

## ACTIVE METHODOLOGIES IN GEOGRAPHY TEACHING: POSSIBILITIES IN PUBLIC SCHOOLS IN RURAL AREAS, PIAUÍ/PI

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### ABSTRACT:

Public schools in rural areas belong to a reality far removed from the others, and when looking for new ways to teach the discipline of Geography, the teacher encounters difficulties. Thinking about this issue, the main objective of this work is to use simple and low-cost resources that may contribute to the teaching-learning process of Geography in these schools. Having as justification the need to think about the use of cheap recreational resources or without any expense in the teaching-learning process, given the difficulty of having access to expensive materials or those that require advanced technology. This work was carried out in stages from an approach through action research, a bibliographical survey was carried out; studies with the textbook, realization of didactic sequences, elaboration of instruments and systematization of data on active methodologies. The main results demonstrated the various possibilities for the use of active methodologies in teaching geography in schools in the rural area of any municipality, mainly with the use of didactic resources existing in the school reality itself, that is, teachers and students. It is concluded that schools in rural areas lack infrastructure, but this is not an obstacle for the Geography teacher to be able to study Active Methodologies with his/her students; on the contrary, in any school environment it is possible for the student to be able to learn using various resources, what really has to be done is the adaptation to reality, so that there is no difficulty in its application, that is, despite real problems it is possible to use accessible teaching resources, what really needs to be done is the adaptation to the reality in which the institution and students belong.

**Keywords:** Geography; Active Methodologies; Low Cost Play Resources; Public Schools in Rural Areas;

## METODOLOGIAS ATIVAS NO ENSINO DE GEOGRAFIA: POSSIBILIDADES EM ESCOLAS PÚBLICAS DE ZONAS RURAIS, PIAUÍ/PI

### RESUMO:

As escolas públicas de zonas rurais pertencem a uma realidade bem distante das demais, e ao buscar novos meios de ensinar a disciplina de Geografia, o professor encontra dificuldade. Pensando nessa questão, esse trabalho tem como objetivo principal utilizar recursos simples e de baixo custo que podem vir a contribuir no processo de ensino-aprendizagem de Geografia nessas escolas. Tendo como justificativa a necessidade de se pensar a utilização de recursos lúdicos baratos ou sem gasto algum no processo de ensino-aprendizagem, visto a dificuldade de se ter acesso a materiais caros ou que exigem uma tecnologia avançada. Esse trabalho foi realizado em etapas a partir de abordagem por meio da pesquisa-ação foi feito levantamento bibliográfico; estudos com o livro didático, realização de seqüências didáticas, elaboração de instrumentos e sistematização de dados sobre metodologias ativas. Os principais resultados

demonstraram as várias possibilidades para a utilização de metodologias ativas no ensino de geografia em escolas da zona rural de qualquer município, principalmente com a utilização de recursos didáticos existentes na própria realidade escolar, ou seja, docentes e discentes. Conclui-se que as escolas de zonas rurais são carentes de infraestrutura, mas isso não é um empecilho para que o(a) professor(a) de Geografia possa estudar com seus aluno(a)s as Metodologias Ativas; pelo contrário, em qualquer ambiente escolar é possível que o(a) aluno(a) consiga aprender utilizando diversos recursos, o que realmente tem que ser feito é a adaptação para realidade, para que não haja dificuldade alguma em sua aplicação, ou seja, apesar de problemas reais é possível utilizar recursos didáticos acessíveis, o que realmente precisa ser feito é a adaptação para a realidade em que a instituição e estudantes pertencem.

**Palavras-chave:** Geografia; Metodologias Ativas; Recursos Lúdicos de Baixo Custo; Escolas Públicas de Zona Rural;

## INTRODUCTION

It is common to observe in schools that the discipline of Geography is taught passively, in which the teacher only passes on his knowledge together to the subject presented in the textbook without provoking, awakening or challenging the student to think, which often ends up becoming a repetitive and uninteresting class. For this reason, it is important to think about alternatives that change reality, in which the teacher becomes a facilitator, guiding his students in the teaching-learning process.

In this context, the Active Methodology (MA<sup>1</sup>), is a methodology that consists of taking the student out of complacency through interactive and didactic strategies, which make them think and build their own knowledge with the help of the teacher and become responsible for the construction of concepts themselves, developing their critical sense.

Although MA brings many benefits in the teaching-learning process, its low application in geography teaching is evident and this occurs for various reasons, such as resistance to new methodologies; lack of training by teachers and the scarce access to technologies due to lack of resources that enable their practice.

In contrast, unfortunately not all schools are able to use advanced technological resources that facilitate the practice of this active means of education, especially public network institutions, which are the most lacking, but contrary to what is thought, active methodologies are not applied only by using high technologies, such as computers, virtual platforms, applications, *Internet*, TVs, there are also simple and inexpensive teaching resources, which would have the same result as others, so what is really necessary is the interest on the part of the teacher and also that the activities are relevant in relation to the content that is currently being considered in the classroom.

The great difficulties faced by public schools, especially those in rural areas, are the conditions in which they are, in which many do not have access to the Internet, and if they have is limited. There is also a lack of resources, such as cardsotcks, glues, crayons, among other materials that could be used in the teaching of Geography. Another problem, because it does not say the greatest, are the socioeconomic conditions in which many students find themselves, which prevents the teacher from asking for extra materials that are not extremely necessary. Thinking about this situation, we sought simple, alternative and low cost means, in order to facilitate the teaching-learning process through active methodology.

In this sense, a school in the municipality of União was chosen, located in the State of Piauí. According to ibge data (2020), in this municipality there are 61 school units, including public and private schools, and among these, 37 units are in the rural area. For this research, a school was chosen for the application of the project and a 6th grade class, in the afternoon shift, in which the textbook was used as a basis for the development of alternative and low-cost teaching resources.

Geography is a science that studies the relationship between man and the environment in its various areas, and because it is a complex discipline it is of paramount importance that it is sought for methodologies that help in its understanding, as in the case of active methodologies. Thus, it is known that these playful activities when well applied transform a class into a productive moment, in which the teacher can get the student out of his/her comfort zone, inking him/her to think.

The production of this work was mainly justified by the use of simple resources in the teaching-learning process of students from public schools in rural areas, given their difficulty in having access to expensive materials or that require advanced technology. In this context, the article was constructed with the aim of showing cheap playful resources that can be used in the education process of the student of public education in the rural area.

In addition, it was noted the resistance by much of the teachers of Geography to make use of playful methods in the teaching-learning process, and therefore, the discipline is still seen by most students as a decorative, tiring and superficial subject, in which only concepts are learned, without materializing them. Many teachers think that the active methodology as a difficult practice, which requires a greater effort on their part, which requires greater interaction with students, in order to make them arouse curiosity and develop their criticality using means that go beyond the board and the textbook.

Another issue that was raised in the research was the difficulty faced by public schools, especially in rural areas to have access to methods that enable Active Methodologies such as *internet*, computers, funds for the purchase of materials (cardstock, glue, color pencils...), conducting field classes to more distant locations, among others. In addition to the adversities faced by schools, there is also the socioeconomic issue of students, because it is known that most families of students in the rural area live only from planting and harvesting, with the help of cost of care programs. Thus, it was asked: what does the use of active methodologies with low-cost playful resources mean in the teaching-learning process with students from public schools in rural areas of the municipality of União/PI?

The main objective of this work was to analyze simple and low-cost resources that can contribute to the teaching-learning process of Geography in public schools in rural areas, and thus present theoretical foundations of the concept of active methodologies, study low-cost playful resources and show activities and application in a school unit.

The methodology of the work consisted of the elaboration of the pre-research project, in which the author/researcher delimits his theme of interest, making previous studies, conducting bibliographic surveys of authors who based the research.

In a second moment, data were investigated on public schools in the rural area of União/PI (city in which the research took place), where there was the choice of an institution to

serve as a laboratory in the construction of the work, in which the researcher applied the active methodologies that can be used for the teaching of Geography. In order to have the proper use of low-cost teaching resources, a textbook analysis was carried out and at the same time a research on which materials would be used for the application of the project in the classroom, in view of the best possible result. After choosing the school, the practical part for the construction of the work was started, the class in which the research occurred was selected, being, therefore, the class of the 6th year of elementary school.

School meetings took place in four days. On the first day, there was a visit to meet her, in the second moment, there was the first contact with the students, where questionnaires were applied, in order to collect information about the class and its relationship with the discipline of Geography, active methodologies and teaching resources. A questionnaire was also passed to the teacher of the discipline to know about his relationship with this teaching practice. Soon after, subjects already studied by the students were reviewed, so that they had a better basis at the time of practice, being the following subjects: Hydrographic Basin, Geographic Coordinates, Political Map of Brazil, Relief, Earth Structure and Tectonicism. At the end of this second day, the students were divided into groups and asked them to bring some materials at the next meeting.

The group with the theme hydrographic basin, had to carry a middle tree leaf and toothpicks; the theme Political map of Brazil, was in charge of carrying cardboard and 26 caps of pet bottles; for the students responsible for the relief, they were asked only to take boxes of eggs; to the earth's structure group, an avocado was ordered and; to students with the theme tectonicism were ordered oranges and pens.

In the third meeting, the students, based on the review of the textbook and the help of the teachers, had a practical class, using all the low-cost teaching resources requested in the past meeting.

### **THEORETICAL APPROACH ON THE DIFFICULTY AND USE OF ACTIVE METHODOLOGIES IN GEOGRAPHY**

It is known that Geography is the science that studies space and its relationship with man, that is, everything that is directly or indirectly connected with it, going through several areas, and for this reason teaching this discipline brings great challenges for the teacher. One of these challenges to be broken is the fact of deconstructing through active methodologies the idea of geography discipline as superficial and passive matter. Melo and Sant'Ana (2013, p. 328) mention that:

The teaching-learning methodologies propose challenges to be overcome by students, enabling them to occupy the place of subjects in the construction of knowledge, participating in the analysis of the care process, and placing the teacher as a facilitator and advisor to this process.

The use of this teaching medium is indeed challenging, responsible for building a critical student, through the effort of the teacher to allow himself to use the Active Methodologies, where the same "[...] they are starting points to advance to more advanced

processes of reflection, cognitive integration, generalization, redevelopment of new practices" (MORÁN, 2015, p.18).

Some teachers of geography teaching still resist the use of playful means in the education process, because they consider such methods difficult to apply. "The resistance of some teachers to new proposals often reveals a lack of knowledge of teaching strategies. In other cases, it stems from the fact that such strategies have never been taught to teachers" (MORAES E CASTELLAR, 2018, p. 425).

When the teacher does not use playful means, the class tends to become uninteresting, considering that they do not seek new methods of interacting and maintaining the attention of their students, in this context, it is understood that:

The geography taught in schools generally does not follow new teaching methodologies, demonstrating a knowledge without a meaning for the student, because it ends up becoming repetitive, reproductive, superficial and uninteresting. Thus geography loses its ability to make students observe and analyze the place where they live losing their educational sense. Although most schools have access to new technologies, which enable the visualization and manipulation of spatial data and information, it may occur that some teachers are not prepared or are not sure how to use this teaching strategy in an efficient pedagogical way. (LIGHT; BRISKI, 2011, p. 2.)

Lunarti (2020, p. 53) states that "Geography is a discipline with great potential for applying playful activities to articulate school content and students' lives, involving aspects of natural sciences and social sciences", the author also argues, that the teacher, when seeking active means in teaching its contents, brings possibilities to contribute in the classroom, resulting in a participation of students in activities, stimulation of solidarity, cooperation, critical analysis and reflection, in addition to preparing the student for the world. In this sense, the author also mentions that:

Thus, it is necessary to improve the proposals of teaching and learning Geography, considering the student as subject of the process in the construction of concepts, skills and values, in which ludicity can be a tool capable of stimulating dialogue and interaction between the student and the development of his/her geographic reasoning. (LUNARTI, 2020, p. 55)

The teacher has as an important role in the use of Active Methodologies, to find a way to adapt the didactic resources to their reality and, especially the reality of their students, thus, "it is essential that the teacher seeks differentiated teaching methodologies and resources for a constructive class and that can make concrete learning according to the reality in which students are inserted (FERNANDES et al., 2018, p. 12).

Fernandes et al. (2018, p. 12) comment that "the realization of a class with didactic resources different from traditional ones provides students with a greater interest in the content, besides arousing curiosity and better apprehension of the contents", but in counterpoint, it is known the difficulty of working with didactic resources in most public schools, especially those in rural areas, in view of the deficiency of resources, it is at this

moment that the teacher enters making the use of his creativity, in order to look for ways to produce low-cost teaching materials, without affecting the quality of the teaching-learning process.

### **ACTIVE METHODOLOGIES OF LOW COST IN RURAL AREA EDUCATION**

Public schools located in rural areas are more susceptible to precariousness, which causes great difficulty for teachers when performing their role as mediator of knowledge, especially when trying to seek innovative ways to conduct learning.

It is notorious that access to advanced teaching resources is much more difficult for these schools, an example, internet and computers. Bezerra Neto (2015, p.134) says that, "only 0.5% of rural schools have computers, against 27.9% in the urban environment". Although these institutions do not have as many accesses to materials that require greater value, there are other viable alternatives that can be worked by the teacher, such as Active Methodologies, from various teaching resources, which can be adapted, created or recreated, depending on the school context, in this sense:

The didactic resources are part of the framework of possibilities of professional knowledge, and are tools that can be discovered, improved and relocated according to different situations and realities, and the ideal mode of its use will depend on the methodological conception of the teacher. It is essential to explain that many teaching resources are available, but not necessarily accessible, and knowing the Brazilian educational reality, the use of different resources is linked to the conditions conducive or not to their use in the context of the school reality. (BAVARESCO, 2021, p.165)

In this sense, it is important that teachers of an institution located in the field seek ways that enable this practice, taking into account the school context, therefore:

It is undeniable that, in this context, evoke the reflection on the importance of the teacher promoting various ways of teaching, considering that these ways of teaching need to start from the sensitivity and knowledge of the school reality in which it is inserted, it becomes fundamental as a didactic-pedagogical attitude to be able to innovate the teaching practice. (LIMA, 2021, p. 18.,)

The use of teaching resources in schools in rural areas can facilitate in the teaching-learning process and, in mind, it is important that the teacher chooses low-cost Active Methodologies, in view of the little resource offered in most of these institutions, as well as, the financial condition in which most of these students find themselves, then, "To overcome this deficiency in the teaching-learning process is that unconventional teaching resources arise, where together with meaningful learning, they propose a new approach in the way of teaching" (SOUSA; SANTOS, 2020, p. 3)

It is important to put that, the school of the field despite not containing many high quality materials available to its students, does not prevent the learning teaching process from being raised, what is important is the creativity and willpower of the teacher, who can find cheap means or that require no expense, as recyclable materials, or even the leaf of some tree. Sousa and Santos (2020, p.7) , mention that:

We can see in a practical way how much that a simple feature like cashew leaves (*Anacardium occidentale*) when well developed, it can intrigue the student in such a way, this one engages and ask countless questions, moved by the curiosity of something unusual; thus leaving passive status for the active in the teaching process, while the teacher becomes a mediating element of the whole process, signaling for the student to expose his empirical knowledge, thus enriching the class.

## **ACTIVE METHODOLOGY RELATIONSHIP, SCHOOL AND TEACHER**

The practice of Active Methodology in the teaching of Geography is not frequently present in schools, having an aggravating factor in public network institutions in rural areas. During the action research carried out it was possible to collect and observe various information about the institution, in which it is a small School Unit that works with classes ranging from early childhood education to elementary school in the final years.

When considering the relationship between school, geography teacher and MA, it was noted that there is no use of this teaching method, for various reasons, the lack of preparation of the institution itself and the teacher responsible for the discipline, as well as the low financial condition in which the students are. When applying a questionnaire to the teacher codenamed José, where he asked about the practice of this method in school, he said that he does not use it.

When questioning the Professor if he had difficulty using the Active Methodologies, he answered the following: "Yes, due to the accumulation of multiple disciplines in different areas the time to plan, study and produce practical materials becomes an unusual situation". The difficulty mentioned by the Teacher, unfortunately, is something common in the reality of schools, especially public, where to close the workload to be fulfilled, ends up being redirected to assume disciplines that are not part of their academic training, so the case of this teacher in particular, where he has his training in full degree in Pedagogy.

It is important to highlight that, when a teacher graduated in a given area assumes different disciplines, it can succeed in a bad teaching-learning process, considering that the teacher did not have the proper preparation and, therefore, has no mastery of the content, which results in a poorly conducted discipline, which generates present and future problems in the learning process of the students.

Working with playful resources is not something seen as easy, as it requires a greater effort, but this situation is further complicated, for teachers who do not have their training in geography. This lack of preparation unfortunately is not only your fault, there are other issues involved, such as the lack of teacher preparation courses focused on this issue.

Schools in rural areas find it more difficult to make use of active methodologies for the various situations and conditions they face. When questioning Professor José if he encounters greater obstacles when working active methodologies in these schools, he replied that "yes, some materials for rural students is more difficult to find". With his answer, it is soon realized that the idea of working in the classroom with playful resources is only possible using materials or means far from the economic, structural and locality reality in which these students and the school meet, and that there is a great difficulty to understand that there is a range of options to be worked on in these schools, that go

beyond expensive and technological resources, where they do not require or require minimally from the pocket of the student, teacher and institution.

Although the José Expedito Medeiros School Unit is an organized school, it was noted that it does not frequently use these resources in its teaching, especially in geography, but the institution and even the teacher recognize the importance of their use. Professor José mentions that this practice may contribute, "because the student with active materials facilitates the assimilation of contents proposed in the classroom. For, in addition to identifying the aspects present in the book, it is also a means of improving it."

### **LOW-COST PLAYFUL RESOURCES: ITS APPLICATION IN A SCHOOL UNIT**

The playful resources are of paramount importance for the teaching of Geography, since it can sharpen and encourage interest in learning, and the curious thing is that it does not need to use methodologies that require a high value, and this was shown to the 6th year students and geography teacher of the José Expedito Medeiros School Unit, that these materials can be low cost and easy to find.

Based on the textbook Geography, used by the school works, six subjects already taught by the teacher were chosen to elaborate a class that used low-cost playful resources, thus showing that active methodologies can be applied in a light, relaxed and inexpensive way.

In the 6th grade class, the book is more focused on physical geography, which gives the teacher a range of options to work on subjects using various playful resources. The six subjects chosen were: geographical coordinates; map of Brazil; relief; tectonics; Watershed; and structure of the Earth.

There are several resources that can be used to work geographical coordinates, the best known of them would be the globe, but unfortunately it is not every teacher or school that has one, thinking about this issue, sought other means for its application in a practical way, where it was suggested the school that made the use of orange (*Citrus sinensis*), taking into account that its shape mimics the globe a lot, being possible to work latitude and longitude, parallels and meridians, time zones, that is, geographical location.

For the production of the map of Brazil, instead of making the use of the maps only of the book, the idea was given to produce them using cardboard, and caps of pet bottles, both features that can be found without any expense, but that can bring good results. Other subjects that brought minimal expenses, was to study relief using only egg box, toothpicks, and paper, as well as the use of tree leaf to work watershed, because its structure resembles those of it.

Tectonism and the structure of the Earth were other subjects chosen for the use of Active Methodologies, where the first was suggested the use of stuffed biscuits, sheet and pencils. The second was used avocado (*Persea americana*), that when cut in half it looks a lot like the division of the structure of the earth, being the Mantle, Crust and core. For the production of both themes, it was necessary small expenses, which in this case would be the purchase of a packet of stuffed cookie and avocado.

### **Application of active methodologies for 6th graders**



The meetings with the 6th grade class occurred in three days, since it was the amount necessary for the application of the action research in the institution.

The first meeting was divided into two moments, at the beginning, a questionnaire elaborated by the author was applied to the class, which was objective, that is, with answers to mark, in view of the difficulty that some students face in writing, where they addressed questions about Active Methodologies and their practices in the classroom in the discipline of Geography, this initial questionnaire consists of 08 questions, the following being:

**Table 1:** Initial questionnaire applied to students, 2022

1. Do you like geography? ( ) Yes ( ) No ( ) So so
2. Which of these options is the geography discipline for you? ( ) Practice ( ) Unattractive ( ) Decorative ( ) Challenging ( ) Tiring
3. Does your Geography teacher often use Active Methodologies to teach Geography? ( ) Yes ( ) No ( ) So so
4. Do you have difficulty understanding the subjects of Geography? ( ) Yes ( ) No ( ) So so
5. Can you relate what is studied in Geography with your daily life? ( ) Yes ( ) No ( ) So so
6. Do you use materials other than the textbook to learn Geography? ( ) Yes ( ) No ( ) So so
7. Would you like to use other materials to study and learn about Geography content?
8. How do you think you learn more? ( ) In class, using only the textbook as material; ( ) Using materials other than the textbook;

**Source:** prepared by the author, 2022.

Soon after the application of the questionnaire, a review was made about the chosen themes, where the concepts of the six subjects were explained again, through explanations based on the textbook, considering that this research was thought through the analysis of the same. The review aimed to recall the subjects, so that students when producing active methodologies did not encounter any or few difficulties.

With the application of the first questionnaire, it was observed that most of the students, when asked about the second question, marked the discipline of Geography as decorative, that is, the discipline where they only read in order to memorize to achieve a reasonable average, without any reuse or de facto understanding of the subjects addressed by the discipline.

This first questionnaire served to be heard about what students understand with regard to active methodologies and playful resources, what could be perceived, is that many had never heard about these teaching methods, and if perhaps there was their practice in the discipline of Geography or in the others, the students did not know how to associate. Then, in this first moment, there was a need to apply this questionnaire, so that the author could know how far the students' knowledge goes about these practices in geography, seeking to know the main difficulties they face in relation to discipline.

At the second meeting, there was the practical part, in other words, the students were encouraged to develop their own work based on the review made earlier. For this practice to be performed, the students were divided into six groups, where each was responsible for a certain theme, and for bringing the low-cost resources that would be used for their confections.

The result of their productions was very satisfactory, because, it was noted the excitement on the part of the students in doing something outside the usual, it was also observed that they were able to understand their themes well and relate them to their daily lives.

The group responsible for the Geographic Coordinates produced their own globes using oranges, toothpicks, pens and paper, all these resources are easy to be found, and in this particular case, there was no expense, considering that the orange was harvested in the students' own backyard, and the other materials, they already had. At the time of production, the students made markings on the fruit simulating the Globe, highlighting the Equator as the main parallel and the Greenwich Meridian, in which they had a greater understanding of the location of the Northern and Southern Hemisphere and the Eastern and Western Hemisphere, and also produced a map in the orange peel about latitude and longitude.

During the review, it was observed that the 6th grading students presented great difficulty in relation to the political division of Brazil, many did not know which state capital they belong to, in this case, Piauí, in which region is located or which states border their own. When trying to fill this deficiency of knowledge about the country and the state itself, one of the groups was instigated to produce their own map of Brazil, in which they used the following resources: pet bottle caps, specified 26, cardboard, pen, glue and was also reused a4 paper, which would be discarded for clipping.

The interest of working with this MA was that the students when they went to create the map, were discovering by themselves, where each State is, since its construction consists of drawing the map on a cardboard, putting the acronym of each state in the caps and locating them on the map, this is also a very simple and low cost idea, where students learn, building their stuff and playing, making it a lighter and more fun learning.

Another subject chosen to use low-cost recreational resources was the Structure of the Earth. This subject offers a range of resource options that can be used in its explanation, but in this case, it used the fruit of the avocado tree, which is very similar to the structure of our planet. In this case, the students use avocado as the main material to develop their work, in addition to the fruit used toothpicks and paper.

In to make the students better understand what the structure of Planet Earth is like, they with the help of the teacher opened the fruit and made the necessary comparisons using toothpicks and paper. When observing the figure, the similarity of the Earth's Crust with

the peel of the fruit, the Mantle with the pulp and the lump with the Nucleus was noticeable.

Working on the subject Relief, is not considered as something easy, considering that many students can not understand its concept, this occurs for many reasons, but the most frequent, it is because it does not often relate what the textbook brings as an example, because it is not characteristic of their everyday reality. Thinking about this difficulty, it was proposed for the group that would work with relief that produced a model, using only egg boxes, paper and toothpicks (Figure 01).

**Figure 01:** Model about Reliefs



**Source:** Author, 2022.

In this model, students differentiate and make markings on what is a mountain, plateau, plain and depressions, where they could better internalize the different types of relief existing on planet Earth in practice with playful resources very easy to be found.

Another suggested subject for the use of playful resources was Tectonism, where it focused on the three movements of the tectonic plates, being the convergent, divergent and transforming movement. The students produced this material using stuffed cookies, paper and pencils, where they drew what occurs when these plates are moving and represented with the cookies (figure 02).

**Figure 02:** representation of the movements of tectonic plates.



**Source:** Author, 2022.

The sixth content worked with the students was Watersheds, this subject was the only one not to be reviewed, because it was the last subject studied by the class before the application of the project. The students responsible for this theme brought to class a leaf from a tree, which is the playful resource requested by the group to produce the work.

The structure of some leaves looks very similar to the structure of a hydrographic basin, and when thinking about this issue, the group responsible for this theme, created a map marking the main elements that make up the hydrography of a place, such as, as, spring, main river, tributaries, subtributaries, river mouth, among others (Figure 03).

**Figure 03:** Map of a watershed using tree leaves.



**Source:** Author, 2022.

In the last meeting with the students, they were given a new questionnaire, in which there were questions from the first and other new ones, in order to analyze the teaching process learning students after application of the Active Methodologies, and collect their opinions. This questionnaire contained six objective questions, the following being:

**Table 02:** Final questionnaire applied to students

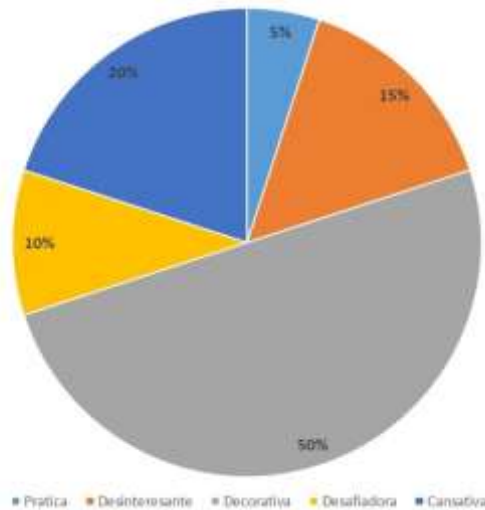
1. Do you like geography? ( ) Yes ( ) No ( ) So so
2. Using didactic resources left the discipline more... ( ) Uninteresting ( ) Understanding ( ) Tiring ( ) Easy ( ) Interesting
3. Você conseguiu entender melhor os assuntos utilizando os recursos lúdicos? ( ) Yes ( ) No ( ) So so
4. Have you been able to better relate the theme to your daily life? ( ) Yes ( ) No ( ) So so
5. Would you like to learn using active methodologies? ( ) Yes ( ) No ( ) Maybe
6. How do you think you learn more? ( ) In class, using only the textbook as material. ( ) Using materials other than the textbook.

**Source:** prepared by the author, 2022.

These final questions were of paramount importance for the closing of the practical part of the action research, where it was possible to observe if the results were really satisfactory, having said that, in one of the questions of the first and in the second questionnaire, the students were asked, if they liked the discipline of Geography, through the comparison of their answers, it was observed that most students liked the discipline, but this result increased after class with the use of active methodologies, where at first 55% of students declare to like the discipline, 20% said no and 25% put more or less, already in the second instant 85% said if they liked, 5% answered no and 15% more or less, with this, observed a significant improvement of the opinion of students about the discipline of Geography.

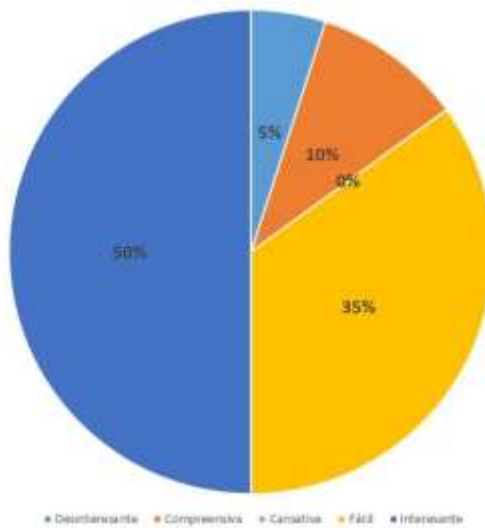
At first, the students were asked what opinions they had about the discipline, whether it was a practical, uninteresting, decorative, challenging or tiring subject matter, 50% responded decoratively, and the others were divided among the other alternatives. Through these answers it was possible to prove what was said earlier, that the discipline is very attached to the interpretation and decoration of concepts. When making the questionnaire for the final application, this question was remade, where the students answered how the discipline remained after the use of playful resources, if it made it more uninteresting, understanding, tiring, easy, interesting. In graph 01, one can better understand what was mentioned above.

**Figure 1:** Students' opinions before applying Active Methodologies



**Source:** Direct search, 2022.

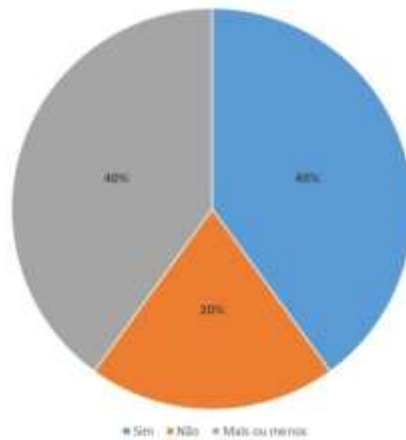
**Graph 02:** Students' opinion after application of Active Methodologies



**Source:** Direct search, 2022.

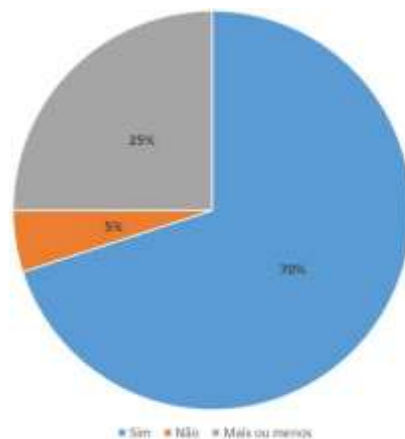
Before the application of the project, students were asked if they had difficulty understanding subjects of the geography discipline, the vast majority said yes or more or less. After the execution of the Active Methodologies, it was questioned whether the students were able to better understand the subjects from the use of playful resources, being observed the positive result as shown in the chart below: (questions 4 and 3)

**Figure 3:** Students' opinions before applying Active Methodologies



**Source:** Direct search, 2022.

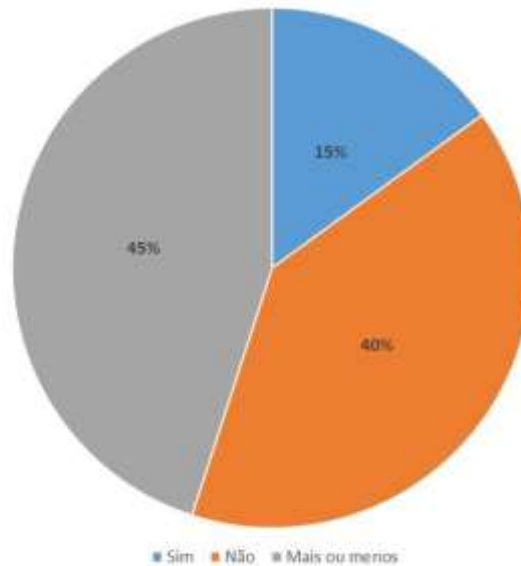
**Graph 4:** Students' opinion after application of Active Methodologies



**Source:** Direct search, 2022.

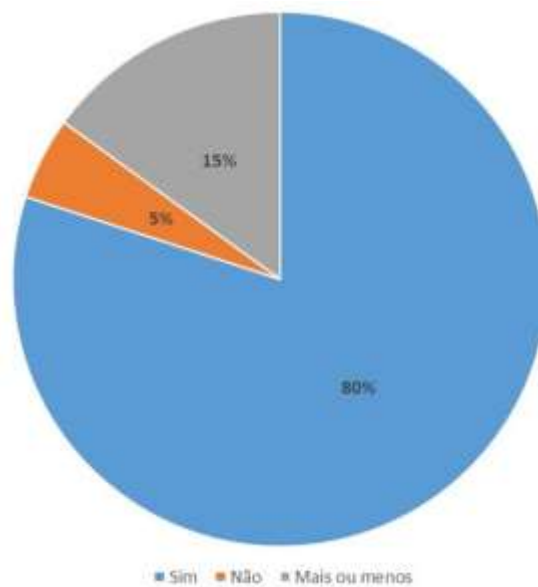
Many students have difficulty in relating what is studied in the classroom with their reality, when thinking about this question, the students of the U.E. José Expedito Medeiros were asked in both questionnaires, if they have this difficulty. When comparing the graphs below, it was noticed that there was an improvement in relation to this question. (5 and 6).

**Graph 5.**Students' opinion before applying Active Methodologies



**Source:** Direct search, 2022.

**Graph 06:** Students' opinion after application of Active Methodologies



**Source:** Direct search, 2022.

The application of the questionnaires before and after the project was of great importance for data collection, where when observing the students' opinion in general, about the use of these low-cost playful resources, since after application most of the students changed their opinion about the discipline of Geography.



## CONCLUSION

This work is of great importance for teaching, because by seeking to use simple and inexpensive means of playful resources, it allows the teaching-learning process to be lighter, besides bringing solutions to institutions, especially rural areas and students with few resources.

During the days of research at school, it was noticed that one of the great problems that the teacher of the discipline of Geography does not use the Active Methodologies is the fact of not having his training in geographic science, paths the reality of many teachers, where to close their workload end up assuming other disciplines, which prevents him from having a greater domain over this in particular.

Other issues observed was that, after the application of the project, the students acquired a greater power of understanding about the subjects studied, where it was proved through the result that, in a light and relaxed way using materials beyond the textbook, it is possible that the student obtains a great development of his/her critical sense.

Through this study, it is concluded that unfortunately schools in rural areas are more lacking in infrastructure, but this is not a hindrance for the Geography teacher to work with his students the Active Methodologies, on the contrary, in any school environment it is possible that the student can learn using various resources, what really has to be done is the adaptation to the reality of each, so that there is no difficulty in its application.

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