

Mathematics in the Preparatory Course for the Admission Exam at the *Ginásio Pelotense*¹

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RESUMO

Apresentamos uma análise sobre as modificações que ocorreram no ensino de Matemática no curso preparatório ao Exame de Admissão ao Ginásio Pelotense, denominado “Curso Admissão”, que existiu na cidade de Pelotas, no Rio Grande do Sul. Expomos permanências e modificações dos conteúdos de Matemática entre 1960 e 1971, a partir de uma análise documental dos diários do Curso Admissão e das prescrições do Programa para os Exames de Admissão (PEA), estabelecido em âmbito nacional, e do Programa Experimental para o Ensino Primário Gaúcho (PEEPG). Entre as conclusões, destaca-se que a Matemática do Curso foi se modificando em função das alterações educacionais, relacionadas ao Primário e ao Secundário, que vinham sendo praticadas à época. Essas modificações, especialmente em relação à segunda metade dos anos de 1960, também podem ser associadas à influência da Matemática Moderna, apesar disso não ter significado uma ruptura completa com os programas estabelecidos nos anos 50.

PALAVRAS-CHAVE: História da Educação Matemática. Ensino Secundário. Matemática Moderna. Currículo. Curso Admissão.

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ABSTRACT

We present an analysis about the changes that occurred in the teaching of Mathematics in the preparatory course for the *Ginásio Pelotense* Admission Exam, called "Admission Course", which existed in the city of Pelotas, Rio Grande do Sul. We presented permanences and modifications of the Mathematics contents between 1960 and 1971, based on a documental analysis of the diaries of the Admission Course and the prescriptions of the Program for the Admission Examinations (PAE), established at the national level, and the Experimental Program for Primary School in Rio Grande do Sul (EPPSRG). Among the conclusions, it is worth mentioning that the Mathematics of the Course was changing due to the educational changes, related to Primary and Secondary, which were being practiced at the time. These changes, especially in relation to the second half of the 1960s, may also be associated with the influence of Modern Mathematics, although this did not mean a complete break with the programs established in the 1950s.

KEY WORDS: History of Mathematics Education. Secondary Education. Modern Mathematics. Curriculum. Admissions Course.

Las Matemáticas en el Curso Preparatorio para el Examen de Admisión del Ginásio Pelotense

RESUMEN

Presentamos un análisis de los cambios ocurridos en la enseñanza de las Matemáticas en el curso preparatorio para el Examen de Admisión al Ginásio Pelotense, denominado "Curso de Admissão", que existía en la ciudad de Pelotas, en Rio Grande do Sul. Exponemos permanencias y modificaciones de los contenidos de Matemáticas entre 1960 y 1971, a partir de un análisis documental de los diarios del Curso de Admissão y los requisitos del Programa para os Exames de Admissão (PEA), establecido a nivel nacional, y del Programa Experimental para o Ensino Primário Gaúcho (PEEPG). Entre las conclusiones, se destaca que la Matemática del Curso se modificó debido a los cambios educativos, relacionados con Primaria y Secundaria, que se estaban practicando em ese momento. Estos cambios, especialmente en relación a la segunda

mitad de los años de 1960, también pueden estar asociados a la influencia de la Matemática Moderna, aunque esto não significó una ruptura completa con los programas establecidos en los años cincuenta.

PALABRAS CLAVE: Historia de la Educación Matemática. Enseñanza Secundaria. Matemática Moderna. Plan de Estudos. Curso Admissão.

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Introduction

This article presents an analysis of the changes in mathematics teaching that occurred in the 1960s in a preparatory course for the *Ginásio Pelotense* Admission Examinations, called "Admission Course", which existed in that important school in the city of Pelotas, Rio Grande do Sul.

The results presented here are the result of the second author's master's research, developed in the Graduate Program in Mathematics Education (PPGEMAT), at the Federal University of Pelotas (UFPel) and linked to the Project "Mathematics Education in Rio Grande do Sul: institutions, characters and practices" (RIOS, 2015). The research was focused on building the Documentary Fund⁴ "The Mathematics in the Exams for Admission to the *Ginásio Pelotense* ", at the Museum of the Pelotense Municipal School, an institution located in the city of Pelotas, Rio Grande do Sul, considering the period from 1925 to 1971. Since the constitution of the Fund, an analysis referring to Mathematics in the Admission Course was produced (SANTOS, 2019).

The *Ginásio Pelotense* was founded in 1902 and is still in operation, initially called *Ginásio Pelotense*, it underwent several changes in its name, the last one occurred in 1948, when it became known as Pelotense Municipal College. Here, in this work, we will refer to it as " *Ginásio*

⁴ According to the Brazilian Dictionary of Archival Terminology, the definition of background is: "Set of documents of the same provenance. Term that is equivalent to archive" (ARQUIVO NACIONAL, 2005, p. 1923). According to the Dictionary of Archival Terminology, Fundo is "a unit constituted by the set of documents accumulated by an entity that, in the permanent archive, comes to live with the archives of other [entities]" (CAMARGO; BELLOTTO, 1996, p. 14).

Pelotense ", the name used in the period when the preparatory course for the Admission Examinations started (SANTOS, 2019).

In 1906, the *Ginasio Pelotense* became equivalent to the Pedro II College, however, in 1915, with changes in the law that restricted the equivalence only to state public institutions, it lost that condition. Thus, as a private institution, it encountered some difficulties to reestablish the equalization. In 1925, the Pelotense Gymnasium was once again equalized to the Pedro II College and began offering exclusively the Gymnasium Course (AMARAL, 2008). The reinstatement of the team served as the initial time frame for the constitution of the Documental Fund, and the final demarcation was justified by the official closing of the Admission Examinations in Brazil in 1971.

The Documental Fund produced is composed of 181 documents related to the admission exams, distributed in three categories, namely: administrative documents, pedagogical documents and documents related to Mathematics (FUND, 2020).

All documents were scanned by a "planetary" scanner, containing approximately 4,350 images, converted into searchable PDF format. The physical version is available at the document department of the Pelotense Municipal College Museum, which also has a digital version; other digital versions are available at the Digital Repository of the History of Mathematics Education Research Group (GHEMAT)⁵ and at the Santos dissertation (2019).

Before entering the discussion about the changes that occurred in the teaching of Mathematics in the Admissions Course, we would like to point out that the localization of sources about the preparatory course was only possible due to an effort for documental preservation that has been taking place in the institution for some years now. Due to this institutional commitment, in 2004, the Pelotense Municipal

⁵ To access the Documental Fund in the Repository: <https://repositorio.ufsc.br/handle/123456789/197903>.

College Museum⁶ was created, for recognizing the importance of safeguarding and preserving vestiges of the educational practices that took place there.

Investigating that preparatory course, the Admissions Course, was justified since it was a didactic unit within that school culture, a teaching method that was institutionalized and lasted around fifty years. Moreover, it seems to us that, although it is still little discussed, this type of course existed in several Brazilian schools (MACHADO, 2002).

The study of courses of this nature has an interesting potential to advance the understanding of the Admission Examinations, a selection that lasted in the Brazilian educational system while the automatic access of graduates from Primary Education to Gymnasium Education⁷ was not guaranteed (AKSENEN, 2013).

The preparatory courses were not characterized as an official part of Primary or Gymnasium Education, but existed between these two levels of education, functioning, on the one hand, as a complement to the training received in Primary or to self-taught studies, while this was admissible in Brazil, giving the basis for the approval of candidates in the Exams for Admission to the Gym and, on the other hand, as a mechanism for adaptation of students to Secondary Education or as a leveling for what would be required of them when they entered the Gym.

Due to its objective of approving students in the Gym Admissions Exams, its organization depended directly on the changes that occurred in these two levels of education and also on the changes that might occur in the Admissions Exams. Due to this borderline condition between these two educational levels, in order to discuss the changes

⁶ Currently the Museum is coordinated by Professor Ms. João Nei Pereira das Neves and has a variety of object types, such as uniforms, photographs, institutional documents, furniture, books and graduation pictures (SANTOS, 2019). It is registered with the Institute of National Historical and Artistic Heritage. (IPHAN); and with the Brazilian Institute of Museums (IBRAM) in the Brazilian Museum System (SBM) (IBRAM, 2020).

⁷ The Exams for Admission to Gymnasial Education were instituted in Brazil by Decree No. 4,468 of February 1, 1870, to select admission to Colégio Pedro II. In 1931, as of Decree nº 19,890, it became mandatory in all official secondary education institutions. In 1971, Decree-Law No. 5,692, which united Primary Education with Gymnasium Education, eliminated the demand for admission to the 5th grade of the first degree, as it was renamed the old 1st grade of the gymnasium (AKSENEN, 2013).

that occurred in the 1960's, specifically in the preparatory course that existed in the *Ginasio Pelotense*, we took as a parameter the prescriptions established for the Gym Admission Exams in Brazil, the 1959⁸ Admissions Exam Program (PEA), and the state's prescription for Primary Education, the 1959 Experimental Program for Primary Education in Rio Grande do Sul (PEEPG).

The Admission Course had different nomenclatures, such as "Vestibular Course to the First Gymnasial Year" (CERTIFICATES, 1923), "Preliminary Course" (REGIMENTO, 1932), besides "Admission Course", "Primary Admission" and "Admission" (Diário, 1971), variations that sometimes occurred in the same document. To make the reference during this text simpler, we will refer to ourselves as "Admission Course".

The Admission Course was intended to "prepare candidates for admission examinations at official, assimilated or previously inspected civil secondary schools and military colleges" (RULES, 1932, p. 2). Students who attended 75% or more, achieved a minimum grade in each of the subjects in the course (three), and also took five as a total average of the subjects, earned a certificate of participation in the course.

However, this certification did not guarantee passing the Admission Examinations, nor was passing the Course a requirement for the candidate to enroll in the Admission Exam. From this, one can conclude that the existence of grades served much more as a mechanism for monitoring the student's learning process.

The Admissions Course was run on an off-site basis, initially in the evening shift, with classes from May to November and recess in the second half of June (REGIMENT, 1932). In the 60's, the classes worked in the

⁸ The Mathematics Program of the entrance exams to the gym became effective in 1952, initially proposed by Ordinance No. 501 of May 19 of that year and reaffirmed by Ordinance No. 325 of 1959. The 1959 ordinance establishes some criteria for restrictions regarding the deepening of the subject, but it does not go as far as to be detailed, and there are no contents (AKSENEN, 2013) (MACHADO, 2002).

afternoon and the classes went from March to November, with the recess during the whole month of July.

We identified, throughout the course period, the existence of the four disciplines: Mathematics, Portuguese, History and Geography, sometimes with some variations of name, such as: Arithmetic and History of Brazil. The existence of these disciplines and their variations refer to changes in the school subjects of the Primary and Gymnasium and, consequently, in the demands of the Admission Course.

Our analysis will be specifically focused on the 1960's because we found a significant number of sources from a nearby period, there were eleven class diaries of the Admission Course⁹ classes, and because these diaries had records of Mathematics content, which did not always occur.

We identified three models of class diaries, but in all of them most of the space was destined to record the students' daily attendance and the monthly grades of the four subjects, with each page referring to one month. Besides this information, they contained the names of the students, names of the teachers - although not all of them filled, shift, month and year, indication of the students who had left the course, among other details, as a space for the identification of the class, used when there was more than one in the same year.

There was no place for the teacher to write down the contents, yet some of them registered the monthly content in the space reserved for "observations". From the diaries, we could notice that the classes took place from Monday to Friday, but we did not have access to a flowchart of the distribution of the subjects throughout the week.

About the administration of the Admissions Course, we found three minutes of specific meetings with teachers of the Course, from 1966, where it was possible to identify discussions about the monthly distribution of

⁹ Two classes of 1960, three classes of 1961, three classes of 1962, two classes of 1963 and one class of 1971.

contents, planning, evaluations and other information¹⁰, including, in one of them, there is the detail of the Mathematics content that would be taught in the month of August of that year.

One hypothesis for the fact that not all the teachers registered the contents in the diary is that they were previously defined in the meetings; another hypothesis would be that it was an effect produced by the format of the diaries itself, which did not foresee a specific space for that; or, still, that the teachers registered this information in another document that is no longer available.

There is also no homogeneity in the existing records in the diaries: the teachers' ways of writing are quite different, containing more or less details. Some wrote, besides the contents of Mathematics, other details of daily didactic practices, such as, for example, the mention of the use of fixation exercises, from problems; of classes destined for revision, of dates of tests and studies from problems, traces that allow us to have an idea of the distribution of the activities.

The non-homogeneity of the registers, identified by the diversity of ways in which information appears in the space "observations", points out that there was no rigid control over the registers in the diaries, neither of the writing model, nor of the content, leading us to consider the existence of a certain margin of freedom in the practice of those teachers who, even in classes of the same year of the Course, varied the registers of both didactic practices and contents.

This difference in the records is important because it allows us to consider aspects of the functioning of the Admissions Course and refers us to the creative role of the teachers, who adjusted themselves according to the relationship with the classes. The difference in the registers may also point to the existence of a variation between the definition of the contents that would be worked on that month, possibly

¹⁰ Unfortunately, it was only possible to find three minutes, from a very close period, making it difficult to identify the regularity of these meetings.

decided in a meeting. The justifications for such differences could either be related to the varied learning rhythms of the students and the forms, or to the content that the teacher considered most important to highlight. As it was not a single teacher, in several cases we have another element that justifies the different forms of registration.

When comparing the registers of classes of the same year, we notice that, in general, the contents of Mathematics coincide throughout the period, with differences in their distribution between the months, suggesting that there was a commitment to attend a certain set of contents, although the teacher was free to distribute it during the year. We did not have access to a Mathematics program of the institution, which would allow us to make other inferences in this respect.

This interpretation dialogues well with what Dominique Julia (2001) warns about not ignoring the active and creative role of teachers when analyzing school subjects, due to the recognition of the complexity of educational experiences and the set of variables placed in the classroom circumstances, including those resulting from the tension produced by the difficulty of learning certain content and the margin of maneuver of teachers.

[...] in view of the general provisions attributed by society to the school, teachers have ample freedom of maneuver: the school is not the place of routine and coercion and the teacher is not the agent of a didactic that would be imposed on him from outside. [...] he always has the possibility of questioning the nature of his teaching; freedom is evidently much greater on the margins of the system [...] In fact, the only restriction exercised on the teacher is the group of pupils that he has before him, that is, the knowledge that works and those that "do not work" before that public (JULIA, 2001, p. 33).

We also identified methodological records in some diaries. In one of the classes of the year 1960, for example, the teacher¹¹ registers that

¹¹ In none of the five diaries of 1960 and 1961 to which we had access is there the identification of the teacher.

the bulletins would be delivered in the month of June, explaining something of the daily life of the Course. This same teacher, when registering in the journal the various contents that would be given in each month, lists the order in which he would approach them, presenting a little of his organization. In the month of September, in the same diary, he affirms regarding all the subjects: "[...] all the exercises referring to them were done, from the book collected and many beyond these" (DIÁRIO, 1960a, p. 6).

In a 1961 diary, we have the record that all the subjects required for the Gym Admission Course had been taught until October 31st and that, during the whole month of November, all the subjects would be reviewed. We can't fail to consider that such register, besides representing the treated contents, could have the intention of rendering an account of the fulfillment of the foreseen program (DIÁRIO, 1960a).

In another diary, from 1962, Professor Nara Silva states that "all the material on Portuguese and Mathematics was given until October 31" (DIÁRIO, 1961, s. f.). That same year, another teacher, Nelson Yasmin, records the subject in the diary until the month of October and points out that he considered that his students would already be able to pass the exams because the program had been fulfilled and revisions had been made (DIÁRIO, 1961).

Still referring to methodological issues, we identified, in a 1971 diary¹², marks of a more technical model, with the register of "objective monthly tests and works", however, we don't have more information about these tests and also documents were not located that would allow us to know which works would be these (DIÁRIO, 1971).

¹² The structure of the Admission Course diaries does not have a separation, or systematic organization. It was common for the journals to take advantage of the leaves left over from previous years. Here we will refer to the date of the first year of mention of the diary.

Changes in the Mathematics of the Admission Course

What we intend to discuss here is about changes that can be identified in the Mathematics of the Admission Course during the 1960s, interpreted, in part, as a result of the capillarization of Modern Mathematics in the Institution, as it happened in several schools in the country (RIOS, 2016) (BÚRIGO; FISCHER; SANTOS, 2008) (RIOS; BURIGO; OLIVEIRA FILHO, 2011), having as a parameter a journal of the year 1971.

We will first present permanences and, in the sequence, the modifications identified along the diaries, in comparison with the programs foreseen for the Rio Grande do Sul Primary School and for the Gymnasium Admission Examinations in Brazil, which became effective in the 1950's, as already mentioned.

We began by presenting a chart summarizing the contents of the Mathematics Program for the Admission Examinations:

TABLE 1: Admission Exam Mathematics Program.

1952	Whole numbers. Arabic and Roman numerals. Decimal numbers. Fundamental operations on integers. Divisibility by 10, 2, 5, 9 and 3. Real and nine proofs. Prime numbers. Decomposition of a number into prime factors. Maximum common divisor and minimum common multiple of two or more numbers. Ordinary fractions; simplification and comparison. Operations on ordinary fractions and mixed numbers. Fractional decimal numbers; operations. Conversion of ordinary fractions into decimal numbers and vice versa; Periodic decimal numbers. Notions on the legal system of unit of measurement. Metro, square meter and cubic meter; usual multiples and sub-multiples. Liter, usual multiples and sub-multiples. Kilogram, usual multiples and sub-multiples. Brazilian monetary system. Simple problems, including the legal system of units of measurement.
1959	[...] II - The Mathematics program may cover, at most, the elementary arithmetic calculation, the geometric morphology essential to the applications of this calculation and the most common units of use of the Brazilian metric system.

Source: Text clippings from PEA (AKSENEN, 2013, p. 99).

Here is a summary of the contents that have been recorded in different 1960 diaries of the Admissions Course. Even though the names of the teachers are not included in the diaries, from the difference between the handwritings, we can identify that they were different teachers:

TABLE 2: Mathematics Contents in the 1960 Admission Course.

Teachers' records in the Journals of the Course Admission in 1960
M. D. C., M. M. C. and corresponding exercises; properties. Problems. Fractions: notion, classification; concept; t�ermos; fundamental property; extraction of integers; transformation of mixed number into improper fraction; simplification; equivalent fractions. Irreducible fraction. Exercises, problems. Comparison of fractions: homogeneous and heterogeneous fractions. Reduction to the lowest common denominator. Sum and subtraction of fractions. Problems. Multiplication and division of fractions. Reduction of fractions to decimal numbers. Determination of the generator of a periodic tithe. Whole numbers - decimals - Arabic and Roman numerals - fundamental operations over whole numbers and corresponding exercises - arithmetic expressions - Problems over the 4 operations - Potentiation - Divisibility by 2-3-5-9 and 10 - Prime numbers - Decimal fractions with dec. number - intuitive notion and operations - Conversion of ordinary fraction to dec. number and vice versa. Measures of length. Surface measurement. Volume measures. Capacity measures. Measures of weight. Equalities or relation between measures.

Source: (DI ARIO, 1960a, p. 5) (DI ARIO, 1960b, p. 4.6-7); (DI ARIO, 1960c, p. 6-7).

From these tables it can be affirmed that the contents of the Admissions Course were in accordance with that prescribed in the 1952 Admissions Examination Program and in the 1959 Experimental Program for Primary School in Rio Grande do Sul.

The consonance to which we refer, however, does not refer to the standard of record in the diaries, since each teacher described the contents differently, as we have already mentioned. The PEA, for example, mentions "Periodic decimal numbers", which in the diary appears described as "Whole decimal numbers" (DI ARIO, 1960b, p. 4) and "Whole numbers" (DI ARIO, 1960c, p. 21), different forms of writing but dealing with the same content. In one of the 1960 diaries to which we had access, there is no mention of the content. We also noticed situations in which the Program describes in a more synthesized way

and the record in the diary is more detailed: while in the PEEPG there is "legal system of unit of measurement", in the diary there are "measures of length, surface, volume, capacity, weight".

In the following we want to highlight some differences found between the contents indicated in the diaries of the Admission Course and what was prescribed in the programs. First, we will deal with what was prescribed in the program and did not match the contents of the Course, and then we will point out what was not prescribed in the ADP and appeared in the Course journals.

The only content that was in the PEA and that we did not find in the journals of the Admissions Course was the topic "Brazilian Monetary System," which is very curious because it was prescribed both in the Program for Admissions Examinations and in the Experimental Program for Primary School in Rio Grande do Sul. One hypothesis is that perhaps this was not a topic that was frequently charged in the Admission Examinations and, therefore, was not taught. Anyway, since we did not have access to the tests, we could not verify the validity of this hypothesis.

From the contents that were registered in the Admissions Course but that were not foreseen in the Program for the Admissions Exams, we identified "generators of periodic tithes" and "potentiation".

Although we are not in a position to make major speculations regarding the consequences of the presence of these contents in the Admissions Course, since we have no more information than to mention them in the journals, we can say that the inclusion of these contents was not a challenge to the prescriptions of the PEA, since, according to the ordinance in 1959, the institutions could establish some content that was not foreseen in the Program, as long as it did not exceed the elementary arithmetic. Also according to the ordinance, in the case of mathematics contents, one could include "[...] at most, the elementary arithmetic calculation, the geometric morphology essential to the

applications of this calculation and the most common units of use of the Brazilian decimal metric system" (MACHADO, 2002, p. 161).

This inclusion can still be read as an effect of the effort to meet PEEPG indications. The content of 'periodic tithing generators' appears in the topic 'Fractions': 'Generator. Simple and composed periodic'. The content of the "potentiation" appears in the topic "Fundamental Operations, Miscellaneous Calculations": "Power of a number. Square and cube. Operations with powers" (RIO GRANDE DO SUL, 1959, p. 8). We do not have the indication of methodological elements of these contents, however, their indication keeps appearing throughout the years in the Admission Course.

Advancing in the analysis of the diaries, we identified in 1961 a content that had not appeared in the previous year: "Real and nine proofs" (DIÁRIO, 1961). Compared to the Experimental Program of 1959, referring to that content, it appears in the topic of "Fundamental Operations, Miscellaneous Calculations" as "Real proof of multiplication and division; proof of the nine of the four operations" (RIO GRANDE DO SUL, 1959, p. 10), thus fulfilling what had been prescribed in the PEEPG and the PEA.

In 1962 we did not see any increase in content compared to previous years. In the 1963 diaries, we identified a new content "Problems over the square, the rectangle, the triangle and the cube" (DIÁRIO, 1960c; 1961¹³). Compared with the PEEPG, we find in the topic of "Geometry": "Study of the sphere, cube and cylinder" (RIO GRANDE DO SUL, 1959, p. 6) and "Concept of quadrilateral and triangle" and "Recognition of quadrilaterals" (RIO GRANDE DO SUL, 1959, p. 8), coinciding in part with this Program, because these items are there foreseen, including still sphere and cylinder, which do not appear in the diaries.

As of 1964, we have not identified Mathematics contents in the journals of the Admission Course, appearing only in a teacher's meeting

¹³ We used the references of the year 1960 and 1961 because the classes of 1963 were registered there.

minute, of 1966, all already contemplated in the journals previously considered (ATA, 1966).

From what we have brought so far, we can conclude that, in the first half of the 60's, the Admissions Course attended a great part of the Admissions Examination Program and also the Experimental Program for Primary School in Rio Grande do Sul. During the second half of the 60s, there was an almost complete absence of sources regarding the Admissions Course classes. Only referring to 1971 we have located one more diary, which we will discuss below.

In the 1971 diary we can notice differences from the previous ones, allowing us to infer that these changes were due, in part, to the influence of what became known as the Modern Mathematics Movement (MMM). Of course we are not considering that such influences were specific in that year's diary, but, as we will show, there is an intensification of elements in the diary that can be associated with Modern Mathematics.

The Modern Mathematics Movement has already been studied by many researchers from several Brazilian states, having a vast production of dissertations, theses and articles, related to the theme. According to Valente (2011), at the end of the 1950s, "[...] a real revolution is taking place in school mathematics with the advent of what became known as the Modern Mathematics Movement. And it was precisely the Gymnasium that was the privileged place of its initial reception in Brazil" (VALENTE, 2011, p. 648).

Although the Admissions Course does not specifically compose the Gymnasium, it is to be expected that it has also been modified to accompany its changes, since, following its own initial understanding, it should prepare the candidates for the Admissions Examinations, which meant enabling them to enter the Gymnasium (REGIMENT, 1932).

In the case of Rio Grande do Sul, it is in the second half of the 1960s that the MM's interference became more explicit. (RIOS; FISCHER, 2016) (BÚRIGO, 2001), a little later in the state pointed out

by Valente (2011) and, specifically in the Admission Course, we identified the intensification of their marks in 1971.

When analyzing the 1971 diary, we notice some interesting differences from previous diaries. Below is a table with the records of the contents in that diary.

TABLE 3: Synthesis of the contents of Mathematics in the 1971 diaries.

Month	Teachers' records on the contents worked in the 1971 diaries
March	Number and numeral. Decimal classes. Absolute and relative values. Concept of set. Pertinence. Set relation with subset. Operations with sets. Use of signals $>$ $<$. Roman numbering. Properties of addition. Problems. Expressions.
April	Continuation of Addition Properties. Operations with sets. Subtraction. Properties. Egyptian and Babylonian numbering system. Bases. Multiplication. Properties. Potentiation.
May	Radiationing.
June	Multiple. Submultiple. Criterion of divisibility - Prime numbers. Eratosthenes screen Problems over the 4 operations. Expressions.
August	Fractions (notion), own fractions, mixed, equivalent, improper, heterogeneous, homogeneous, apparent. Addition and subtraction. Multiplication and division. Real proof of the 4 operations. Problems.
September	Decimal fraction, decimal number operations, problems, expressions.
October	Decimal fraction, decimal number operations, problems, expressions.
November	Area of the triangle (perimeter). Reductions with surface measurements.

Source: Excerpts from the 1971 diary (DIÁRIO, 1971, p. 1-8).

We observe the register of contents that can be associated with Modern Mathematics, especially in relation to the explicit inclusion of the Theory of Sets, for example, in the contents, "Concept of Set"; "Pertinence"; "Relationship of Set with Sub-Sets"; "Operations with Sets"; "Number and Numeral"; "Absolute Value and Relative Value"; "Operations with Sets" (DIÁRIO, 1971).

On the other hand, there was no abandonment of the contents that were prescribed in the Admission Examination Program and in the Experimental Program for Primary School in Rio Grande do Sul, since some contents remained, as can be seen in the previous tables. For example, the

contents "problems, potentiation, multiplication and radicalization" are still being recorded in the same way.

An association with Modern Mathematics can also be noticed when we identify indications of aspects related to an approach that suggests greater attention to the idea of numbers, previously treated, in 1960, as "written and spoken numeration, Arabic and Roman". In 1971, what we have is the concept of "number and numeral", which suggests an appropriation of Modern Mathematics, according to the formalization of the concept of number.

We also highlight "Decimal Classes, Bases, Properties of Addition" (DIÁRIO, 1971), annotations that can be related to an approach more concerned with structures and numerical properties. According to Pinto (2007, p. 8), the MM "has achieved not only the purposes of teaching, but also the traditional contents of Mathematics, attributing prime importance to axiomization, algebraic structures, logic and sets".

In the case of the *Ginásio Pelotense* Admissions Course, these changes related to Modern Mathematics should not be understood from a change in legislation, both in the Admissions Examination Program and the Experimental Program, because no changes were instituted in these programs. The last prescriptions that we accessed regarding these two programs are from 1959, which we brought to the discussion already regarding the diaries of the 1960s.

According to Rios, Búrigo and Oliveira Filho,

The institutionalization of Modern Mathematics did not happen 'at once', by some centralized government decision. Elements of Modern Mathematics were incorporated into the programs and examinations according to different regional and sectorial dynamics. (RIOS; BÚRIGO; OLIVEIRA FILHO, 2011, p. 51).

In other words, such changes figure as an effect of a gradual process of capillarization of the MM in gaúcho schools. The Admissions

Course also adapted to these changes that were happening in Rio Grande do Sul, because both Primary and Secondary Education were changing due to the Modern Mathematics that was being practiced in these two levels of education in the state (BÚRIGO, 1990), even though there was no updating of the Program for the Exams, which officially ceased to exist in the country after that year.

Some Considerations

We present here an analysis of the Mathematics of the Admissions Course, a preparatory course for the *Ginasio Pelotense* Admissions Examinations, a particular case of a re-established educational practice modality to prepare students for the Gymnasium Admissions Examinations.

Discussing about this course, in our case about Mathematics in this particular case, takes us to the possibility of doing other works about this educational modality in the scope of researches in History of Education and in History of Mathematics Education, still little researched and that lasted for a long time in Brazilian education. Looking at these courses may enable us, to a certain extent, to better understand the process of entering the gymnasium, and also certain problems regarding Primary Education.

We could affirm that the Mathematics of the Admissions Course, in the first half of the 1960s, was associated with the Admissions Examination Program and the Experimental Program for Primary School in Rio Grande do Sul, both of the 1950s, as we discussed earlier and highlighted in the tables presented.

Finally, particularly in the case of the Admissions Course, a preparatory course to the *Ginasio Pelotense* Admissions Exam, we identified that the course was influenced by the changes that were taking place in Mathematics at that time and, consequently, it was modified accordingly. In the case of the second

half of the 1960s, these changes can also be associated to the influence of Modern Mathematics, although this does not mean a complete break with the programs of the 1950s, which were not updated in those years.

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