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PERCEPÇÃO SOBRE A DISCIPLINA DE MATEMÁTICA PELOS ALUNOS DO 1º ANO DO ENSINO MÉDIO EM UMA ESCOLA PÚBLICA

PERCEPCIÓN DE LA ASIGNATURA DE MATEMÁTICAS POR LOS ESTUDIANTES DE 1º AÑO DE SECUNDARIA EN UN COLEGIO PÚBLICO

PERCEPTION OF THE MATHEMATICS DISCIPLINE BY 1st YEAR HIGH SCHOOL STUDENTS IN A PUBLIC SCHOOL

Presentation: Poster

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INTRODUCTION

Most elementary school students have difficulty understanding the content taught in Mathematics by teachers in the classroom. These difficulties originate from the weak consolidation of the mathematical base necessary for promotion in the various high school and undergraduate subjects (Menez; Lima, 2021). Involvement without affinity with the subject and the complexity of some mathematical content contribute to creating difficulties in understanding the subject of Mathematics.

The difficulties presented by students in relation to mathematical content generated in Elementary School, may be due to inadequate teaching methods, unqualified teachers, lack of teaching infrastructure and students traumatized by bad experiences, minimizing performance, generating anxiety, aversion and obstacles to learning throughout the student's time at school. These difficulties can also occur due to psychological, physical and pedagogical factors that involve a sequence of concepts and work, which must be developed in the treatment of difficulties in Mathematics. Difficulties correlated to external and internal teaching factors can negatively impact and harm the learning of the content taught in the mathematics subject.

Given this context, the need arose to investigate and understand the difficulties in learning mathematical content, from the perspective of 1st year high school students at a public school located in the city of Pium, state of Tocantins.

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THEORETICAL FOUNDATION

According to Menez; Lima (2021), in 2015 Brazil presented the worst performance of high school students in Mathematics. Also, according to the authors, the results showed that high school students have difficulties in interpreting text and minimally complex mathematical operations, such as addition, subtraction, multiplication and division and when compared with the international results presented by the International Student Assessment Program (PISA), Brazilians' mathematical knowledge is lower than the world average.

Mathematical knowledge is very important and indispensable, as it plays a fundamental role in many areas of human knowledge, however, dissatisfaction has been observed on the part of most students when studying the subject of Mathematics (Pacheco; Andreis, 2018). Over the years, learning Mathematics is an obstacle for most students, as failure in this curricular component causes dropouts and increased school failure rates (Holanda; Freitas; Rodrigues, 2020). The lack of identification with the discipline and complexity of some mathematical content also generates difficulties in understanding the subject of Mathematics (Gomes; Sabião, 2018). The difficulties of mathematical content generated in Elementary School due to inadequate teaching methods, unqualified teachers, lack of infrastructure for teaching, and traumatized students from bad experiences, minimizes performance, generating anxiety, aversion and obstacles to learning over time. of the school student. (Pacheco; Andreis, 2018).

According to Menez; Lima (2021), Mathematics plays a decisive role, allowing the resolution of problems in the individual's daily life, in the work environment and as an essential instrument for building knowledge in other curricular areas. According to the authors, it interferes with and assists the intellectual formation of the student's deductive reasoning. According to Xavier (2015), Mathematics decodes information coming from different areas of knowledge, but to generate a political individual, an autonomous intellectual, mathematical education is necessary to help students overcome difficulties and decode information in society.

METHODOLOGY

The study was carried out in June 2023, in an exploratory, descriptive way with a qualitative and quantitative approach to quantify and convert the research data into numbers and percentages (Lüdke; André, 2013). The research locus was a secondary education unit

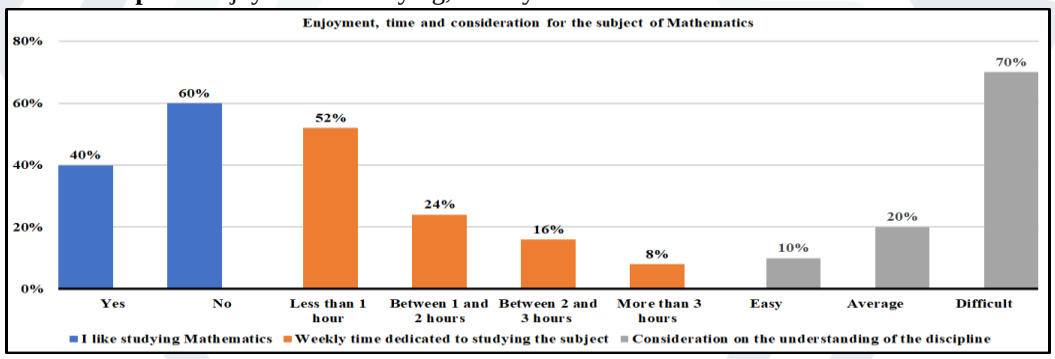
located in the municipality of Pium, state of Tocantins. The school participating in the research had 300 students enrolled, located in an urban area, which allowed all students to have access to textbooks, permanent teachers and the internet.

Data collection was carried out via a semi-structured questionnaire, as it was a previously prepared script, composed of open questions, proposing a better interaction between the interviewer and the interviewee (Manzini,2004). The questionnaire was administered to 2 (two) 1st year high school classes, totaling 50 students) and lasted 15 minutes containing the following questions: 1. Do you like studying Mathematics? 2. How much time do you dedicate each week to studying Mathematics? 3. How do you classify the mathematics subject? 4. What type of class does the teacher use? 5. Resources used by the teacher in the classroom 6. Difficulties that impede understanding of the mathematics subject. After applying the questionnaire, the data was tabulated.

RESULTS AND DISCUSSION

The answers to the questionnaire answered by public school students about difficulties in understanding the subject of Mathematics are expressed in the graphs below.

Graph 1: Enjoyment of studying, weekly time and consideration of Mathematics.

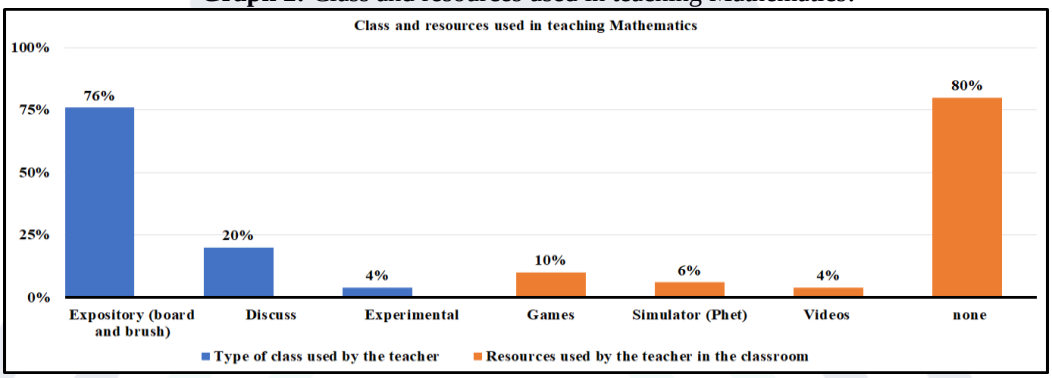


Source: Authors (2023)

According to graph 1, it can be seen that 40% of students like to study Mathematics. Students who do not like studying Mathematics claimed that calculations and interpretation of questions are factors that demotivate their enjoyment of the subject. Regarding the weekly time dedicated to studying mathematics, 52% of students stated that they dedicate less than 1 hour, 24% between 1 hour and 2 hours, 16% between 2 hours and 3 hours and 8% more than 3 hours of study of the subject of Mathematics. Pacheco, Andreis (2018), found in a study, on the causes of obstacles in learning mathematical content, that 35.8% of students did not have time for

extra-class study and 54% worked. These data presented by Pacheco and Andreis may explain the lack or minimal dedication of students to extracurricular studies. Regarding the classification of the mathematics subject, 10% classify the subject as easy, 20% as average, 70% as difficult to understand the mathematics subject. According to Barros (2016), understanding and development of learning can originate from organic or emotional factors. Resende, Mesquita (2013), carrying out research in public and private schools in São Paulo, observed that the majority of students interviewed admitted difficulty in understanding the subject of Mathematics.

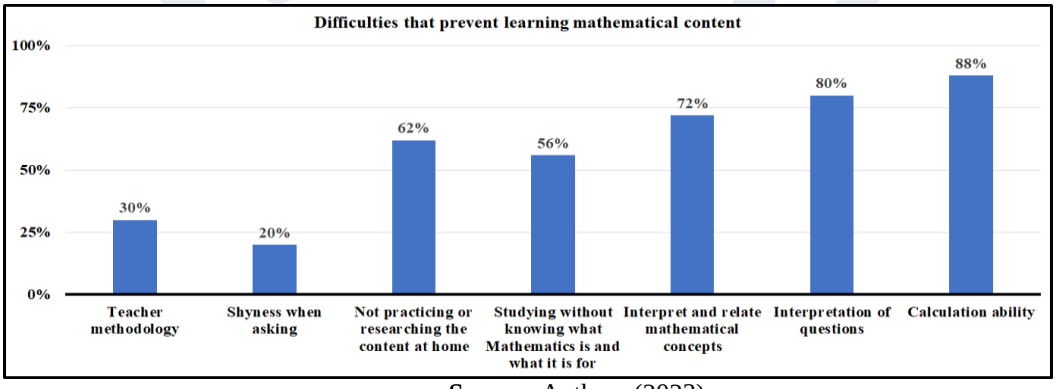
Graph 2: Class and resources used in teaching Mathematics.



Source: Authors (2023)

According to graph 2, 76% of students stated that the teacher uses expository as a teaching method (whiteboard and brush). The use of these teaching materials impedes the growth of teaching when they do not use technology (Romero, 2006). 80% reported that the teacher does not use any resources during classes. According to Tatto and Scapin (2004), a motivating class is the responsibility of the teacher who leads it, which can arouse the student's interest and increase understanding of the subject.

Graph 3: Difficulties that prevent the learning of mathematical content.



Source: Authors (2023)

According to graph 3, the difficulties that prevent learning mathematical content are Teacher methodology (30%), shyness when asking questions (20%), not practicing or researching the content at home (62%), studying without knowing what it is and what is mathematics for (56%), interpreting and relating mathematical concepts (72%), interpretation of the question (80%) and calculation skills (88%). According to Oliveira, Oliveira (2011) observed that elementary school students have difficulty understanding the contents of the mathematics subject. The authors highlighted difficulties in explaining the teacher and not liking discipline. According to (Ponte, 2020), a systematic approach is necessary, in which in addition to pedagogical intuition, innovative ideas are necessary and very important to facilitate the fixation of content.

CONCLUSIONS

The study showed that among students in the 1st year of Elementary School at a public school located in the city of Pium, Tocantins, 40% like to study Mathematics, with 52% dedicating less than 1 hour to studying and 70% considering the subject to be difficult. understanding. The survey also highlighted that 76% of students stated that the teacher uses expository as a teaching method (whiteboard and paintbrush), and 80% reported that the teacher does not use any resources during classes. Regarding learning, 56% do not know what mathematics is and what it is for, 72% do not interpret and relate mathematical concepts, 80% have difficulty interpreting the questions and 88% do not have calculation skills. The investigation was a reflection of the perceptions of students who are involved in the learning process, seeking to understand how they can collaborate to break with exclusionary models that contribute to mathematical knowledge not being understood, respecting the diversity and peculiarities of each individual.

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