

Teacher Training and the Development of First Language Reading Strategies

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Abstract This study concerns the professional development of first language teachers, in order to improve students' reading skills. The research analyzes the implementation of The National Programme for Portuguese Teaching (NPPT), in primary schools, as well as its influence on teacher training. It is important to determine whether teachers' reflective practices, about reading strategies, can improve students' reading skills, as a result of continuous professional training. The study took place in 2012, in primary schools of Oporto, Portugal, using both quantitative and qualitative data, including a questionnaire and categorical analysis of teachers' portfolios. The results show that the NPPT Programme helped to train teachers who, by changing and innovating their practices, improved primary students' reading skills. Furthermore, the study confirms that teachers need continuous training, in order to strengthen first language reading strategies and improve teaching practices, using school community resources.

Keywords: *teacher training, The National Programme for Portuguese Teaching (NPPT), reading skills, reading strategies, primary schools*

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1. Introduction

Teachers are confronted with new reading strategies and methods every day. However, the choices to be made depend not only on what is taught or to whom, but also on how it is taught. The National Programme for Portuguese Teaching – NPPT [1] was planned because of the low literacy levels amongst Portuguese students. In the 1970s, one out of five people of working age in Portugal was illiterate, and although great progress has been made in the last decades, the PISA tests of 2000 [2] still ranked Portugal as one of the lowest performing OECD countries in reading. In the latest PISA tests, Portuguese students were still performing below the OECD average. However, they showed improvements in all areas [3,4].

As a result of an intended effort to overturn low literacy levels, the NPPT project was initiated in 2007 [1], in primary schools, focusing on both teachers' continuous training and students' literacy development. This training was based on participatory action-research, including systematic school-based research and professional self-reflection [5,6], in order to develop first language teaching and learning, in Portuguese primary schools.

The NPPT project implies the construction of portfolios, as a multi-dimensional strategy of reflection and self-assessment [7]. Through the portfolio, teachers and supervisors are able to communicate, seeing that the texts are written, re-written, organised and shared throughout the

activities. The reality of teachers' continuous training demands reflective teachers [8], capable of changing their educational practices, using cooperative learning and teaching processes, and valuing a positive interaction amongst peers.

Knowing that reading is crucial in all subject-specific content areas, the aim of this study is therefore to analyze if, by means of continuous training, first language teachers can improve teaching strategies for comprehensive reading and, likewise, if students succeed in developing their reading skills.

2. Literature Review

Since the late seventies, school is no longer the sole owner of education and information. With a click of a button, students can communicate in real time and share knowledge, via networks and learning platforms. Therefore, there is a wide range of possibilities relating to literacy. In this way, the concept of reading has become broader, since being an effective reader is the key to education and professional success. Today, developing children's language and literacy is the main goal of any language program in elementary schools. It starts at an early age, but it is a continuous lifelong process. Every reading experience in a child's early life has an impact on his or her reading abilities and interests. Hence, students should be taught how to deepen their reading, from the

first years in school, in a process that demands continuous practice and critical analysis.

Learning to read, unlike speaking, is not a natural and spontaneous process. The act of reading requires a set of skills, some of which are also part of spoken language. Even though there are differences between spoken and written language, both share common aspects in phonology, syntax and semantics. At the beginning of learning to read, children are limited to plain linguistic abilities, such as connecting letters and sounds or decoding the text. Once they start to recognize whole words (lexical level), the multiple mechanisms that assemble words into sentences (syntactic level) and the whole message (text level), they are able to read more fluently, which is essential for building a mental representation of the text. Within this framework, reading is both an active thinking process that enables readers to turn writing into meaning, and a complex interaction between the author, the text and the readers, shaped by students' prior experience [9]. Thus, teachers can increase reading comprehension through the explicit teaching of reading strategies, helping students to practice and deepen their reading [10,11].

Traditionally, there did not use to be explicit teaching on text comprehension, in the teaching of reading. Students had to "guess" their way to become readers. Nowadays, researchers emphasize that frequent contact with literature and explicit strategies enhances students' text understanding. The quality and diversity of texts are more important than their quantity.

Effective readers use strategies to understand what they read, before, during, and after reading. Before reading, they use prior knowledge to think about the topic, make predictions about the probable meaning of the text and preview the overall meaning. During reading, they monitor comprehension by questioning and reflecting on text information. After reading, they clarify and relate the reading content to their experience and knowledge, deepening their understanding in a critical way. From this perspective, knowing how to read implies to infer meaning and to question the text, mobilizing and transferring former knowledge [12,13], in order to construct meaning and mentally interact with the message.

Accordingly, teachers' role is changing, due to active learning methodologies. Now teachers are seen as facilitators of student-centred learning [14], focused on students' interests, abilities, and learning styles. In this

way, it is essential that first language teachers move away from simple teaching and help each student in the acquisition of a progressive reading comprehension skill.

3. Materials and Methods

In this educational research work, a case study applied to seven primary schools from Oporto, Portugal, a mixed research methodology was adopted. The purpose of using a mixed methods approach is to intertwine both qualitative and quantitative methods in a single study [15]. The research combined a questionnaire, applied to 121 Portuguese primary grade teachers of different schools in Oporto, and the analysis of 7 teachers' training portfolios. All teachers participated in the NPPT project.

The teachers' training portfolios were analyzed, according to categories defined *a priori* and others *a posteriori*, arising from the textual corpus [16,17]. As for the quantitative research design, two hypotheses were considered: Hypothesis 1– The perception of first language teachers, who joined the teacher training project, is that it favors the development of primary school students; Hypothesis 2 - The perception of first language teachers, who underwent the teacher training project, is that they acquired a more reflective attitude, towards the development of primary school student's reading skills.

Since the questionnaire and the training portfolios are two complementary parts of the study, they will be analyzed together, as a multi-methods triangulation can increase the understanding of a phenomenon as well as the study accuracy [18].

4. Results and Discussion

In 2012, a questionnaire was handed out to 121 teachers, with an average service time of 20 years, all of whom attended the NPPT project in the region of Oporto, during three school years.

Comparing NPPT reading strategies with a more traditional model, teachers prefer an active teaching model, student-centered. In Table 1, by means of specific tests, the teachers' perception about the frequency of strategies used to promote reading, before and after NPPT training, were analyzed.

Table 1. Comparing NPPT reading strategies with a more traditional model

Control variables			Median strategies after the training	General median results
Spearman's rho	Median strategies after the training	Correlation Coefficient	1.000	.379**
		Sig. (1-tailed)	.	.000
		N	121	121
	General median of the results	Correlation Coefficient	.379**	1.000
		Sig. (1-tailed)	.000	.
		N	121	121

** Correlation is significant at the 0.01 level (1-tailed).

The correlation is statistically significant, confirming the importance that teachers attach to reading strategies as a means of developing reading comprehension, linking these strategies to improved results. According to all the data obtained, there is a significant increase in the use of strategies after NPPT training (1.000, overall median 0.379). Unlike traditional teacher-centered models, NPPT reading strategies helped students use a variety of student-

centered strategies to comprehend the text. Thus, students were taught how to preview the meaning of a text, ask questions while reading, develop their vocabulary and figure out unknown words or summarize essential information. Applying these reading strategies before, during and after reading stimulated students and enabled them to become more proficient readers.

Table 2. Reading strategies application before and after teachers’ training (Paired Sample Teste)

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% confidence interval of the Difference				
				Lower	Upper			
Pair1 Usage of strategies before training – Usage of strategies after training	-1.15455	.56347	.05122	-1.25597	-1.05312	-22.539	120	.0000

In Table 2, taking into account the scores averages, before and after the NPPT training, there appears to be a significant statistical difference ($p < 0,001$), proving there is a perception of higher usage of strategies after training. Applying reading strategies can develop students’ reading comprehension, as previously mentioned in the literature

review [12,13]. Language is a skill, so it needs to be trained as a skill, given that communicative competence is the main goal of a language classroom. After NPPT training, teachers designed appropriate interventions for all reading levels, with various strategies and activities, in order to help children enjoy reading and succeed as readers.

Table 3. Teachers’ perception of a more reflective attitude in the application of reading strategies

Control variabls		Median 1	Median 2
NPTP school year	CorrelationCoefficient	1.000	.255
	Sig. (1-tailed)	.	.005
	N	0	118
Median 2	CorrelationCoefficient	.255	1.000
	Sig. (1-tailed)	.005	.
	N	118	0

The results in Table 3 confirm that a more reflective attitude, concerning the application of reading strategies, is independent from the year of training. Teachers’ perception of a more reflective attitude in the application of reading strategies enhances students’ reading skills and helps them become better readers. After the analysis, we have confirmed this hypothesis.

As the NPPT project implied the construction of teachers’ portfolios, they were analyzed considering semantic categories and indicators [17]. Tables 4 and 5 show an overview of the results by category, regarding pre and post training teachers’ perceptions, included in their portfolios.

Table 4. Teachers’ training perceptions (Pre)

Categories	Indicators	Teachers - %						
		A	B	C	D	E	F	G
Training Motivation	a) Training and updating	31.81	27.50	28.62	19.04	27.57	30.00	34.00
	b) Pedagogical practices improvement	25.27	27.00	29.33	24.80	21.45	21.00	20.00
	c) Self-reflection and self-regulation development	22.72	15.00	22.22	31.85	26.94	29.00	22.00
	d) Shared work amongst peers	10.09	22.50	11.11	13.76	14.15	10.00	11.00
	e) Space joint/ synergetic experiences	10.09	8.00	8.72	9.52	9.89	10.00	13.00
Training portfolio reflection	a) Conceptual enrichment	50.00	26.66	40.00	45.45	36.36	27.27	33.33
	b) Knowledge construction in action	8.33	20.00	20.00	18.18	18.18	18.18	26.66
	c) Self-assessment and evaluation	16.66	6.66	11.42	9.09	13.63	18.18	6.66
	d) Professional development development	25.00	46.66	28.57	27.27	31.81	36.36	33.33

In Table 4, the reasons indicated for entering the teachers’ training project were unanimous. In the category motivation for training, teacher G emphasises training and updating (34.00%), C highlights improvement of pedagogical practices (29.33%), D favours development of self-reflection and self-regulation (31.85%), B chooses the collaborative work amongst peers (22.50%) and teacher G stands out for choosing shared experiences (13.00%) as the main perception and motivation. Concerning a process of self-reflection, included in the training portfolio, teacher A chooses conceptual enrichment (50.00%), G, knowledge construction in action (26.66%), F, self-assessment and evaluation (18.18%), and, finally, B, professional development (46.66%). Overall, teachers emphasized the need for training and

updating, self-reflection and collaborative work, in order to increase their scientific and pedagogical skills. In addition, they also reinforced the influence of teachers’ continuous training on their professional knowledge and growth [14].

In Table 5, in the category motivation for training, teacher A stands out (34.84%), followed by F (32.00%). Otherwise, there is a balanced distribution in the training and updating indicator. Teacher B chooses pedagogical practices improvement (28.82%), D and G (22.21%) stand out in self-reflection and self-regulation, while D reflects about collaborative work amongst peers (17.95%). Finally, in what concerns shared experiences, five teachers have similar results, G (13.72%), F (13.00%), E (12.82%), A (12.69%) and D (10.11%).

Table 5. Teachers' training perceptions (Post)

Categories	Indicators	Teachers %						
		A	B	C	D	E	F	G
Training Motivation	a) Training and updating	34.84	31.25	30.21	23.62	28.00	32.00	27.27
	b) Pedagogical practices improvement	23.14	28.82	27.71	26.11	23.66	25.00	23.72
	c) Self-reflection and self-regulation development	19.21	17.36	20.25	22.21	19.34	16.00	22.11
	d) Shared work amongst peers	10.12	12.90	12.74	17.95	16.18	14.00	13.18
	e) Space for joint/ synergetic experiences	12.69	9.67	9.09	10.11	12.82	13.00	13.72
Training portfolio reflection	a) Implementation of contents	7.09	13.72	12.90	16.98	2.50	15.62	11.36
	b) Diversity of strategies	21.21	23.52	38.70	16.98	22.50	28.12	36.36
	c) Application in the classroom	18.18	17.64	19.35	20.75	20.00	21.87	22.72
	d) Self-assessment and evaluation	21.21	15.68	19.35	24.52	17.50	21.87	11.36
	e) Knowledge construction in action	30.30	29.41	9.67	20.75	32.50	12.50	18.18
Focus skills	a) Oral skills	18.51	19.14	30.00	24.44	26.08	12.50	31.11
	b) Reading skills	59.25	57.44	50.00	57.77	56.52	68.75	48.88
	c) Writing skills	14.81	17.02	13.33	15.55	17.39	18.75	17.77
	d) Grammatical skills	7.40	6.38	6.66	2.22%	0.00	0.00	2.22

Concerning the reflection of the training portfolio, teachers reinforce the diversity of strategies, with C (38.70%) and G (36.36%), as outliers. Teacher E chooses knowledge construction in action (32.50%), followed by D, with self-reflection and self-regulation development (24.52%). Teacher G indicates application in the classroom (22.72%), and D implementation of contents (16.98%). Regarding the skills category, teachers highlighted reading, oral, writing and, finally, grammatical skills. Reading skills were considered a priority by all teachers, showing their perception of the importance of teaching strategies for comprehensive reading.

In conclusion, teachers point out that the portfolio, as a tool for training, allowed the deepening of reflective thinking, and the opportunity for teachers to register their own procedures, as well as monitor students' learning process. As teachers described in their portfolios:

Teacher A: "This training meets the need to improve, update and renew teaching practices, to obtain the success of my students. The world has changed so much, since I took my initial training, that it is essential to accompany this change, in a theoretical and practical perspective."

Teacher B: "When I enrolled in this training, I did not do it out of a sense of obligation (...). The feeling was that

this training could help me find new and more effective reading strategies and develop a more meaningful learning of Portuguese language."

Teacher C: "This portfolio includes all my classroom training plans and reflections, and also my exchanging views with the supervisor. It is both a tool and a resource I can use to improve my teaching practice. Also, it's an open document with continuous self-observation and self-evaluation".

Teacher D: "During the portfolio construction, I tried to contextualize reading activities, in order to understand the development of the whole teaching and learning process."

Teachers' training helped change practices regarding reading strategies. When teachers know how to use these strategies, they can guide and facilitate the students' learning and promote their reading proficiency. The tedious moments of reading that keep the reader away from texts no longer exist in the classes of trainees who participated in the programme. We see that, after participating in the NPTP training programme, teachers started using more student-centered strategies that value reading and textual diversity.

Table 6. Teachers' training assessment (Post)

Categories	Indicators	Teachers - %						
		A	B	C	D	E	F	G
NPTP Assessment	a) Very positive	100.00	76.47	89.47	66.66	64.28	78.94	100.00
	b) Positive	0.	0.	0.	0.	0.	0.	0.
	c) Positive but with effort	19.00	23.52	10.52	33.33	35.71	21.05	0.
	d) Negative	0.	0.	0.	0.	0.	0.	0.

As aforementioned, the main goal of NPTP is to improve the levels of reading comprehension as well as written and oral expression, in all Portuguese elementary schools. Considering this objective, we analyzed teachers' training assessment perceptions of renewed language teaching methods. Table 6 registers the data collected. We can observe that all the teachers chose the very positive

indicator. The same percentage is achieved by teachers A and G (100%) followed by C (89.47%), F (78.94%), B (76.47%), D (66.66%) and, finally, E (64.28%). Furthermore, it appears that, in some written comments, with the exception of G (0%), they also chose the positive but with effort indicator, teacher E being (35.71%) the most significant.

As teachers clarified in their portfolios:

Teacher A: “I fully realized the need to reflect on our teaching practices. Self-reflection can improve our way of teaching and help students to become fluent readers.”

Teacher C: “The preparation of this portfolio deepened my organizational and professional growth. As a result, it promoted growth in my class, during about the process of learning the first language.”

Teacher E: “The guidelines were important in shaping the success of supervised classes.”

Teacher F: “The training met all my expectations from the beginning. I learned and discussed learning strategies and activities, which I implemented with my students.”

Regarding the importance of training, all teachers agreed that continuous training had a positive effect, since it promoted a change in pedagogical practices. Comparing this data with the assessment of NPPT we see the same level of perception in the teachers’ portfolio. However, in the training sessions, they recognize that the NPPT project implied an additional effort of teaching hours, with higher levels of work.

Within the training portfolios and the central objective of NPPT, the results show that the levels of reading comprehension and written and oral expressions have improved in all primary schools. This improvement was related to the change in the language teaching strategies of the teachers undergoing NPPT training. NPPT was considered, by a majority of teachers, as a successful moment in their professional development as Portuguese language teachers. This reinforces the idea that continuous and systematic training can have an impact on teachers’ pedagogical practices, particularly in the development of reading skills.

5. Conclusions and Recommendations

The perceptions expressed in the training portfolios and the teachers’ replies to the questionnaire were similar. Both groups reported that the NPPT training led to a conceptual enrichment and provided differentiated strategies, with emphasis on reading. It was also confirmed that self-reflection and self-assessment promoted more effective learning and the academic success of primary school students.

It was found that the teaching and learning of specific strategies, applied to the understanding of several types of texts, enhanced the development of reading skills, in contrast to the traditional models, previously used. Moreover, teachers’ reflections contributed to the awareness of a new paradigm of teaching how to read, applying new reading strategies that question the meaning of the text and mobilize students’ previous knowledge. When teachers know how to use these strategies, they promote language development, reading proficiency and reading habits, amongst students. This improvement occurred in all classes of teachers participating in the Programme.

Regardless of the year they participated in the NPPT, teachers report that they acquired a more reflective attitude, regarding the implementation of strategies for the development of reading skills. The analysis of the portfolios revealed the same results.

In summary, teachers considered continuous training essential in language teaching, particularly in the development of reading strategies. Continuous training improved the pedagogical practices of all teachers involved. After participating in the NPPT training programme, teachers started using more strategies for comprehensive reading, as well as textual diversity. That may be one of the reasons why Portugal, since the first participations in PISA, showed improvements in all areas, reading included [3,4].

Being a case study, the generalization of results is not possible. However, there is a possibility of applying this approach to similar contexts [19]. In fact, the results show the importance of being a reflective language teacher, entering a process of self-observation and self-evaluation. Hence, teachers’ practices, focusing reading strategies, can improve students’ reading skills. Therefore, it is essential that teachers follow social, technological and multicultural changes, renewing their knowledge and practice concerning reading strategies, through self-education and continuous training.

In the future, it is necessary to reinforce specific training in reading strategies, so as to provide teachers with a powerful tool, capable of improve students’ reading across the curriculum.

Statement of Competing Interests

The authors have no competing interests.

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