

# International Journal of Human Sciences Research

## DIFFICULTIES FOUND IN REMOTE TEACHING

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## INTRODUCTION

According to what was experienced at the Dom Malam Reference School for Elementary Education, this research highlights some of the difficulties encountered in teaching Mathematics at school, given the inclusion of remote teaching. According to EM TEIA - ``Revista de Educação Matemática e Tecnológica Ibero-americana`` (2020), “it is essential to understand the actions developed by teachers who teach in the initial years of Elementary School, whose children, even though they have easy access to digital technological means, still do not have maturity to incorporate remote teaching into their school routine.”

As it is one of the most relevant curricular subjects, mathematics brings with it a high level of care regarding the individual's knowledge. In elementary education, it is considered that this knowledge is available for the good development of the student, both academically and socially. According to the National Curricular Parameters (1997).

“Every day, it is necessary make students develop an essentially practical intelligence, which allows them to recognize problems, search for and select information, make decisions and, therefore, develop a broad capacity to deal with mathematical activity”.

And he also states that “when this capacity is enhanced by the school, learning presents better results”.

Taking as a reference the EREF Dom Malam Pedagogical Political Project, where he says that “it takes into account the trajectory of its school community, its history and culture, not only to guarantee a successful training path for children and adolescents, as well as to fulfill its commitment to society [...]”, it could be observed that the school has been developing increasingly better when it comes to the family-school relationship, which in most cases facilitates communication and

work in teams, which increases the level of student learning.

Because the school is one of the best known and is also located in a central area of the city, it allows for great social diversity, which can often lead to greater resistance when it comes to individual learning. It was seen that the school began to reduce the level of attendance and participation among students, the main reasons being the difficulty in accessing the internet and the difficulty in getting to it.

In view of the above, the objective of this research is to describe and analyze how Mathematics Teaching is practiced in the Central Sertão of Pernambuco, its difficulties and potentialities within the context of a municipal public school.

## THEORETICAL FOUNDATION

Mathematics acts in basic education as a guiding discipline, which requires a high level of dedication from the individual, making learning relevant. In this context, caution is necessary when it comes to teaching, which leads the teacher to look for ways to make learning clearer and more accessible to students. According to Miguel and Miorim (2004, p.70), “the purpose of Mathematics Education is to make the student understand and take ownership of Mathematics itself “conceived as a set of results, methods, procedures, algorithms, etc.”

Observing the school scenario, it is clear that mathematics teaching takes place in a decontextualized way and outside the students' reality, making classes boring, tiring and demotivating. Therefore, it becomes necessary for the teacher to review his methodology so that the teaching and learning process is more attractive to the student, making knowledge more effective. Because, according to the National Curricular Parameters (1997), it is “important to highlight that Mathematics must be seen by the student as knowledge that

can favor the development of their reasoning, their expressive sensitivity, their aesthetic sensitivity and their imagination “.

With the Covid-19 pandemic, due to social distancing, schools had to exchange in-person classes for remote ones. This exchange occurred abruptly, taking everyone by surprise. Mathematics teaching is once again undergoing a major change, presenting a series of new challenges for the school community. Among them, lack of equipment, lack of internet on the part of both teachers and students.

“In addition to the lack of adequate space to study at home, one of the biggest barriers to implementing remote teaching is access to the internet and equipment such as computers and smartphones. Brazil is the seventh most unequal country in the world, according to the latest report released by the UNDP (United Nations Development Program) in December 2019. For this reason, a significant social class divide occurs when taking advantage of online classes.” (Revista Babel,2020)

It is known that society is marked by a totally technological world, constantly changing the way of communicating and producing knowledge. In this context, mathematics is essential, as it is fundamental for the development of these tools. However, when preparing his classes, the teacher has to take into consideration, the environment in which his student is inserted and his previous knowledge to make his class attractive and at the same time make sense for the students.

Therefore, in order for the teacher to bring the subject he teaches to this reality, there is a need for this teaching professional to make use of tools that help him in this arduous process. The use of a board and pilot, for example, is one of the most used techniques in classrooms. However, new technologies appear as a useful alternative to assist students and teachers in teaching Mathematics. (Silva, 2021)

It is notable that mathematics teaching needs to adapt to this new form of teaching by routinely applying active methodologies, therefore, it is necessary for them to participate in training that makes it possible to understand how these tools work and the potential of each one.

The inclusion of existing technologies would be a proposal to assist in these changes that are necessary in the teaching of Mathematics. We would like to highlight some that can contribute to the teaching-learning of Mathematics, such as calculators, computers, the Internet and video/ DVD. Each of these tools has its significant importance in this process and must be explored, always having specific planning, according to the situation to be applied. (HENZ,2008)

It is a fact that in the mathematics discipline, the majority of students have problems in the learning process, and this pandemic period has shown how necessary it is to take new initiatives in order to alleviate them, contributing to more meaningful learning.

Difficulties in the teaching-learning process of Mathematics at school, especially in high school, have been increasing rapidly since the family has stopped making its contribution to the development of learning. Given such evidence, it is necessary for the school there to fulfill its transformative function and for Mathematics to be reborn with a new pedagogical perspective in the school environment, configuring a new meaning and facilitating the development of teaching and learning Mathematics. (``Brasil Escola``).

Therefore, participation and encouragement from both school and family is needed more than ever.

## METHODOLOGY

This research was carried out in a school in the municipality of Salgueiro, located in the Central Sertão of Pernambuco. The municipality is located at latitude -8.07373 and longitude -39.1247.” This city currently has a total population of approximately 60,604 inhabitants according to IBGE data. The city’s main sources of income are agriculture, goat farming and retail trade.

Schools in the city of Salgueiro, according to results from the IDEB (Basic Education Development Index) and IDEPE (Pernambuco Basic Education Development Index) recently released by the federal and state governments, respectively, placed the city’s municipal schools in 1st place among the eight municipalities of the Sertão Central Regional Education Management.

EREF Dom Malam is located on Rua Carlos Soares de Brito, Santo Antônio neighborhood, close to the city center. Founded on April 25, 1956, the school has exactly 677 students. It is of fundamental importance to know that most of these students live in the rural area of the municipality of Salgueiro, being part of the low-income economic class.

This research is of a qualitative nature with data collection and study, according to Thesaurus 2016, qualitative research is “based on the interpretation of the observed phenomena and the meaning they carry, or on the meaning attributed by the researcher, given the reality in which the phenomena are embedded.”

The research was carried out from May to June 2021, where 4 (four) face-to-face visits were carried out with the aim of collecting data on the operation, structure and Pedagogical Political Project of the rural school, using a notebook to record observations, as well as photographic records of the school’s facilities.

## RESULTS AND DISCUSSION

During the first visit, it can be seen that the school has a large environment, but it is not well used. The library has many materials that could be used in class, but they were stored in cupboards.

Due to the current pandemic, the school has reduced the rate of student participation in classes. The following data (2021), made available by the school, were able to prove this drop in one of the subjects:

Class	February	June
	Frequency (%)	Frequency (%)
6º grade “a”	66%	65%
6º grade “b”	76%	61%
6º grade “c”	74%	59%
9º grade “a”	89%	76%
9º grade “b”	69%	65%

Source 1: The authors (2021)

It is noted that there is low student attendance, both in February and in June. It is important to highlight that both teachers and students had to update themselves in the face of the pandemic, which for many was greater difficulty than others, as some students have difficulty accessing remote classes, due to difficult access to the internet, resulting in a lack of motivation to attend classes, which becomes one of the biggest reasons for the drop-in attendance. It is noted that, for students who have difficulty accessing the internet, activity notebooks made by teachers are made available so that they can carry out them at home.

The materials found could be added as a form of playful activities, taking students from the monotony of an expository class to a possible participatory class. The lack of use of teaching tools in classes reduced the degree of student interaction, as well as leading to low attendance.

To continue advancing, the school needs to

have the student as a subject of the right to receive the school as a place for exchanging experiences, elaborating and appropriating knowledge.

## CONCLUSION

We currently live in a completely technological world, where social media makes it possible to bring people together, such as virtual games, which are always present in generation Z. Given this, we need

to try to introduce teachers to current realities and thus be able to streamline classes with the aim of to engage students, improving their performance and increasing their potential.

Teachers are asked to participate in training as a way of expanding knowledge and as a way of finding out the best way to win over their students.

Therefore, the teacher, in addition to streamlining his classes, will be able to arouse interest in students, increasingly involving them in their learning process.

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