Hybrid teaching approach at Romanian Language and Literature in PISA 2018, Romania

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Abstract

In recent years, teaching became an important subject of public debate, as a critical area of educational reform in Romania. There is little consensus about what is expected of Romanian teachers, some standpoints inclining towards taking a more constructivist approach in teaching. However, there is little scientific evidence about the teaching practices of Romanian teachers, for public debate to rely on. PISA 2018 (Romania) gives access to data about the frequency of 5 teaching practices, as perceived by students at Romanian Language and Literature lessons. The analysis of these practices suggests that, in their students` perception, Romanian teachers have a hybrid approach of teaching, with a predominance of directed instruction. Also, according to the students, other frequent practices in Romanian language and literature class are teacher support and teachers` stimulation of reading engagement. For the future, more accurate evidence is necessary, in addition to investigating the students` perceptions, we should do observational studies of the teaching practices themselves.

Keywords: teaching practices, directed instruction, constructivist teaching, PISA, Romanian Language and Literature

Introduction

In recent years, teaching became an important subject of public debate, as a critical area of educational reform in Romania. It is one of the two most important, determining factor of school success in the public perception (Tufiş, 2022). Also, improving the quality of teaching represents a priority in political projects (România Educată, 2019), European funding (Borş, 2020) and the civil society`s standpoints (Coaliţia pentru Educaţie, 2015).

There is little consensus about what is expected of Romanian teachers, some standpoints inclining towards taking a more constructivist approach in teaching. The teachers are expected to become facilitators of learning (MEC, 2019, România Educată, 2019), to prioritize formative assessment and feedback (Kitchen et al., 2017, Banca Mondială, 2020) or to use engaging and meaningful teaching methods (Banca Mondială, 2020). However, these claims are based on consultations with stakeholders, international studies and/or a political preference.

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There are some studies showing that Romanian teachers use interactive methods (Petruța, 2013) and have a positive attitude towards constructivist approaches in teaching (Rogoz, 2015). With some limits PISA 2018 could help us gain some more clarity on the subject. PISA 2018 (Romania) gives access to data about the frequency of 5 teaching practices, as perceived by students at Romanian Language and Literature lessons. The students were inquired about adaptive instruction, teacher support, teacher feedback, teachers` stimulation of reading engagement and directed instruction. In this article I present an analysis about the frequency of these practices and their variation pattern.

Before proceeding further, it must be said that myself and the reader should approach this analysis and the subject of teaching with consideration. Systematic reviews show that teaching practices, measured independently or as part of broader school factor (eg. the curriculum), have a significant, positive effect on students` performance (Hattie, 2014, Reynolds și alții, 2014, Scheerens, 2016). Nonetheless other researchers are claiming that the evidence about teaching became so politically important because it legitimizes the raising control of neoliberal governments (Ball, 2007), to the detriment of teaching itself (Biesta, 2010). Also, there is evidence that OECD studies themselves give us a limited understanding of teaching and challenge the teachers' authority (Sorensen and Robertson, 2017). In the light of these criticisms, I acknowledge that even though my intention with this analysis is to enrich our understanding of teaching for teaching`s sake, simply by using data from PISA 2018 I am perpetuating a certain understanding of teaching, close to OECD politics. As follows, I am inviting the readers to read and use the results critically, to restrain from using this evidence for unfair, hasty judgment of teachers, and support or involve in complementary and independent studies of teaching

Data: PISA 2018

In the analysis I used data from PISA 2018, the large-scale and standardized assessment of 15-year-olds competencies, coordinated by the Organization for Economic Cooperation and Development (OECD). In Romania, the data for PISA 2018 were collected by the Institute of Educational Sciences[3], as designated by the Ministry of Education and Research (MEC, 2019). PISA investigates three[4] domains of competence, reading, math and science. In PISA 2018, the major testing domain was reading, which in Romania`s case, is defined as: "understanding, using, reflecting on and engaging with written texts, in order to achieve one's goals, to develop one's knowledge and potential, and to participate in society"[5] (OECD, 2010, p. 23).

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[3] Reorganized in the Education Research Unit within the National Center for Policy and Evaluation in Education in April 2020.

[4] In the 2018 wave, two new secondary areas were investigated: financial skills and global skills, but it is not clear what their status is in the next waves. These minor areas have not been tested in Romania.

[5] The definition of the testing domain changed in 2018 for the countries who did computer based assessment of literacy, the change consisted of adding „evaluation" to the 4 general capabilities. (OECD, 2019a)

In relation to the discipline associated to reading (Romanian Language and Literature), PISA 2018 investigated the students` perceptions about teaching practices such as adaptive instruction, teacher support, teacher feedback, teachers` stimulation of reading engagement and directed instruction. These practices were measured with 3-4 items of frequency or opinion, included in the students' background questionnaire. By aggregating the items, respecting the statistical threshold of internal consistency, of at least 0.7, measured by the Cronbach alpha, the PISA consortium obtained 5 indices: adaptivity, teachsup, perfeed, stimread, and dirins. The indices were calculated using the Rasch model, the values being reported as weighted likelihood estimates (OECD, 2009). The positive values of the indices indicate that the perceived frequency of the practice is higher than the average frequency perceived by the students from the OECD countries.

Table 1

The composition of the pedagogical practices' indices (OECD, 2010)

Teaching practice	Items
Adaptive instruction (ADAPTIVITY)	- The teacher adapts the lesson to my class's needs and knowledge; - The teacher provides individual help when a student has difficulties understanding a topic or task; - The teacher changes the structure of the lesson on a topic that most students find difficult to understand.
Teacher support (TEACHSUP)	- The teacher shows an interest in every student's learning; - The teacher gives extra help when students need it; - The teacher helps students with their learning; - The teacher continues teaching until the students understand.
Teacher feedback (PERFEED)	- The teacher gives me feedback on my strengths in this subject; - The teacher tells me in which areas I can still improve; - The teacher tells me how I can improve my performance.
Teachers` stimulation of reading engagement (STIMREAD)	- The teacher encourages students to express their opinion about a text; - The teacher helps students relate the stories they read to their lives; - The teacher shows students how the information in texts builds on what they already know; - The teacher poses questions that motivate students to participate actively.
Directed instruction (DIRINS)	- The teacher sets clear goals for our learning; - The teacher asks questions to check whether we have understood what was taught; - At the beginning of a lesson, the teacher presents a short summary of the previous lesson; - The teacher tells us what we have to learn.

According to ISE (MEN, 2019), the data for PISA 2018 were collected from a nationally representative sample of 5,081 students, grades 7-10, from 170 school units, with a validation rate of 99% (N = 5075 tests). Among the respondents, the lowest share comprises of 7th grade students (0.9%), followed by the 8th grade students (6%), the 10th grade students (15.1%) and the 9th grade students (77.9%). Sampling was performed by the OECD consortium through a multistage and stratified sampling procedure (OECD, 2009). This strategy allows for an acceptable level of representation at an affordable cost of data collection.

The sampling procedures, with schools and classes being the primary and second sampling units, generates some degree of error (OECD, 2009). On the one hand, at national level, schools have various sizes, which means that the students` probability to be selected in the sample is higher for those from smaller schools. Also, the students from the same school are more likely to resemble, which means that the sample does not fully capture their diversity, at national level. The correction of this error is particularly important in Romania because the lower secondary education is highly segregated (Iosifescu, 2016, Kitchen et al., 2017). As recommended by the consortium (OECD, 2009), the representativeness error was partly corrected by doing analysis on weighted data.

Results

The students' perceptions of their teachers` adaptivity in Romanian Language and Literature classes are divided. The statistics of the index (min = -2.25, max = 2.00, M = 0.04, SE = 0.02, CI = -0.00,0.09, KURT = 0.13, SKE = 0.02, SD = 0.98, SE = 0.01) suggest that on average adaptive instruction is rather high. Nevertheless, as shown by the items' distribution (see Figure 1), the aggregated average is not representative for an important proportion of Romanian students. At least 40% of the students believe that their teacher changes the structure of a lesson, adapts the lessons, and provides individual help almost never or at some classes. Thus, it would be more accurate to conclude that in the practice of Romanian teachers, there are important differences regarding the frequency of adapting their teaching to the students, as individual and / or as a group.

**Figure 1**

Teachers` adaptivity (%)
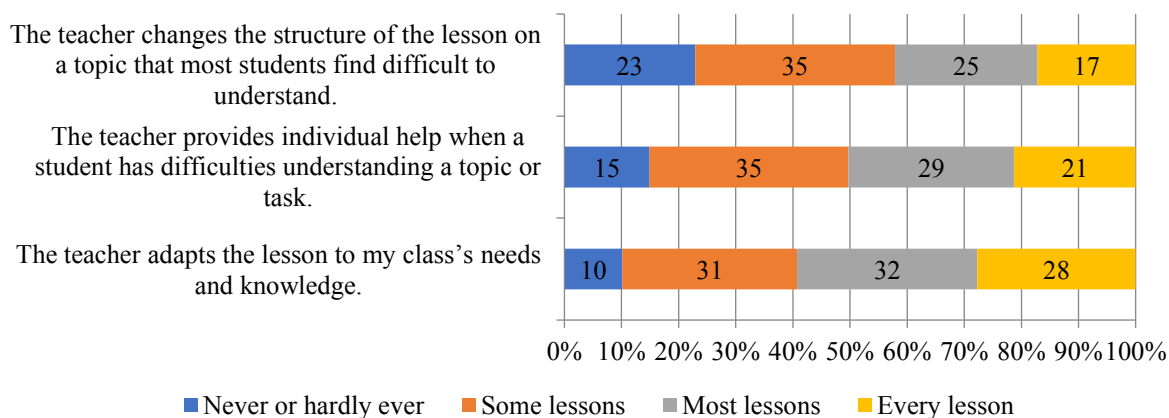
Teacher support, defined as time, interest and extra help to students, is a common practice according to the students' perception. The statistics of the index (min = -2.72, max = 1.31, M = 0.2, SE = 0.02, CI = 0.18.0.27, KURT = -0.02, SKE = -0.66, SD = 0.97, SE = 0.01) show that in general students feel supported at Romanian Language and Literature classes. At least 70% of students state that most or every lesson their teachers show interest in every student's learning, gives help, and continues teaching until the students understand.

Figure 2

Teacher support (%)
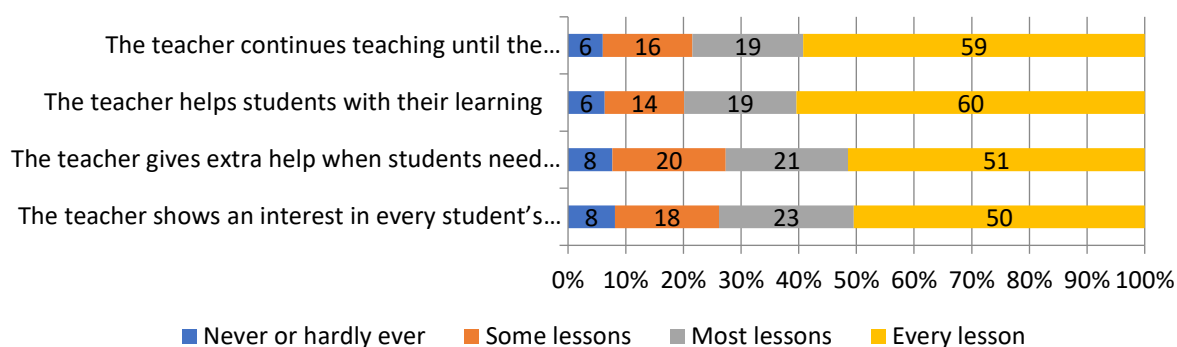
According to the students, the stimulation of reading engagement is a common teaching practice, however this is not a clear-cut trend. The statistics of the index (min = -2.30, max = 2.09, M = 0.3, SE = 0.02, CI = 0.25,0.34, KURT = -0.15, SKE = -0.047, SD = 1.0, SE = 0.014) show that on average, most students consider that teachers stimulate their reading engagement in most Romanian Language and Literature lessons. However, between 20% and 30% of students say that this only happens in some lessons. Looking at the items` distribution, one could observe that the micro-practice of helping students to relate the stories they read to their lives is the least common one.

Figure 3

Teachers` stimulation of reading engagement (%)

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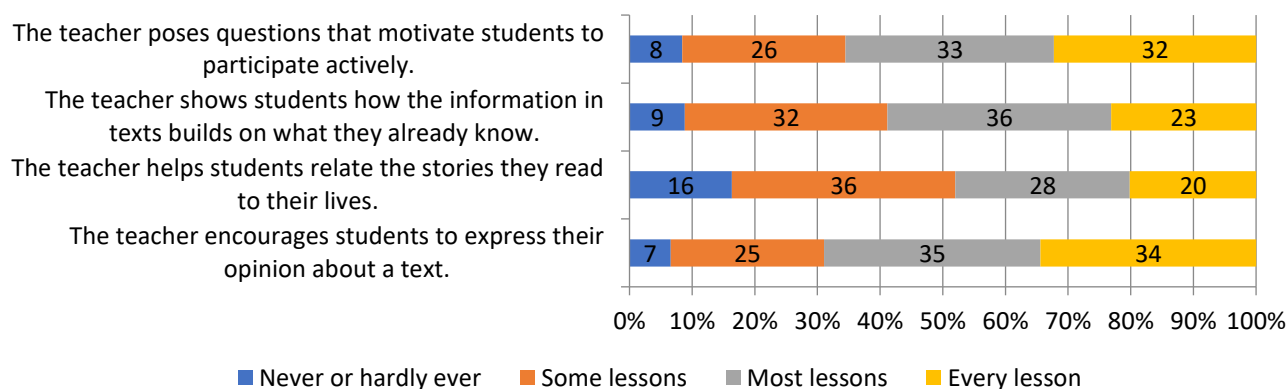
Directed instruction is a common practice at Romanian Language and Literature lessons, in the students` perception. The statistics of the index (min = -2.94, max = 1.82, M = 0.3, SE = 0.02, CI = 0.27.0.37, KURT = 0.08, SKE = -0.21, SD = 0.97, SE = 0.02) show that on average, the micro-practices specific to directed instruction were reported in most lessons. Also, in the case of two micro-practices, telling students what to learn and checking their understanding, seem to be quite common, over 50% of Romanian students associate these with every lesson. At the other end of the spectrum, 17% of students say that at the beginning of Romanian Language and Literature lessons, teachers rather don`t present a short summary of the previous lesson.

Figure 4

Directed instruction (%)
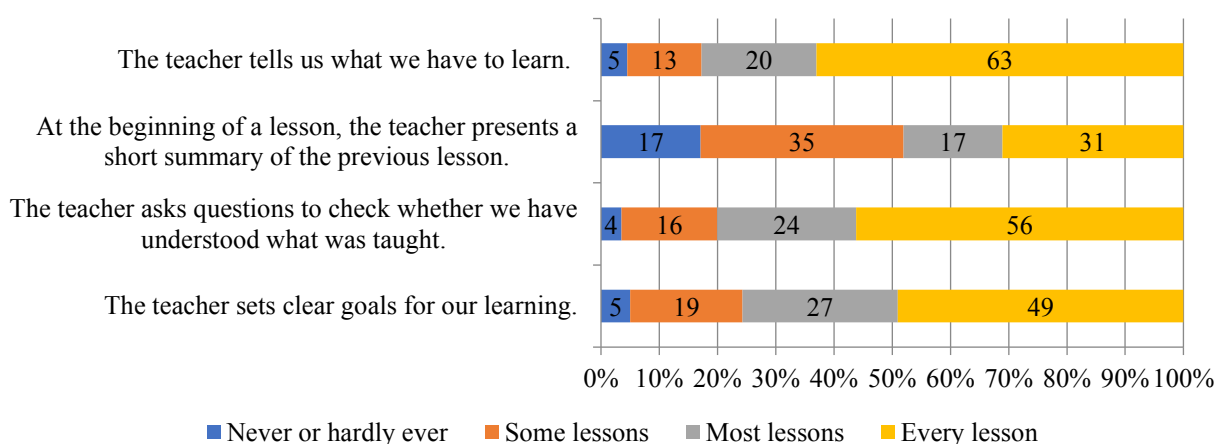
In the students' perception, feedback is a practice with a rather low frequency. The statistics of the index (M = 0.2, SE = 0.02, CI = 0.18.0.27, KURT = -0.02, SKE = -0.66, SD = 0.97, SE = 0.01) show that on average, students receive feedback from their teachers in some lessons. An important share of students, 33%, reported that they never or almost never receive feedback on their strengths regarding Romanian Language and Literature classes.

Figure 5

Teacher feedback (%)
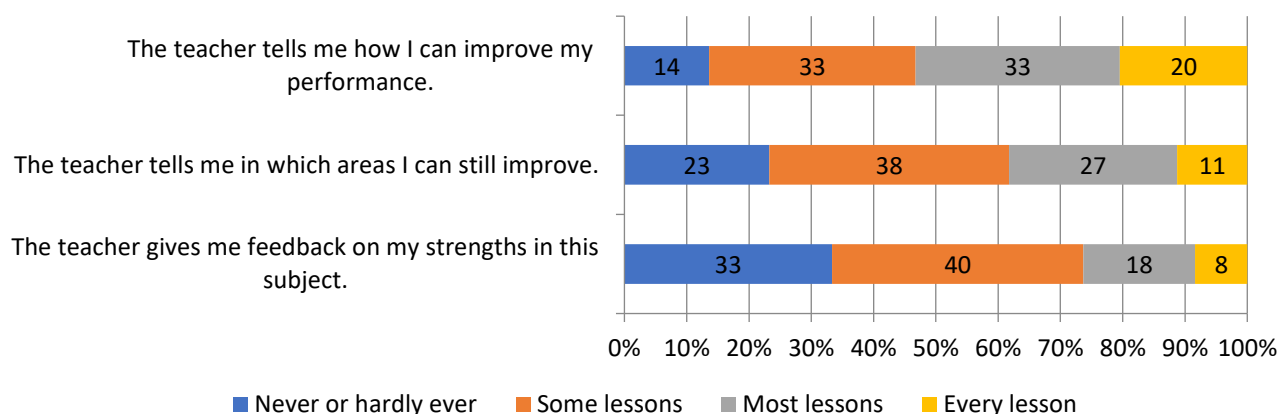
As one ca see in table 2, the correlation analysis of the teaching practices shows that there is a positive and moderate/substantial relationship between all the measured practices. This suggests that, in the students` perception, one practice does not systematically exclude another, but they are reported with a significantly correlated frequency.

Theoretically, directed and constructivist approaches in teaching are defined in opposition to each other. The correlation analysis shows that, in practice, with a probability of 95%, the students who reported a high frequency of directed instruction, also reported a rather high frequency of the teachers` stimulation of their reading engagement. Between these practices there is a positive and moderate correlation ($r = .37$, SE = 0.02, $R^2 = 0.13$, $p < 0.01$), which suggests that Romanian language and literature teachers have a rather hybrid pedagogical approach, systematically combining directed instruction with a constructivist one (the stimulation of reading engagement). Nevertheless, as showed previously, directed instruction is the practice with the highest frequency, according to the students' perception. Therefore, I conclude that the Romanian teachers have a hybrid approach, with a predominance of directed instruction.

The correlation analysis also shows that some practices correlate stronger than others. On the one hand, teacher support is more strongly correlated with directed instruction than with teachers` stimulation of reading engagement. Both relationships are positive and moderate, but the correlation between the index that measures teacher support and the index that measures directed instruction ($r = .55$, SE = .012, $p < 0.01$) is stronger than the correlation with the index that measures the teachers` stimulation of reading engagement ($r = .43$, SE = 0.02, $p < 0.01$), the difference being statistically significant ($z = -9.28$), according to the testing method developed by Meng, Rosenthal, and Rubin (1992 in Gignac, 2019). This shows that, in students' perceptions, a higher frequency of support is more likely to be associated with a higher frequency of directed instruction than with a higher frequency of teachers` stimulation of reading engagement.

On the other hand, both adaptive instruction ($z = 11.80$) and feedback ($z = 13.25$) are more strongly correlated with the teachers` stimulation of reading engagement than with directed instruction. The correlation of adaptive instruction ($r = .49$, SE = 0.02, $p < 0.01$) and feedback ($r = .52$, SE = 0.01, $p < 0.01$), with the teachers` stimulation of reading engagement is moderate to high. This shows that in students' perceptions, a higher frequency of adaptive instruction and feedback is more likely to be associated with a higher frequency of teachers` stimulation of reading engagement than with a higher frequency of directed instruction. These differences in correlation power isn`t surprising, teacher support as measured by PISA is a theoretically consistent with direct instruction, additionally, adaptive teaching, feedback and stimulation of reading engagement share constructivists theoretical assumptions.

Tabel 2
Correlation of pedagogical practices

		ADAPTIVITY	TEACHSUP	PERFEED	STIMREAD	DIRINS
Adaptive instruction (ADAPTIVITY)	r	1				
	N	4960				
Teacher support (TEACHSUP)	r	.41	1			
	N	4943	4989			
Feedback (PERFEED)	r	.48	.39	1		
	N	4873	4891	4913		
Teachers` stimulation of reading engagement (STIMREAD)	r	.45	.43	**.53**	1	
	N	4972	4950	4882	4978	
Directed instruction (DIRINS)	r	.33	**.55**	.33	**.37**	1
	N	4944	4977	4893	4953	4992

*p<0.01

Conclusions and Discussion

This descriptive and correlation analysis show that, in the students' perception, teacher support, teachers` stimulation of reading engagement and directed instruction are frequent practices in Romanian language and literature classes. Adaptive instruction is also rather frequent, but the results are importantly dispersed. However, the frequency of feedback is rather low. PISA data also suggest that, on the one hand, a higher frequency of perceived teacher support is correlated with a higher frequency of directed instruction, and on the other hand, feedback and adaptive instruction are more strongly related to teachers` stimulation of reading engagement. Overall, the variation of the practices suggests that, in their students` perception, the teachers have a hybrid approach, with a predominance of directed instruction. However, more accurate evidence is necessary, in addition to investigating the students` perceptions, we should do observational studies of teaching practices.

The hybrid approach of Romanian teachers is not out of the ordinary. In scientific literature teaching is disputed between competing learning and instructional theories. However, there are studies showing that in practice teachers use a bricolage of teaching activities, some directive, and others constructivist. Some teachers get directive during interactive teaching approaches (Myhill and Warren, 2005, Dyer and Gamoran Sherin, 2015) and others are being receptive to their students thinking during directed instruction (Chin, 2006, Tiilikainen et al., 2019).

More precisely, by analyzing critical moments[6], Myhill and Warren (2005) conclude that sometimes teachers use dialogue to control, not scaffold their students: through a series of questions and explanations, the students are guided to the correct information, in the logic of the teacher. Coffey et al. (2011) claim that even the scientific understanding of formative evaluation gives insufficient importance to how receptive are teachers to their students` thinking. On the other hand, Chin (2007) found that an overall directed approach to instruction, in the form of IRF (initiative / question, answer, feedback) can include in-depth investigation and uptake of students' ideas. In the cases analyzed by the author, what makes the difference is how teachers react to the students' answers. While some teachers use corrective feedback, establishing if their students' answers are correct, others remain rather neutral. The latter don`t guide their students' attention on performance, but on actual knowledge through open-ended questions, which aim at higher levels of thinking and encourage students to explore their ideas to a greater depth. Also, the responsibility for the conclusion and evaluation is redirected to the students, so the actual knowledge, not the authority of the teachers, becomes the reference point for students.

From an effectiveness point of view, some studies prove that there is no general model of effective teaching (Reynolds et al., 2014), and the pedagogical approaches with the highest results blend constructivist and directed instruction (Kyriakides et al., 2013, Scheerens, 2016). Other studies also show that learning is fostered by a good balance between structuring learning and cultivating the students` independence (Donovan and Smolkin, 2002). Especially experienced teachers are effective in facilitating the construction of new knowledge by combining rigor and creativity (Sawyer, 2011a), supporting students neither too much, nor too little. Sawyer (2011b) calls this phenomenon "the learning paradox" and argues that, based on this evidence, teaching should be reimagined as an art of improvisation. The hybrid approach of Romanian teachers is promising in this sense, but future studies should test its effects on students` performance, regardless of their social class, gender, ability, ethnicity.

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