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EVALUATION OF THE TEACHING PARTICIPATION OF THE DEPUTY JOSÉ CLÁUDIO DE SOUZA STATE SCHOOL IN THE II AMAZONIAN MATHEMATICS FAIR

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ABSTRACT

This research, entitled "Evaluation of Teacher Participation in the II Amazonian Mathematics Fair of the State School Deputado José Cláudio de Souza", aims to analyze the low adherence of teachers to the event, with emphasis on the pedagogical practice of the Mathematics Fair. The study seeks to understand the factors that influence the participation of teachers in scientific projects and explore suggestions to increase their involvement. The investigation adopted procedures of bibliographic research and action research, with a descriptive approach. Data collection was carried out through interviews with mathematics teachers, containing open and closed questions. Data analysis followed a qualitative-quantitative methodology, with the participation of 8 professors.

Keywords: Evaluation. Amazonian Mathematics Fair. Scientific Projects.

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INTRODUCTION

Mathematics education plays an essential role in the development of critical and scientific thinking and in the formation of citizens prepared to face complex challenges. In this context, educational events such as mathematics fairs emerge as valuable opportunities to promote active, collaborative, and meaningful learning.

These events, which involve the participation of students and teachers, create a dynamic environment for the practical application of mathematical concepts and for the integration of theoretical knowledge with everyday reality. Mathematics fairs are thus configured as fundamental pedagogical practices for the dissemination of scientific knowledge and to highlight mathematics as a fundamental tool in various areas of knowledge.

The relevance of mathematics fairs in the Brazilian educational scenario is evident, as these initiatives enable the involvement of students in research projects, creativity and application of mathematical concepts. The active participation of students is extremely important, as it favors learning, the development of research skills, problem solving and teamwork. However, the role of teachers is equally essential. By guiding their students, teachers encourage the search for innovation and expand the reach of pedagogical practices in the field of mathematics. By actively engaging in these events, faculty members take on the role of facilitators of learning, guiding students in their research and stimulating critical thinking.

Historically, mathematics fairs in Brazil have evolved significantly. The first recorded event took place in Blumenau, Santa Catarina, in 1985, with the Santa Catarina Mathematics Fair and since then, this pedagogical format has expanded to several regions of the country, culminating in the creation of the National Mathematics Fair in 2010.

In the state of Amazonas, pedagogical practice is represented by the Amazonense Mathematics Fair (FAMAT), which began in 2018, marking a significant milestone in the appreciation of mathematics teaching in the region. The holding of these events has encouraged the participation of both students and teachers, in addition to promoting integration with the local and national scientific community, strengthening mathematics education in various contexts.

Despite the importance of the mathematics fairs, there was a low adhesion of the teachers of the Deputy José Cláudio de Souza State School to the II Amazonense Mathematics Fair. This phenomenon generated a reflection on the possible causes of this

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reduced involvement and on the pedagogical strategies that could be adopted to increase the participation of teachers and students in future events.

The main focus of this study is to understand the factors that contribute to the low adherence of teachers to the event and to identify pedagogical measures that can be implemented to improve this participation.

The research is justified by the need to explore the reasons for the low involvement and to seek solutions that involve innovative pedagogical practices, capable of promoting the inclusion and protagonism of teachers in the orientation of scientific projects in the school under study.

The methodology adopted in this study combines bibliographic approaches and action research, with the objective of analyzing qualitatively and quantitatively the factors that influence the participation of teachers in the Amazonian Mathematics Fair (FAMAT).

Data collection was carried out through structured interviews with mathematics teachers, using open and closed questions to capture their perceptions about the event and the challenges faced. In addition, the research follows a descriptive and qualitative-quantitative approach, allowing an in-depth analysis of the experiences and perceptions of teachers.

The study aims to provide concrete contributions to the improvement of pedagogical practices in mathematics teaching. By evaluating the participation of teachers, the research seeks to identify opportunities for improvement in the way mathematics fairs are organized in schools and how teachers can be more effective in guiding students in the preparation of their projects. In addition, the study intends to collaborate in the construction of a more inclusive and collaborative educational environment, where mathematics fairs can play an increasingly relevant role in the formation of new critical and innovative thinkers in the field of mathematics and science. The results obtained may positively influence the adhesion of teachers in future editions of the Amazonian Mathematics Fair.

This article is structured as follows: the first section presents the introduction, contextualizing the theme and objectives of the study; the second section is dedicated to the literature review, addressing mathematics fairs in the national context and offering an educational and theoretical reflection on the Amazonian Mathematics Fair; the third section describes the methodology adopted for the research; the fourth section presents the results obtained; the fifth section analyzes and discusses these results; and the sixth section exposes the conclusions and the seventh section presents the bibliographic references.

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MATHEMATICS FAIRS IN THE NATIONAL CONTEXT: AN EDUCATIONAL APPROACH

Mathematics Fairs in Brazil have been consolidated as innovative pedagogical practices, providing students with the opportunity to apply mathematical concepts in a practical and creative way. These events encourage collaboration between teachers and students, promoting an integration between academic knowledge and everyday situations. In addition, they stimulate research, problem-solving, and teamwork, which are fundamental for the development of cognitive and socio-emotional skills of the participants.

These fairs are seen, in the national context, as tools that encourage dynamic and participatory learning, contributing to the formation of critical citizens prepared to face the challenges of the contemporary world.

The model has proven effective in enhancing academic skills and raising awareness about the applicability of mathematics in various areas of knowledge. Thus, Mathematics Fairs help to consolidate mathematics as a practical and accessible science, while promoting the active participation of all those involved.

The central objective of these events is to disseminate and share educational experiences, allowing participants to carry out scientific investigations that highlight the applicability of mathematics in different contexts.

According to Floriani and Zermiani (1985), the fairs aim to improve scientific teaching in schools and enable the external public to learn about the projects developed in educational institutions, from basic education to higher education. By transforming school activities into interactive learning spaces, these fairs promote the exchange of knowledge and the collective construction of knowledge.

By stimulating critical reflection on the subject, mathematics fairs help in the development of essential skills for learning, challenging traditional teaching approaches and adopting a more inclusive and contextualized methodology. This approach enhances students' understanding of mathematics and its relevance, taking into account social, cultural, and political aspects that expand students' understanding of the world. As highlighted by De Oliveira and Civiero (2019), mathematics fairs represent educational spaces that connect scientific and cultural knowledge, in this context teacher training is essential in conducting this teaching process

These events provide participants with the opportunity to express and share their experiences, engaging students from different levels of education and members of the community. This interaction creates a collaborative environment that favors collective

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learning, promoting according to Zermiani (1993, p.5) "the dissemination and popularization of mathematical knowledge, socializing the results of research in this area", and thus the popularization of mathematical knowledge, socializing the results of research in this area

The History of Mathematics Fairs in Brazil dates back to 1985, when the city of Blumenau, in Santa Catarina, hosted the first event of its kind. According to Araújo (2019) and Zermiani (1993), the organization of the event was led by professors Vilmar José Zermiani and Valdir Floriani, from the Regional University of Blumenau. Since then, the Santa Catarina Mathematics Fairs have been pioneers and continue to be an important reference point for other similar initiatives in Brazil.

Since its creation, the Santa Catarina Mathematics Fair has played a fundamental role in the dissemination of good pedagogical practices, inspiring other Brazilian states to adopt this event model. By valuing mathematical knowledge between students and educators, it promotes the exchange of experiences and the integration of innovative educational practices. Several scholars recognize the importance of this event, such as Hackbarth (2021) and Silva (2021) and others, who highlight its contribution to academic training and the development of mathematics teaching in the country.

In terms of organization, the Santa Catarina Mathematics Fair has expanded over the years, culminating in the first National Mathematics Fair (FNMAT) in 2010. Since then, the event has promoted the exchange of research and knowledge at the national level, strengthening the teaching of mathematics throughout Brazil.

According to SBEM (2016), the National Mathematics Fairs have become a fundamental space for reflection and learning, overcoming the limits of the classroom and involving a wide range of participants. The realization of these fairs continues to be an experience of great relevance for mathematics education in the country, reflecting a growing involvement of the academic community and expanding the impact of mathematics in the national educational scenario.

The Mathematics Fairs in Brazil have been consolidated as innovative pedagogical practices that are aligned with the principles of dynamic and participatory learning, playing a fundamental role in the formation of critical citizens prepared for the challenges of the contemporary world. These events promote the integration between theory and practice, allowing students to experience mathematics in a concrete way that is applicable to everyday reality.

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According to Floriani and Zermiani (1985), one of the main objectives of the Mathematics Fairs is the improvement of scientific teaching in schools, creating spaces for scientific investigation where students have the opportunity to present their discoveries.

These events favor the dissemination of knowledge and encourage collaboration between teachers and students, transforming the school environment into an interactive and collaborative space. This teaching model is essential to promote the connection between academic knowledge and everyday situations, as highlighted by De Oliveira and Civiero (2019), since fairs stimulate the exchange of knowledge and expand the understanding of mathematics as a science applied in everyday life.

In addition, mathematics fairs contribute significantly to the development of participants' cognitive and socio-emotional skills, encouraging problem-solving, teamwork, and critical reflection on the discipline. According to Diniz (2019), the skills acquired from the oral presentations held during the mathematics fair play a significant role in developing comprehension skills and improving students' understanding of mathematical concepts.

This type of approach, more inclusive and contextualized, is opposed to traditional teaching, promoting a teaching methodology that is more reflective and connected to social, cultural and political aspects, as defended by Floriani and Zermiani (1985). The pedagogical proposal of the fairs allows students to understand mathematics in its broader context and apply it in a critical and creative way.

The success of the Santa Catarina Mathematics Fairs culminated in the creation of the National Mathematics Fair (FNMAT) in 2010, as highlighted by SBEM (2016), providing a unique space for reflection and exchange of knowledge between educators and researchers from all over Brazil.

The consolidation of mathematics fairs as a space for collaborative and continuous learning has been one of the greatest legacies of this movement. As stated by Hackbarth (2021) and Silva (2021), fairs have encouraged the dissemination of good pedagogical practices, establishing a strong connection between scientific and cultural knowledge. By enabling the collective construction of knowledge, these fairs expand the boundaries of traditional education, promoting a more relevant and accessible mathematics education for all.

In this way, the Mathematics Fairs in Brazil stand out as a means of enhancing the teaching of mathematics and as an example of pedagogical innovation, where students are protagonists of their learning. By integrating dynamic, inclusive, and contextualized

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teaching practices, fairs have proven to be essential for the development of students' cognitive, social, and emotional skills.

The analysis of the participation of Brazilian regions in the six editions of the National Mathematics Fair, held between 2010 and 2020, reveals a significant panorama of the involvement of the states. The North region registered 125 projects, with 40 projects in the last edition. The South accumulated 270 projects, with 48 in the first edition and 25 in the fifth. The Southeast presented a total of 53 projects, while the Northeast added 149 projects, with a peak of 77 in the third edition. The Midwest, in turn, had only 4 projects. To ensure equitable representation and strengthen mathematics teaching throughout Brazil, the diversity of contributions in the editions of the National Mathematics Fair is essential. This involvement plays an essential role in advancing mathematics education in the country.

For a state to participate in the National Mathematics Fair, it must first be approved in its state stage. Thus, it is essential that each state develops and guides quality research in order to ensure participation in the national phase.

AMAZONIAN MATHEMATICS FAIR

In the state of Amazonas, the state stage of the fair is held through the Amazonense Mathematics Fair (FAMAT), a scientific event that aims to promote mathematical knowledge. FAMAT is organized by the Department of Mathematics of the Federal University of Amazonas (UFAM), with the support of the Dean of Extension (PROEXT), the Federal Institute of Education, Science and Technology of Amazonas (IFAM), the University of the State of Amazonas (UEA), the State Secretariat of Education of Amazonas (SEDUC) and the Municipal Secretariat of Education of Manaus (SEMED).

Since its first edition in 2018, FAMAT has been coordinated by Professor Dr. Francisco Feitosa, with the objective of creating a scientific and cultural environment that favors the exchange of experiences in the use of mathematics (DE OLIVEIRA; CIVIERO, 2019). Inspired by models of mathematics fairs, such as the one proposed by Floriani and Zermiani (1985), the event seeks to encourage scientific investigations, allowing students to experience mathematics in a practical and interdisciplinary way.

Fairs such as FAMAT promote knowledge and stimulate collaboration between teachers and students, creating dynamic and participatory learning. FAMAT provides this environment that contributes to the development of students' cognitive and socio-emotional

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skills, allowing an interactive experience with professionals in the field of mathematics. By encouraging the application of mathematical concepts in real situations, the event contributes to the popularization of mathematics.

In addition, FAMAT serves as a platform that arouses the scientific curiosity of students, allowing them to enter the field of academic research and develop essential skills for the training of future professionals. Hackbarth (2021) states that mathematics fairs play a fundamental role in the collective construction of knowledge, going beyond formal education and consolidating themselves as transformative experiences for participants.

FAMAT reflects the principles of innovative mathematics education, providing students with a new perspective on the importance of mathematics in various areas of knowledge. In this context, FAMAT follows the tradition of the Santa Catarina Mathematics Fairs, as reported by Araújo (2019), which stand out as models of excellence in the dissemination of good pedagogical practices, these fairs were fundamental to make mathematics more accessible and applied, a concept that is central to FAMAT, which seeks to expand the reach of mathematics to a larger and more diverse audience.

FAMAT has an impact that goes beyond its scientific character, representing a transformative educational experience. The event motivates students to become protagonists of their own learning, contributing to the formation of critical citizens who are able to face the challenges of the contemporary world. In this way, FAMAT consolidates mathematics as a relevant and accessible science (SILVA, 2021).

The projects presented by the students are guided by mathematics teachers, who accompany and offer suggestions throughout the process of idealization and execution. FAMAT is open to students regularly enrolled in basic education, higher education, special education, and mathematics teachers from public networks and private schools in Amazonas can participate.

The organization and evaluation of the event follow a structured process, involving the active participation of professors and students. The research presented and the application of mathematics in different areas of scientific knowledge make FAMAT a fascinating event, capable of engaging the attention of spectators and providing a unique learning experience, which goes beyond the classrooms. According to Silva et.al (2019):

> The works presented at the Mathematics Fairs are often not limited to the boundaries of the classroom, being developed in different places, presenting diversified physical and social realities. In relation to the Differentiated Learning Environments, they involve both the moment of exposure and the development of

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> the works. In other words, the Mathematics Fair is configured as a movement that develops beyond the moment of exhibition, of the exhibition of works, and contemplates a cycle of work development, exposure and socialization, and, finally, continuity and improvement of the work based on the evaluations received (SILVA, 2019).

The registration of projects in FAMAT is carried out through a public notice, and the evaluation takes place in three stages: the first in schools, the second in the district coordinators and the third at the Federal University of Amazonas, where participants share their pedagogical experiences. Throughout the process, projects are submitted using a standardized template, which ensures uniformity in the presentation.

Proposals can address both applied mathematics and its interrelations with other curricular components, as well as the development of instructional materials and didactic games. The evaluation considers aspects such as clarity, objectivity in the definition of concepts and the applicability of the projects in accordance with (SANTANA, 2015; SILVA; GARNICA, 2015; DE OLIVEIRA; CIVIERO, 2019).

METHODOLOGY

The research entitled "Evaluation of Teacher Participation II Amazonense Mathematics Fair of the Deputy José Cláudio de Souza State School" adopted a mixed methodological approach, combining bibliographic research and action research, with emphasis on descriptive and qualitative-quantitative analysis. The main objective was to evaluate the participation of mathematics teachers in the first stage of FAMAT, to identify the factors that contribute to the low adherence of mathematics teachers in the first stage of the fair.

The research has a descriptive character and uses a qualitative-quantitative approach to analyze the participants' responses. Eight mathematics teachers were selected, who teach the 1st, 2nd and 3rd year of high school in the morning, afternoon and night shifts.

Data collection was carried out through semi-structured interviews, containing closed and open questions. The closed questions allowed to quantify the knowledge of the professors about the event, while the open questions explored the reasons for the low adherence of the participation of the II FAMAT. Quantitative data were analyzed through tabulation and presentation in graphs, and qualitative responses were analyzed using the content analysis technique, according to Bardin (2011).

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All participants signed an informed consent form, guaranteeing the voluntariness and confidentiality of the data, in accordance with the ethical principles of the

RESULTS

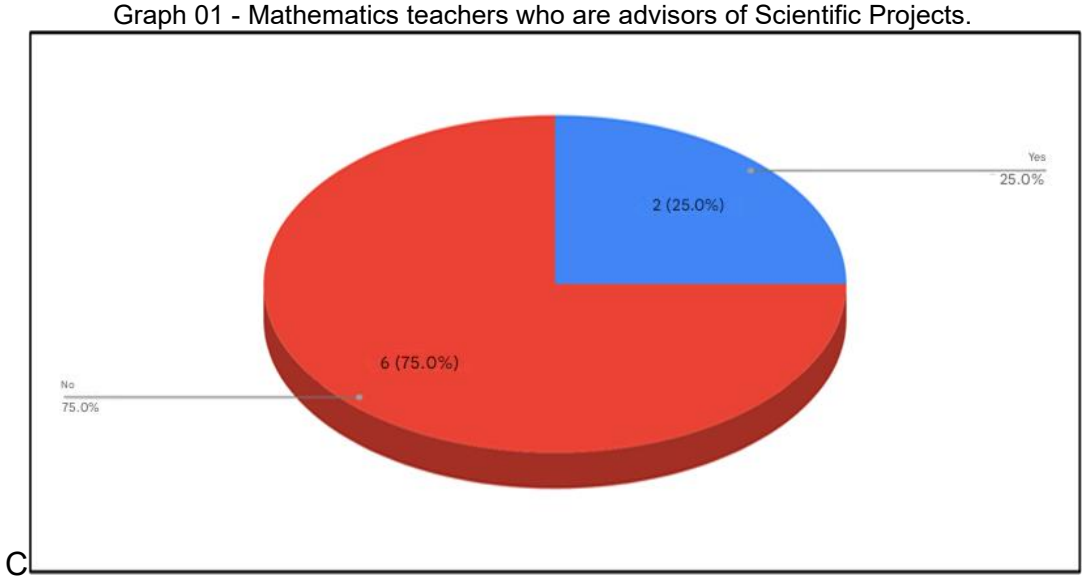
In this section, the results obtained through interviews with Mathematics teachers at the Deputado José Cláudio de Souza State School will be presented, with the objective of understanding the teachers' perception of the relevance of FAMAT in the educational context of Amazonas. It seeks to understand the importance of guiding scientific projects aimed at participation in FAMAT, to analyze the adherence of professors to the II FAMAT, to identify the factors that contributed to the low participation and to propose improvements that can encourage greater involvement of professors in the orientation of projects for future editions of the fair.

The answers of the teachers show the importance of the event in the educational context and suggestions to improve the participation of mathematics teachers in future editions of the fair.

As for the participation of mathematics teachers in the orientation of scientific projects to be presented at the II Amazonense Mathematics Fairs.

Graph 01 shows the number of mathematics teachers who supervised scientific projects to present at the II FAMAT.

Graph 01 - Mathematics teachers who are advisors of Scientific Projects.



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Source: Authors, 2021.

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The teachers answered the following open question: In your opinion, what is the importance of the Amazonian Mathematics Fair in the educational context of the state of Amazonas? And how do you suggest that the school could improve the participation of students and teachers in future Amazonian Mathematics Fairs?

The answers of the professors are presented below:

- Teacher 1: "The Amazonian Mathematics Fair is important to arouse students' interest in mathematics, showing its practical applications and relevance in everyday life, providing a place for students to present their projects and interact with other schools and researchers." As a suggestion for improvement, the professor said: "Organize preparatory workshops for students and teachers, addressing specific topics and project presentation techniques."
- Teacher 2: "It is a unique opportunity for students to present their ideas and discoveries, gaining recognition and motivation. The fair stimulates scientific curiosity and interest in the curricular component of Mathematics." Regarding improvement, he suggested: "Implement a monitoring program, where more experienced students and teachers can guide newcomers in the design and development of projects."
- Teacher 3: "The Amazonense Mathematics Fair promotes the exchange of knowledge and experiences between students and teachers, encourages scientific research and the development of innovative projects, improving the school curriculum by integrating theory and practice." As an improvement, he suggested: "Promote lectures and meetings with former students and professionals in the area to inspire and motivate current students."
- Teacher 4: "The fair contributes significantly to the development of students' critical thinking. The fair encourages collaboration and teamwork, essential skills in the academic and professional world." For improvement, he proposed: "To make available resources and materials necessary for the preparation of projects and to provide an adequate environment for carrying out research."
- Teacher 5: "The Amazonense Mathematics Fair is an excellent initiative to stimulate interest in mathematics and scientific research, helping students to develop communication and presentation skills, a practice that is fundamental to academic performance." Regarding improvement, he suggested: "Offer

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incentives, such as awards and public recognition, for the best projects and for teachers who stand out in guiding students."

- Teacher 6: "The Amazonense Mathematics Fair highlights the importance of mathematics in the scientific and technological development of the region, helping to identify talents and promoting the inclusion of all students in the educational process." As a suggestion: "Establish partnerships with universities and research institutions to offer technical and scientific support to student projects."
- Teacher 7: "The Amazonense Mathematics Fair provides a dynamic and interactive learning environment, which goes beyond the classroom. Students have the chance to see mathematics applied in different contexts and to develop innovative projects." For improvement, he suggested: "Widely publicize the fair and its benefits, both within the school and in the community, to increase interest and participation."
- Teacher 8: "The Mathematics fair is important to show students that mathematics is not just a theoretical subject, but has practical and important applications in reality, promoting integration between different schools and communities." As an improvement, he suggested: "Integrate the preparation for the Mathematics fair and science fairs of the other curricular components into the school's schedule of pedagogical activities, allocating specific time for the development of scientific projects during the school year."

As for the question of whether the mathematics teacher, in 2019, participated in the II Amazonian Mathematics Fair. Graph 02 shows the result.

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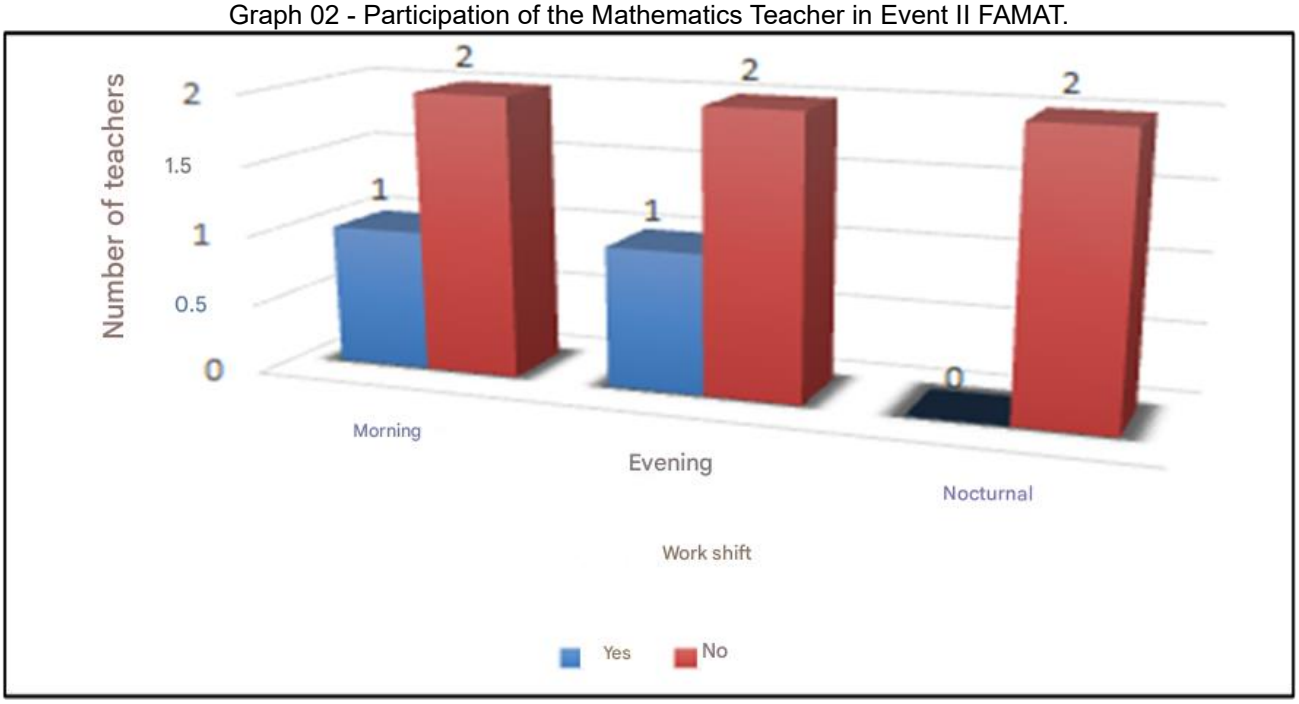
Graph 02 - Participation of the Mathematics Teacher in Event II FAMAT.



Source: Authors, 2021.

Regarding the question about the reasons that led Mathematics teachers not to participate in the II Amazonian Mathematics Fair, the teachers' answers were as follows:

Regarding the question about the reasons that led Mathematics teachers not to participate in the II Amazonian Mathematics Fair, the teachers' answers were as follows:

- Teacher 1: "The non-participation occurred because the information about the event arrived very short in advance. This made it very difficult to prepare the projects that would be presented, as there was not enough time to organize everything properly."
- Teacher 2: "The reason for not participating was, in fact, the short period available to develop the project. When the notice came, it was already at the last minute, and there was no way to organize myself to present something of quality."
- Faculty 3: "Although time was short, I was able to organize a research study with students to participate. It was a great challenge, but I believe that, with good planning, the deadline could be better used."
- Teacher 4: "It is believed that more effective planning among mathematics teachers would be essential. If the pedagogical coordination and teachers could plan continuously throughout the year, there would be more time to prepare and execute the projects, ensuring a more effective participation in the fairs."

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- Teacher 5: "One of the main reasons for non-participation was the lack of resources. There were no adequate materials to develop a quality project, which made it difficult to participate in the fair."
- Teacher 6: "The workload is quite tight, and reconciling class time with student guidance to develop projects was a great challenge. It was not possible to balance everything effectively to be able to participate"
- Teacher 7: "The lack of experience in supervising scientific projects and the lack of specific training for this type of activity prevented participation. I didn't feel safe to guide students properly without the necessary training."
- Teacher 8: "There was little interest on the part of the students in participating. Without their involvement, it is difficult to create projects. The motivation of the students is essential, and without it, we cannot achieve the desired success at the fairs."

DISCUSSION

The analysis of the interviews conducted with the Mathematics teachers revealed a series of suggestions for improving the participation of teachers in the Amazonian Mathematics Fair, especially in the school context, where the first stage takes place. Among the proposals, the organization of preparatory workshops, the integration of the fair into the pedagogical schedule and the continuous monitoring of the projects throughout their development stand out. Such measures aim to provide preparation for students and teachers, ensuring that everyone is properly prepared to present their projects and make the most of the experience provided by the fair.

One of the recurring suggestions among the professors was the creation of partnerships with universities and research institutions to offer technical and scientific support to the projects, raising the academic level of the event. The integration of the preparation of the fair into the school's pedagogical schedule, with specific time for the development of projects during the school year was a widely discussed proposal. This approach aims to increase student involvement in the design and research stages, turning the fair into an essential part of the school curriculum. These suggestions aim to expand participation and strengthen the impact of the fair, making it a more meaningful experience for all involved.

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The analysis of teachers' perceptions about the contribution of the fair to the development of Mathematics teaching in the region highlighted its importance in motivating students, improving pedagogical practice and enhancing the connection between mathematics education and local realities.

Teacher 1 highlighted that the fair is essential to arouse students' interest in mathematics, showing its practical applications and its relevance in everyday life. This patient suggested the organization of preparatory workshops, with specific themes and presentation techniques, as a way to ensure a more qualified preparation for the participants, in line with what Silva and Garnica (2015) discuss about the importance of training spaces for teachers.

Teacher 2 stressed that the fair offers a unique opportunity for students to present their discoveries and ideas, promoting recognition and motivation. The professor suggested the implementation of a monitoring program, in which more experienced students and teachers can guide newcomers, creating a network of support and mutual learning. According to Souza et al. (2019), this collaborative model is effective in developing investigative and collaborative skills.

Professor 3, in turn, noted that the fair is an excellent opportunity to promote the exchange of knowledge and encourage the development of innovative projects. The professor suggested holding lectures and meetings with former students and professionals in the area to inspire students, offering practical examples that can motivate them.

Professor 4 emphasized the importance of the fair in the development of critical thinking and collaboration among students, essential skills both in the academic and professional environments. This professor suggested the availability of adequate resources and materials for the elaboration of the projects and an appropriate environment for carrying out the research. This proposal is based on the idea that a good support infrastructure is decisive for the success of student initiatives, as discussed by Oliveira and Civiero (2019).

Other professors, such as Teacher 5 highlighted the importance of the fair in stimulating interest in Mathematics and scientific research. The professor suggested offering incentives, such as awards and public recognition, for the best projects and professors, aligning with practices of valuing academic effort, as argued by Silva (2015). Professor 6 suggested partnerships with universities and research institutions to support

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the projects, highlighting that these collaborations can create a more robust environment for the development of the projects, as emphasized by Souza et al. (2013).

Teacher 7 highlighted the importance of widely publicizing the fair and its benefits inside and outside the school, in order to increase student participation and involvement. This can be considered a strategy for popularizing Mathematics, as defended by Regueira (2015) and Boaler (1998), by establishing connections between learning and the daily lives of students. Teacher 8, in turn, suggested integrating the preparation of the fair with other science fairs, allocating specific time in the pedagogical schedule, which can provide a more contextualized education, as defended by Floriani and Zeriani (1985).

Regarding the participation of professors in the supervision of scientific projects to be presented at FAMAT, it was observed that only two professors were directly involved with projects, while six did not participate. The main reason given for non-participation was the lack of adequate time for the development of projects. Teacher 1 mentioned that the late arrival of information about the event made preparation difficult, while Teacher 2 highlighted the short time available to develop a quality project, a common difficulty in events of this type. Advance communication is essential to ensure that teachers have enough time to plan their actions, as discussed by Oliveira and Civiero (2019) and Floriani and Zeriani (1985).

However, Teacher 3 managed to develop projects despite time constraints, highlighting that good planning could optimize the use of the deadline.

Teacher 4 suggested that continuous planning throughout the year, in collaboration with the pedagogical coordination, could guarantee more time for the projects. The lack of resources and infrastructure was mentioned by Professor 5, who pointed out the scarcity of adequate materials as an impediment to the realization of quality projects. This is in line with the discussions of Diniz (2019) and Hackbarth (2021), who emphasize the importance of adequate resources for the success of pedagogical activities.

Other challenges pointed out by the professors were the overload of the workload, as stated by Teacher 6, the lack of training to guide scientific projects, as stated by Teacher 7, and the lack of interest of the students, as stated by Teacher 8. These factors, discussed by Hackbarth (2021), Oliveira and Civiero (2019), Boaler (1998), and Diniz (2019), point to the need for a more integrated and collaborative approach, with the creation of training spaces, adequacy of resources, and student engagement strategies, in order to ensure the

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success and continuity of the Amazonense Mathematics Fair as a formative and enriching event.

FINAL CONSIDERATIONS

The analysis of the interviews with the mathematics teachers of the Deputado José Cláudio de Souza State School revealed that, despite the recognition of the Amazonense Mathematics Fair as a valuable opportunity for academic and scientific development, several factors still limit the participation of teachers, especially in the first stage of the event.

The teachers highlighted the importance of the fair to arouse interest in Mathematics, apply the concepts learned in practice and develop academic and professional skills. However, factors such as work overload, lack of institutional incentive, scarcity of financial resources, and difficulty in reconciling the time needed for projects with the regular teaching workload were pointed out as significant obstacles to involvement in this event.

The suggestions offered by the professors indicate fundamental areas that need improvement. Among the proposals, the organization of preparatory workshops for students and teachers, the integration of the fair into the school curriculum and the public recognition of students' achievements stand out. These changes aim to increase the participation of teachers and provide a more effective and transformative experience for all involved, enhancing the Amazonian Mathematics Fair as a fundamental instrument for learning and academic growth.

Several pedagogical measures were suggested to expand the adhesion of teachers to the fair. Among the most prominent are the implementation of educational policies that support research and the development of scientific projects in schools, the strengthening of the research culture in educational institutions, and the creation of institutional partnerships that guarantee the necessary support for the active participation of teachers. The allocation of specific time for the development of projects in the school curriculum and the availability of financial resources for the execution of these projects were considered essential to enable teacher participation.

The anticipation of information about the event and its inclusion in the school's pedagogical schedule are fundamental actions to ensure the engagement of teachers, the suggestion of appointing a coordinator responsible for monitoring the activities directed to

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the Amazonense Mathematics Fair and holding periodic meetings with teachers to monitor the progress of the projects is an effective strategy to ensure active participation in the fair.

These proposals, if implemented, can effectively contribute to increase the adhesion of teachers and improve their participation in the Amazonian Mathematics Fair, thus influencing the participation of their students in this event of great scientific renown.

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