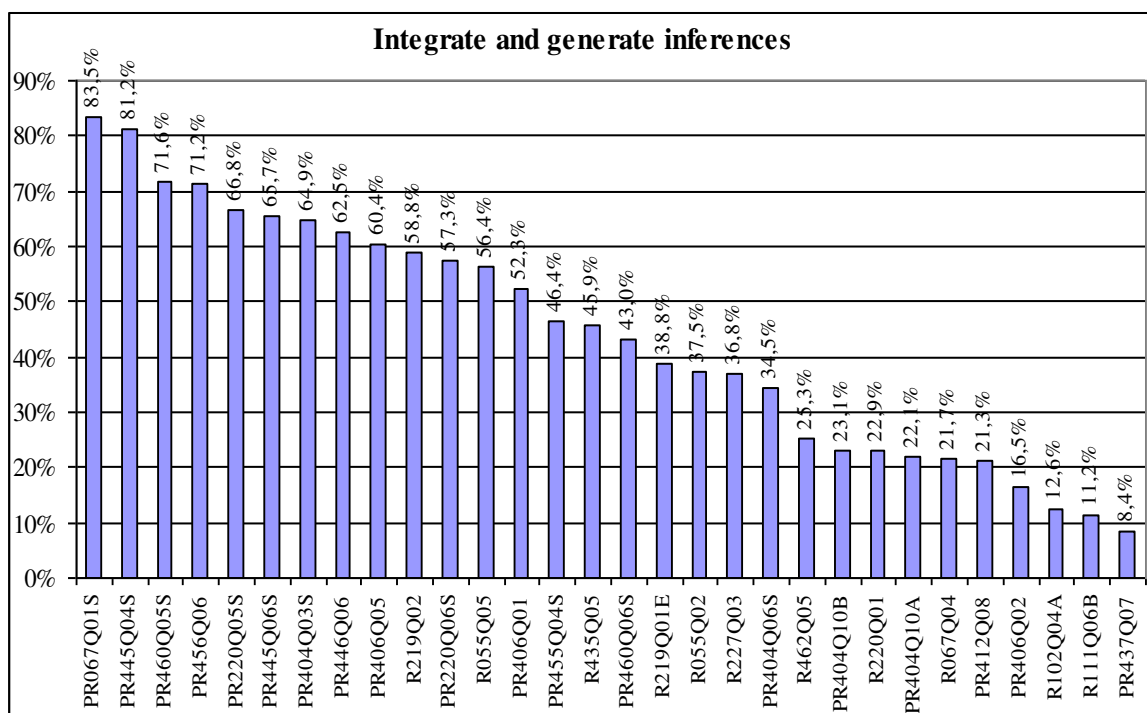
Integrate and generate inferences

	Integrate and generate inferences

PR067Q01S 83,5%
PR445Q04S 81,2%
PR460Q05S 71,6%
PR456Q06 71,2%
PR220Q05S 66,8%
PR445Q06S 65,7%
PR404Q03S 64,9%
PR446Q06 62,5%
PR406Q05 60,4%
R219Q02 58,8%
PR220Q06S 57,3%
R055Q05 56,4%
PR406Q01 52,3%
PR455Q04S 46,4%
R435Q05 45,9%
PR460Q06S 43,0%
R219Q01E 38,8%
R055Q02 37,5%
R227Q03 36,8%
PR404Q06S 34,5%
R462Q05 25,3%
PR404Q10B 23,1%
R220Q01 22,9%
PR404Q10A 22,1%
R067Q04 21,7%
PR412Q08 21,3%
PR406Q02 16,5%
R102Q04A 12,6%
R111Q06B 11,2%
PR437Q07 8,4%

Reflect on content and form

PR445Q03S 74,7%
PR435Q01S 71,9%
PR102Q07S 71,3%
PR424Q03S 63,0%
PR453Q01S 61,9%
PR435Q08S 59,7%
R465Q06 58,8%
R445Q01 57,8%
PR424Q07S 57,5%
R465Q02 55,0%
PR220Q04S 53,2%
R465Q05 52,3%
PR432Q05 48,9%
PR453Q04 41,8%
PR111Q01S 38,8%
PR437Q06S 35,5%
PR453Q06 34,2%
R067Q05 31,7%
PR227Q01S 26,6%
PR455Q02 23,4%
PR420Q06 20,7%
R111Q02B 3,2%

Fig. 2 - The Romanian students' performance in inference and reflection related items

3.3 Integrate and generate inferences

This process refers to going beyond the literal meaning of information in a text by integrating information across sentences or even an entire passage.

Inferences are difficult with both the literary and functional texts. Nevertheless the non-continuous texts are the most confusing for the students. The good news is: multiple choice items support inferences and allow better reading.

TDEV4840

3.4 Reflect on content and form

More than half of the items that ask the reader to evaluate the form of the writing to determine how the author is expressing their purpose/ view are performed successfully by more than half of the students. Nevertheless, there is a highly problematic question that is solved by only 3% (lowest score of all items!). It refers to understanding how the style of an article could influence the reader. This shows the vulnerability of the students in front of the media manipulation.

4. Renovating and innovating practices

The analysis we very briefly presented above highlights the strengths and weaknesses of our students. We need to identify what favours a successful reading in order to capitalize for improving comprehension in areas where students encounter difficulties: PISA evidence shows that multiple choice tasks support students with making inferences and reflecting on content and form. This is very valuable for renovating practices: e.g. more multiple choice tasks will help students better understand what it is about in the text. The new curriculum (2017) clearly defines reading as the student's own comprehension, interpretation and engagement with the text [9]. There is also provision for a variety of texts: continous, non-continous and multimodal. Nevertheless textbooks and, subsequently, practices are not yet tuned to the real-life reading challenges in the class. In the current context, technology-based reading tasks [5] might bercome the opportunity to innovate practices and motivate students in reading for meaning.

References

[1] Mullis, I. et al. (2012), PIRLS 2011 International Results in Reading
https://timssandpirls.bc.edu/pirls2011/downloads/P11_IR_FullBook.pdf
[2] Noveanu, G. et al (2013), A Methodological Guide on How to Improve the Reading Competences (in Romanian), Bucuresti: EDP
[3] PISA 2018 Assessment and Analytical Framework (2019), OECD
https://www.oecd-ilibrary.org/sites/b25efab8-en/index.html?itemId=/content/publication/b25efab8-en
[4] PISA 2018 Database, OECD (2019) https://www.oecd.org/pisa/data/2018database/
[5] PISA 2018 Released Field Trial New Reading Items (2019), OECD
http://www.oecd.org/pisa/test/PISA-2018-Released-New-REA-Items.pdf
[6] PISA 2018 Results (Volume 1). What Students Know and Can Do (2019), OECD
https://www.oecd.org/education/pisa-2018-results-volume-i-5f07c754-en.htm
[7] Schleicher, A. (2019), PISA 2018. Insights and Interpretations, OECD
https://www.oecd.org/pisa/PISA%202018%20Insights%20and%20Interpretations%20FINAL%20PDF.pdf
[8] Singer, F.M., Voica, C., Sarivan, L. (2015) *How Difficult is a Problem. Handling Multi-layered Information Conveyed in a Variety of Codes*, in Procedia Social and Behavioral Sciences 203 (2015) 192 – 198
[9] The Romanian Curriculum, grades 5-8 (2017) (in Romanian), București: Ministry of Education
http://programe.ise.ro/Portals/1/Curriculum/2017-progr/01-Llimba%20si%20literatura%20%20romana%20materna.pdf
[10] The Romanian Curriculum, grades 9-10 (2009) (in Romanian), București: Ministry of Education,
http://programe.ise.ro/Portals/1/Curriculum/Progr_Gim/LC/Limba%20si%20literatura%20romana_clasele%20a%20V-a%20-%20a%20VIII-a.pdf