

# STRONG, INTERMEDIATE AND WEAK PUPILS: THE TEACHING OF MATHEMATICS IN ELEMENTARY SCHOOLS IN THE STATE OF RIO GRANDE DO SUL

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## ABSTRACT

This paper aims to discuss the interpretations of the *Escola Nova* ideas by the managing bodies of the elementary education of Rio Grande do Sul, state of Brazil, during the 1940s and 1950s. The discussion takes into account the apparent contradiction between the alledged adoption of the *Escola Nova* precepts and the high repetition and dropout rates at that time. Through the analysis of the documents published during that period, it is argued that the orientation of using active methods, of valuing the pupils' experience, and of stimulating their creativity criss-crossed with the scientificist rationale, which intended to measure and compare the efficacy of teaching. By the means of statistics and the so-called "objective tests", the pupils' and teachers' performances were evaluated and classified. Pupils and teachers were blamed for their failure, and Mathematics played an important role in this process, since it was the discipline with the highest failure rate.

Keywords: Elementary Education; Mathematics Teaching; Arithmetic; Progressive Education; History of Education.

## RESUMO

Este artigo discute as interpretações do ideário da Escola Nova pelos dirigentes do ensino primário no Rio Grande do Sul, Brasil, nos anos 1940 e 1950. A discussão tem como ponto de partida a aparente contradição entre a alegada adoção dos preceitos escolanovistas e os altos índices de reprovação e evasão naquele período. A partir da análise de documentos publicados no período, argumenta-se que a orientação para o uso de métodos ativos, para a valorização das vivências do aluno e para o estímulo à sua criatividade se entrecruzavam com uma lógica cientificista que pretendia medir e comparar a eficácia do ensino. O desempenho de alunos e professores era avaliado e classificado através das chamadas "provas objetivas". Alunos e professores eram responsabilizados pelo seu fracasso, e a Matemática cumpria um papel importante nesse processo, uma vez que era a disciplina com o mais alto índice de reprovações.

Palavras-chave: Ensino primário; Ensino de Matemática; Aritmética; Escola Nova; História da Educação.

## 1. Introduction

During the 1940s and 1950s, *Escola Nova* thinking<sup>1</sup> was frequently mentioned in the state of Rio Grande do Sul by experts and authorities of the elementary education in that state, as well as in educational programs, official guidelines, and articles published in pedagogy journals. These ideas, when applied to the teaching of Mathematics, advised organizing lessons according to the children's knowledge, experiences and interests in order to stimulate their engagement in different activities, such as creating and solving problems and enacting everyday situations. However, during that period, state public elementary education was characterized by high repetition and dropout rates, being Mathematics the discipline with the highest failure rate.

The apparent contradiction between these rates and the proposal for the implementation of teaching focused on the pupil is the core of the discussion proposed in this article, based on the analysis of the documents published during that period.

Our aim is not discussing the causes of failure or of what would later be called 'school failure', but rather to understand how this issue was perceived by the experts that based the production of Mathematics teaching guidelines on *Escola Nova* ideas. In other words, we attempt to understand the aims of those innovative proposals.

The discussion is part of an undergoing research project "The building of elementary mathematical knowledge: Arithmetic, Geometry, and Drawing in elementary school under a historical-comparative perspective, 1890-1970", coordinated by Wagner Rodrigues Valente. The objective of this article is to contribute for the understanding of processes through which pedagogical ideas have their meaning displaced or are reinterpreted when applied in different contexts by different actors, and, in particular, to discuss the different appropriations of *Escola Nova* ideas in Brazilian elementary education.

## 2. Elementary education in the state of Rio Grande do Sul and the teaching of Mathematics during the First Republic

In the 1920s, *Escola Nova* ideas were already widely spread in Brazil, and served as the foundation of the education reforms of the Federal District (then located in Rio de Janeiro), and of the states of Minas Gerais, Bahia, Espírito Santo, Pernambuco, and Ceará (Azevedo, 2010). The Manifest of the Pioneers of New Education was launched in 1932. In the state of Rio Grande do Sul, *Escola Nova* ideas were only included in the official guidelines by the end of the 1930s.

This time lag is explained by the specific dynamics of the establishment of the public elementary education network in the state of Rio Grande do Sul.

During the Empire, elementary school was regulated by the provinces, and during the first decades of the Republic, the states of the new federation were responsible for this task. This

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<sup>1</sup> In view of the historical specificities that *Escola Nova* acquired in Brazil, which are clarified by Vidal (2013), there is no direct translation of the term into English. She points out that *Escola Nova* brings together elements of what is called in French *Éducation Nouvelle*, and in English *Progressive Education*.

considerable autonomy continued even during the *Estado Novo* period (1937-1945). Despite the centralism of the new regime, the Elementary Education Fundamental Law (Act n. 8.529) came into effect only in 1946, and had diverse effects on the organization of elementary education in the different states.

The establishment of public education schools also followed different paces, according to local pressures and initiatives. In Rio Grande do Sul, this process happened relatively late.

During the Empire, public classes were created or discontinued depending on pupils' frequency and on teachers' interest. The facilities were shabby, and classrooms were opened and closed due to diverse reasons. In 1889, according to Giolo (1994), out of the 618 public classrooms created, only 385 were effectively open.

Despite government's inefficiency in terms of education, Rio Grande do Sul had the highest literacy rate in Brazil in 1890 (Love *apud* Herrlein Jr., 2002). This singularity may be attributed to the school network created by German and Italian immigrants, particularly in the areas where they settled, and to the schools maintained by city governments. Most of the elementary schools in that state were private (Peres, 2000).

This situation changes during the First Republic (1889-1930). Under the administration of the Partido Republicano Rio-Grandense (PRR – Republican Party of Rio Grande do Sul), which ruled the state for almost the same period, a strong effort to expand public elementary education was made as part of a wider project of modernization. Although PRR leaders, who followed positivist ideas, allegedly supported the freedom of education, they increased the intervention of the state government on the sector:

The dispute with the Church relative to elementary education indicated that the State did not renounce its role as the main educator of the workers needed by capitalism for its consolidation and full development. This is the reason why the State heavily invested in elementary education. (Corsetti, 2008, p. 65).

However, the expansion of public elementary education in Rio Grande do Sul did not follow the same model as that of the state of São Paulo, which many authors consider a national reference (Souza, 2012). During the first years of the Republic, the state of São Paulo established a “preliminary education” program of four years; preliminary schools were considered those led by elementary school teachers. The so-called “grupos escolares” (school assemblies), created in 1893, initially consisted of a consolidation of preliminary schools; in 1896, there were already 20 assemblies in the state of São Paulo that were considered models of good-quality education and “the most adequate model of school for popular education” (Ibid., p. 38).

In Rio Grande do Sul, the “colégios elementares” (elementary schools), which were a local version of the school assemblies, were only created in 1909. In that year, nine were created. However, individual schools were more frequent, where a single teacher – usually a woman – taught children of different ages in rented rooms, and provided an education that may be presumed as very basic. In the beginning of 1928, when São Paulo already had 289 school assemblies (Souza, 2012), Rio Grande do Sul had only 79 (Rio Grande do Sul, 1935).

According to Corsetti (1998), there were no significant investments in the expansion of public elementary education in Rio Grande do Sul. Teachers' training was insufficient: in 1910, there was only one public school to train teachers, located in Porto Alegre. Hiring the so-called

“interim” teachers was frequent. According to Luchese (2013), many pupils of elementary schools became teachers immediately after completing their elementary education. Teachers were also poorly paid, and had also to perform administrative tasks and to pay part of the rent of the rooms. The reduced cost of public education, on one hand, and the importance of private and community schools, on the other, explain the higher rate of school attendance by children in Rio Grande do Sul in 1922, of 56%, compared with 44% in São Paulo, despite the meager 12% of the state income applied in elementary education in Rio Grande do Sul compared with 16% in São Paulo (Mello e Souza and Guimarães, *apud* Araujo, 2012).

Nonetheless, important mechanisms to control the action of the teachers were put in place already in the first decades of the Republic in Rio Grande do Sul: “The establishment of a novel school inspection system was the distinguishing feature of the educational experience of the rulers of the state, where both government officials and the communities played an inspection role” (Corsetti, 2008, p. 67). In addition to official school inspectors, schools councils, composed by the pupils’ parents, were established, and some of their tasks were “to supervise the moral and civil behavior of the teachers, as well as book-keeping, pupil enrolment, attendance, and discipline, as well as to attest monthly teachers’ attendance for payment purposes” (Ibid., p. 67-8).

The programs of elementary education of the Republic, established in Act n. 239 in 1899, included the study of Arithmetic, Practical Geometry, and Drawing. Despite its practical character, the Arithmetic program was very ambitious in terms of content and objectives. It included the four operations with ordinary fractions, decimals, and the study of ratios and square and cubic roots.

The programs did not suffer any substantial changes in subsequent Acts n. 1.479 of 1909 and n. 3.903 of 1927. The slow development of grade school education in Rio Grande do Sul may explain the stability of the programs during the First Republic, because there were few schools that offered education beyond the basic skills.

It must be noted, however, that private schools did not need to follow the programs established for state public schools. The schools created by the German-Brazilian community, such as Colégio Concórdia, developed their own programs, where Arithmetic had a significant weight (Agache, 2015). During the First World War, an effort, under federal subsidy, was made to expand the presence of the State in German and Italian immigrant areas. Act n. 3.265 of 1918 created 167 schools in “areas inhabited by populations of immigrant origin”, “dedicated particularly to civic education and teaching Portuguese and Brazilian geography and history” (Article 1, Act n. 3.265 of 1918). The Act wording, however, suggests that the teaching of Mathematics should not be subject to governmental intervention. According to Silva (2015), in the German-Brazilian schools, a network of teachers and book writers promoted the circulation of teaching proposals inspired in German authors and books.

### **3. The reorganization of elementary education in Rio Grande do Sul by the end of the 1930s**

The pace of the expansion of elementary education was accelerated by the end of the 1920s. In seven years, the number of school assemblies and elementary schools doubled, and in 1935, 157 state public schools offered graded education.

That year, an extensive process of reorganization of the state public school network was set in motion by the government of Rio Grande do Sul, with the creation of the State Department of Education and Health Businesses, under Act n. 5.969, and of the State Education Council, under Act n. 6.105. In 1938, the career of state public elementary school teacher was regulated by Act n. 7.640. Act n. 7.929 of 1939 established the new Internal Charter of Elementary Schools, organizing elementary education in a six-year graded regime (in 1942, the regime was reduced to five years).

The establishment of graded-school education as the standard organization of elementary education included “new minimum programs”, under Act n. 8.020 of 1939, replacing the previous programs, which were considered “deficient in terms of consistency and modern teaching principles” (Novos programas, 1939, p. 2). An article published in the official press on November 22, 1939, stated that

The Technical Section of the General Board of Public Education and other committees have extensively studied the new teaching regulations and programs, and await the promulgation of the federal guidelines to be enacted. However, as the Elementary Education National Committee, which was established almost two years ago, has not yet issued the guidelines for the consolidation of elementary education and teacher training, the Department of Education decided to promulgate the state’s new regulations and programs that will be harmonized with the federal legislation in the future. (NOVO PROGRAMA..., 1939, p. 2)

In addition of providing details on the objectives of each discipline and on the “minimal essential” contents to be taught in each grade, the new programs included guidelines for the teachers, which were called “norms”.

The reorganization of elementary education also included the establishment of a control, supervision body that also determined the guidelines to be followed by schools and teachers. Those measures aimed, according to Peres (2000), not only at organizing the expansion of the network and “controlling the status of the work in the schools”, but also at implementing “a scientific education orientation” (p. 129).

In the state public school network, the previous school inspection system was reorganized in 1938 with the establishment of the Regional Education Offices, linked to the ten school regions into which the state was divided. Act n. 31 of 1940 of the government of state of Rio Grande do Sul divided the previous body into the Department of Health and the Department of Education, which was expanded and renamed Department of Education and Culture in 1942. In 1943, similar to the new National Institute of Education Studies (INEP - Instituto Nacional de Estudos Pedagógicos), the state government created the Center for Educational Research and Orientation (CPOE – Centro de Pesquisas e Orientação Educacionais) derived from the Technical Section of the former General Board of Public Education (Quadros, 2006). Private schools were also affected by the standardization and control policies of the state government.

In areas of Italian and Polish immigration, and particularly those of German immigration, the so-called Nationalization Campaign was implemented, under the allegation that schools were not only instruments for the dissemination of Nazi ideas, but also for the creation of National-Socialist Party groups. Several federal laws enacted between 1939 and 1941 forbade foreigners from being school principals, determined the intensification and supervision of Brazilian geography and history teaching. Teaching materials should be printed in Portuguese

and in Brazil, and the use of foreign languages in schools and public gatherings was prohibited. The state regulations determined the registration of private schools in the General Board of Public Education and reiterated – and sometimes, anticipated – the bans established by national laws (Kreutz apud Wanderer, 2014).

During the 1940s, the actions of the state Department of Education, and particularly of the CPOE, established the schools assemblies of the state public network as models for the private schools. According to Moreira (1955), who visited Rio Grande do Sul in the beginning of the 1950s:

Under this organization, it is evident that the Elementary Education Superintendence also intervenes in private schools, which, despite having administrative autonomy, are supervised and must comply with the guidelines of that body. [...] In fact, the state public [education] levels are high, and this is the reason why those institutions try to follow the guidelines, asking and willingly accepting the offered orientation. (Moreira, 1955, p. 72-73).

#### **4. The *Escola Nova* ideas in the guidelines for the teaching of Mathematics**

In the minimum programs established in 1939, Mathematics should be taught in all elementary grades. It maintained the instrumental character previously attributed to Arithmetic and Geometry, incorporating the concepts of the emerging Psychology of Learning. The main objective of teaching Mathematics was “to provide the children knowledge and skills to allow them to use Mathematics as a tool to solve real-life situations involving issues of quantity, number, shape, extension, and position.” (Rio Grande do Sul, 1957, p. 71).

The detailed guidelines of the norms were marked by *Escola Nova* precepts.

Teaching plans should use as reference “the mathematical knowledge of children when they start school” (Rio Grande do Sul, 1957, p. 71), “the child’s natural interests”, the “difficulties still not mastered by the pupil” (p. 73), and “the child’s psychological traits” (p. 85). Teaching should integrate real-life situations, according to the rationale that they provide “meaning” to the concepts (p. 85). Several forms of articulation with other disciplines and activities were proposed for this integration, such as “money change practices”, acting out purchase and sale situations, street markets, stores, projects, visits. The problems should use “data relative to the children’s experience in their environment: expenses with lunch, clothes, transport, school supplies, etc., using price spreadsheets organized or collected by the students, ads” (p. 86), and “situations experienced by the pupil or class”, “being important to make pupils identifying themselves with the characters presented in the problem” (p. 96).

Teaching should be organized using active methods. The aim was stimulate “the lively effort of the pupils” (p. 86). For young children, “through direct and personal action on things, the concrete and experienced material that will serve as the foundation of mathematical abstractions” should be provided (p. 71); counting should use “singing, recitation, hand clapping, bell ringing, marche” (p. 73). For older children, emphasis was placed on “reasoning, comparing, choosing, and decision-making to search important data” (p. 96); the

“definitions, rules, and principles” should be “inferred by the pupils themselves and the role of the teacher is to suitably present the situations” (p. 107).

Considering the dynamics of the “requirements of social life”, of the peculiarities of the “demands and aspirations of the milieu that receives the pupils” and the “impossibility of definitely limiting and classifying the minimum indispensable to life” (Rio Grande do Sul, 1957, p. 70), the minimal programs established in 1939 were presented as having

an experimental character and, therefore, subject to regular reviews in order to allow amendments generated from research results, investigations, and observations on the requirements of the milieu and actual learning possibilities of our pupils (Rio Grande do Sul, 1957, p. 71).

Despite being announced as provisional, these programs suffered no changes until the end of the 1950s. On the other hand, although Act n. 8.020 acknowledged that it was “imperative to provide teaching plans with flexibility” (Ibid., p. 70), measures were applied during the 1940s that, in addition of reinforcing the vertical control of the school network, also established standards to validate assessments and classifications of schools and teachers that restricted their choices and fields of action. The teaching of Mathematics was one of the main targets of those measures.

## **5. Strong, intermediate, and weak pupils**

Peres (2000) explains that the control and standardization practices established in the 1940s by the Department of Education, particularly by the CPOE, were based on the emerging disciplines of Psychology and Experimental Pedagogy, which were part of the teachers’ training curriculum.

The orientation of using active methods, of valuing the pupils’ experience, and of stimulating their creativity criss-crossed with the scientificist rationale, which intended to measure and compare the efficacy of teaching, discriminating the expected learnings by means of minutely elaborated questions, quantifying achievements and failures, systematizing results in graphs and tables, calculating means and standard deviations.

The main instrument for the control of learning were the so-called “objective tests” – as opposed to the former open-ended assessments – produced by CPOE experts and applied in all schools of the state public network at the end of the school year.

The promotion of each student to the next grade in elementary school depended on his or her performance in the different disciplines during the current year.

According to the promotion rule of 1950 (CPOE, 1951), the final score of each student in each discipline should be calculated as weighted average, with weight 1 for the annual average and weight 2 for the final test. Therefore, despite considering the assessment made by the teachers, the CPOE ensured the predominance of the final standardized tests.

In order to be approved in each discipline, the pupil needed to achieve a final grade of 50 (CPOE, 1947a). The CPOE (1949) team explained that this grade was not the result of a mere sum of the number of correct answers, once the objective test was organized in order to

included easy, intermediate and difficult questions. An experimental test was applied to a group of students, in order to assess the validity of each question and its difficulty level, and determined its weight in the definitive test. The answers given by the pupils in the experimental test were also used to build an “answer key” for the definitive test.

The final scores of the different classes and schools were compared. In the first grade, approval rates were expected to be equal or higher than 50%. However, the differences among approval rates were significant: in 1946, for instance, they ranged between 13.89 and 68.97% among schools (CPOE, 1947a). Based on the statistical analysis of those rates, CPOE officials determined a “minimal sufficiency threshold”, calculated as the “minimal lower limit of the central area of frequency distribution of the obtained results” (CPOE, 1947a, p. 54). The percentages calculated using this procedure were then used as reference for the evaluation of the performance of the classes.

At the end of the first grade of elementary school, the pupil could be promoted, despite failing in Mathematics. In this case, he or she should be placed in a “special class” during the second grade, after which being approved in Mathematics was a requisite for his or her promotion to the next grade.

CPOE Communiqué n. 2 of 1956 reported that Mathematics presented the highest failure rates in all grades of elementary school, according to CPOE studies and school principals’ conclusions. The communiqué therefore recommended grouping the pupils according to their final grade in Mathematics in the previous year, and “performing intensive work of the Mathematics program as one of the measures that tended to find [*sic*] the proven deficiency”. “Homogenous” classes of “strong”, “intermediate” or “weak” pupils should be established, with the caveat that it was “extremely important for pupil adaptation that they should not be aware they are considered strong, intermediate, or weak pupils” (CPOE, 1957a, p. 16). The pupils entering elementary school were also ranked according to their performance in the so-called ABC Tests.

The highest rate of failures was consistently recorded by the end of the first grade. In 1950, Moreira (1955) mentioned a 37% failure rate in the entire state public school network, and 46% in the first grade. The repeated failures at the end of the first grade had several effects. One of them was the concentration of the enrollment number in that grade, corresponding to 51% of the total enrollment. A second effect was the expansion of the age range of pupils enrolled in elementary school. In the study of the CPOE (1947b), based on data collected in the entire state, the “normal age” of pupils enrolled in the first grade was determined as 7-10 years in Porto Alegre and 7-11 years in other cities; 8-12 in Porto Alegre and 9-12 years in other cities in the second grade; 10-13 years in the third grade, and so on. Beyond these wide “normality” ranges, 10% of the pupils were still considered as presenting “learning delay”.

Approval rates were higher in the second grade compared with the first grade, ranging between 70-76% in 1950. However, this does not mean that the subsequent grades were less demanding than the first. Due to the high failure and dropout rates during the first and second grades, the pupils that reached the third and fourth grades were necessarily taken as “intermediate” or “strong”; therefore, higher approvals rates were expected.

The promotion of teachers – who wanted to be transferred to schools in larger cities or to the capital of the state – depended on the performance of their classes in the so-called objective



tests and on the assessment of their work by school principals and officials of the Regional Education Offices (Fischer, 2000).

The impact of the test on the teachers' prestige and career explains the procedure, which was quite common at that time, of selecting the pupils that would be submitted to the final tests. This resulted in the emergence of the disqualified pupil, who failed in advance because his or her performance was considered poor (Moreira, 1955). On the other hand, it was natural that all teachers aimed at teaching the "strong" classes due to their expectations that the children would match this previous ranking: "we even noticed a certain fatalism by some teachers. Those responsible for a 'weak' class in the first grade, already anticipated the possibility of a high percentage of failures" (Ibid., p. 137).

## **6. Teaching and learning standards established by the tests**

The so-called "objective tests" were applied in the entire state public school network between 1943 and 1965 (Quadros, 2006). They were developed based on the programs determined by Act n. 8.020. Despite their "official" experimental nature, these programs were effective, without much questioning, until the Elementary Education Reform, which started in 1958.

Teachers were unaware of the content of the tests until the time of their application. According to the oral account of the teacher Nilva Casarin, collected in a talk with former pupils of the teacher training school Instituto de Educação General Flores da Cunha:

We were responsible for teaching a specific content, but we did not elaborate the tests. The Department of Education developed the tests, which arrived at the schools in sealed packages. The teacher saw the test for the first time when she opened the envelope to hand them out to the pupils. This means we needed to have taught that content, or else... The work of the teacher was assessed according to the pupils' performance in those centralized tests. (Casarin et al., 2013).

Tests were corrected using the aforementioned "answer key" sent by the CPOE. The teacher of the class did not correct the tests either:

And we were not allowed to correct the tests. There was a jury that corrected them: one person used a red pencil to mark all the right and wrong answers, and then handed the tests to a reviewer, who marked the tests in blue ink. [...] Only then the teacher was allowed to see the tests, only after the two teachers of the jury had corrected the tests and agreed with the correction, which was untouchable. The teacher was only allowed to express her opinion when the two jurors disagreed. (Casarin et al., 2013).

After correction, the tests were again placed in a sealed envelope and returned to the Department of Education and Culture. We have not been able to find any copy of these tests to date. However, we may assume their content based on the articles written by CPOE officials, on teachers' accounts, and on a Diagnostic Test published in the CPOE bulletin (1953) to be applied at the beginning of the second grade of elementary school.

This Diagnostic Test, which could be applied over several days, included more than one hundred addition calculations, as well as tenths of subtraction, multiplication, and division calculations with one or two digits. Another important section of the test consisted of 23

arithmetic problems, involving addition, subtraction, multiplication and division with small numbers. We provide here two examples:

Laurita brought to school half a dozen eggs for the School Soup. Roberto brought 3. How many eggs did they bring for the Soup.  
Mother gave Laurita 10 cruzeiros to buy 2 buns. Each bun costs 4 cruzeiros. Laurita received .... as change. (CPOE, 1953, p. 144, 149).

Two components of Mathematics teaching that were highly valued by the effective programs are revealed in this Diagnostic Test: arithmetic calculations, which performance was expected to be “accurate and fast” (Rio Grande do Sul, 1957, p. 71), aiming at “becoming automatic” (p. 85); and arithmetic problems, to which “swiftness in the choice of the most economical process, checking of the results, and prompt understanding of the relations among the question data” were expected (p. 71).

The emphasis on calculation led many teachers to focus on the memorization of the multiplication table, according to the testimonials collected by Peres (2000) and to classroom observations reported by Moreira (1955).

However, arithmetic problems could not be solved by repetition, memorization, or training. Their solution depended on text interpretation, such as in the examples above, which could not be solved by the mere manipulation of the numbers presented.

The difficulties in solving problems were a major factor of students' failures. Between 1951 and 1960, seven articles of the monthly *Revista do Ensino* (education journal), journal signed by or endorsed by the CPOE team were dedicated to problem solving. The authors of those articles acknowledged that the performance of the pupils was, in general, below the expectations (Búrigo & Santos, 2015). One of them was even called “The problem of problems”.

According to the oral account of Maria Eunice Martins de Lucena, who participated in the talk mentioned above:

The children have always found it difficult to solve problems, as I detected when working with them [...] Their problem was interpreting, because they did not know how to read and write properly... Because there was not much emphasis on interpretation. At that time, interpretation was aided with hints, such as: ‘the boy plays with the ball. Who is playing the ball? The boy. What’s the name of the boy? The boy is called Pedrinho.’ Interpretations were very simple, and when the children needed to interpret more complex problems, they often found it difficult because they did not know the words, they did not understand what was asked because we worked very little indeed with Mathematics. (Casarin et al., 2013).

This account shows that the teacher attributes the difficulties of her pupils to failures in their work in the classroom. This was certainly one of the effects produced by CPOE discourse when comparing the performance among schools and classes, which result was as expected: the teachers were accounted for the failure of their pupils.

## 7. The prestige of elementary school

According to the discourse of CPOE (1949), the comparisons, as well as the promotions and failures, were supported by scientific data and objective criteria:

Elaborating a graded objective test, as any other scientific activity, is a long and laborious task. [...] After the tests are applied and corrected, and the scores entered in the examination sheets, statistical treatment is started, aiming at analyzing the results. (CPOE, 1949, p. 107)

The classification of a pupil as “weak”, according to the CPOE, did not aim at stigmatizing him or her. It was recommended that no references should be made “in front of the pupils and the class of their poor learning capacity or of other deficiencies they presented” (CPOE, 1957a, p. 16).

The same team that elaborated the test reiterated the *Escola Nova* precepts associated with ideas of the emerging Cognitive Psychology:

When the pupils, by experiencing real-life situations and using manipulative and audiovisual materials, discover the structure of the numerical system, the inter-relations among operations, and the equivalences of parts of a unit, as well as understand the concept of the different measurement patterns, they are not only capable of solving mathematical questions linked to vital problems, but also acquire resources to progress in the reflexive attitude of evolved thinking. Learning Mathematics, when developed using teaching methods that consider the pupils’ characteristics and the psychology of this discipline, allows promoting the correct practice of thinking operations [...] leading the individual to elaborate systems of ideas and to relate them with reality. (CPOE, 1957b, p. 88).

The discourse of teaching that took into consideration the pupils’ characteristics and stimulated their autonomy was reiterated. However, what was the motivation for stablishing requirement standards that a significant part of the pupils was not able to achieve or eventually achieved after repeating the same grade several times?

The main argument used by CPOE was the preservation of the quality of education:

Comparing the results of 1945 with those of 1946, the approval rate decreased in elementary school. [...] However, we do not aim merely at assessing the quantitative aspect of learning, but also the quality of education and its contribution for the development of the pupils’ personality. Those that know the educational environment are aware that a high annual promotion rate does not always mean that the learning conditions are optimal. [...] Despite aiming at progressively increasing the annual promotion rate, this body strives not to compromise the validity of the assessment process and the prestige of elementary education. (CPOE, 1947a, p. 70-71).

The CPOE believed that the prestige and quality of elementary education should be safeguarded against, or in spite of, the disposition of the teachers. This is revealed by Moreira (1955), mentioning his talks with the Director of CPOE at that time:

[...] the state tests, such as those organized by CPOE, establish minimal obligations to the teachers, such as the compliance with the curriculum, and are the indirect measure of their professional efficiency. Those responsible for the education in Rio

Grande do Sul fear that, without this, education standards would fall to unacceptable levels (Moreira, 1955, p. 47).

A CPOE communiqué also suggests its lack of confidence in the teachers' attitudes, and at the same time, questions them:

Despite the advantages we mentioned, the objective tests may lose most of their validity as a scientific means to assess learning results if, during their application and correction, we do not count with the full and genuine collaboration of all teachers to whom this work is destined. (CPOE, 1949, p. 107).

However, conscientiously, the CPOE discourse did not blame exclusively the teachers for the failure of their pupils:

We need to acknowledge that the work in education does not exclusively depend on the teachers' professional training or the traits their personalities should embody; other factors may hamper, transitionally or permanently, the regular work in the classrooms. [...] Therefore, it is our duty to investigate and to remove the cause or causes of failure, evaluating their influence on the learning results. (CPOE, 1947a, p. 70).

In addition, CPOE provided guidelines, suggestions, and support to the teachers, particularly through the bulletin *Revista do Ensino* and its pullouts, which included resources that could be directly used by the teachers. Therefore, not only a control or judgment relationship was established. According to Fischer (2000), based on accounts of teachers of the city of Novo Hamburgo, the discourse highlighting the quality and prestige of the state's public education also inspired and empowered them:

It is even more significant that not only the principals were proud of their schools; the teachers who worked in the state's public education system considered themselves more competent than those working in the private education system. The latter were not submitted to the tests sent by the department of education (SEC), nor necessarily needed to follow the official curricula. Under this perspective, therefore, being a public school teacher made a difference. (Fischer, 2000, p. 13).

## **8. Final considerations**

When revisiting the elementary school of the 1940s and 1950s in the state of Rio Grande do Sul, we see that its prestige aura was built not only on the experimentation of teaching innovations disseminated by the *Revista de Ensino*, on a flood of statistics, and on the teaching guidelines and techniques conveyed by CPOE, but most of all, on the high level of requirements established as a requisite for the promotion of elementary school pupils.

The compliance with the program was used as a justification for the application of standardized tests that, in addition of resulting in high failure and dropout rates, justified the ranking of pupils according to their purported learning abilities.

This established a vicious circle, where pupils were considered "weak" because they failed to comply with some requirements and, at the same time, these requirements were presented as needed to identify the "weak" pupils. The prestige and the alleged quality of the state's public

elementary school fed on the idea of school failure as “natural”, and Mathematics played an important role in this process.

The experts of the Department of Education did not find any contradictions between *Escola Nova* ideas and the high failure rates. Modern methods, applied by committed and well-trained teachers, would gradually promote progress, without the need of relaxing those requirements. Only by the end of the 1950s, under strong pressure for increasing the access to education, the high failure rates started to be considered problematic, leading to the Reform of Elementary Education, which will be the object of further research.

Brazilian law currently forbids ranking pupils as “strong” or “weak”. However, the heritage of the past practices is still visible. Some learn faster than others, and the so-called education quality is still considered as a responsibility of pupils and teachers.

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