

**EDUCATIONAL MATERIAL AS A FACILITATING TOOL IN THE
TEACHING-LEARNING PROCESS: AN APPROACH TO THE DOMAIN OF
SOIL USE IN GEOGRAPHY**

**MATERIAL DIDÁTICO COMO FERRAMENTA FACILITADORA NO
PROCESSO ENSINO-APRENDIZAGEM: UMA ABORDAGEM AO DOMÍNIO
DO USO DOS SOLOS NA GEOGRAFIA**

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RESUMO:

O presente trabalho objetivou analisar e discutir o papel do material didático como facilitador no processo de ensino-aprendizagem sobre o uso dos solos na Geografia e contribuir para o debate em torno da importância do material didático como facilitador no processo de ensino-aprendizagem, especialmente quando voltado para conteúdos complexos como os relacionados aos solos na Geografia. Por meio da revisão de literatura e da análise de estudos de caso, pretende-se fornecer insights e diretrizes que possam orientar educadores na escolha e utilização adequada de materiais didáticos. Diante disso, a proposta de material didático desempenhou um papel crucial como instrumento metodológico, contribuindo de maneira eficaz e significativa para a assimilação dos conhecimentos científicos pelos alunos. Observou-se que tanto os recursos quanto os experimentos foram essenciais para instigar um entusiasmo palpável em relação aos tópicos abordados, proporcionando uma abordagem motivadora. O material ofereceu aos estudantes contextos que fortaleceram a compreensão da importância do ensino e do uso do solo. Palavras-chave: material didático; ensino de Geografia; metodologia

ABSTRACT:

The present study aimed to analyze and discuss the role of teaching materials as facilitators in the teaching-learning process regarding soil use in Geography and to contribute to the debate on the importance of teaching materials as facilitators in the teaching-learning process, especially when dealing with complex content such as that related to soils in Geography. Through literature review and analysis of case studies, it is intended to provide insights and guidelines that can guide educators in the appropriate selection and use of teaching materials. In this regard, the proposed teaching material played a crucial role as a methodological tool, effectively and significantly contributing to the assimilation of scientific knowledge by students. It was observed that both

resources and experiments were essential to stimulate tangible enthusiasm regarding the topics covered, providing a motivating approach. The material offered students contexts that strengthened the understanding of the importance of teaching and the use of soil.

Keywords: teaching materials; Geography education; methodology

INTRODUCTION

The effective use of educational materials has been recognized as a crucial tool for promoting understanding and deepening learning in various areas of knowledge. In the specific context of Geography, the study of soil use represents a fundamental theme for understanding the interactions between society and the environment. This article aims to analyze and discuss the role of educational material as a facilitator in the teaching-learning process regarding soil use in Geography.

Recent references have emphasized the importance not only of the curriculum content but also of the strategies and resources used in teaching, especially when dealing with complex concepts such as those related to soils. Authors like Vygotsky (1978) and Ausubel (1968) emphasize the relevance of educational materials as mediators in the knowledge construction process, facilitating the internalization of concepts through concrete and accessible representations for students.

Furthermore, contemporary authors such as Moran (2012) highlight the need for varied and contextualized teaching resources capable of promoting meaningful learning by relating theory and practice, making knowledge about soil use closer to the reality experienced by students.

In this sense, this article aims to explore the effectiveness and relevance of different types of educational materials, such as thematic maps, models, interactive software, and practical field activities, in understanding soil use in Geography classes. The critical analysis of these resources will consider not only their availability and accessibility but also their effectiveness in promoting more meaningful and contextualized learning for students.

Through literature review and analysis of case studies, insights and guidelines are intended to be provided to guide educators in the appropriate choice and use of educational materials, aiming to enhance teaching about soil use in the Geography discipline. This article seeks to contribute to the debate surrounding the importance of educational material as a facilitator in the teaching-learning process, especially when focused on complex content such as that related to soils in Geography.

METHODOLOGY

We defined our methodology in 5 phases. During the initial phase, we performed the selection of Content and Educational Objectives: Defining specific topics related to soil use in Geography to be addressed with the aid of models. Establishing educational objectives, such as understanding the types of soils, their characteristics, and their uses by society.

In the second phase, the development of Models was necessary: identifying the types of soils to be represented in the models based on the defined educational objectives, choosing suitable materials to represent each type of soil realistically and didactically, such as clay, sand, artificial grass, among others. Furthermore, constructing the models according to the functions that can be performed on the soil.

In the third methodological phase, we carried out the planning of didactic activities: by elaborating educational activities that use models as a central resource for understanding the different types of soils and creating lesson plans that integrate the use of models in different stages of the teaching-learning process. Moreover, in the fourth phase, we utilized the Models in Geography Classes: integrating the models into Geography classes, adapted to the age and comprehension level of the students, and employing the models as visual aids during theoretical presentations, emphasizing the peculiarities and uses of different types of soils.

In the fifth and final phase of the methodological procedure, we conducted the evaluation of Model Efficiency, where we assessed the performance of practical activities with the models to verify the students' understanding of the types of soils. We also collected students' opinions on the usefulness of models as a didactic resource for learning about the topic and conducted a detailed analysis, both qualitative and quantitative, comparing the students' performance before and after the use of models.

This methodology aims to provide a detailed framework for the use of models as educational material in teaching about soil use in the Geography discipline, aiming to promote practice-oriented, more meaningful, and concrete learning for better student understanding.

RESULTS AND DISCUSSIONS

"The diversity of didactic materials in geography places this discipline in evidence and in the preference of students, considering the vast geographical and cultural content for understanding environmental issues of the current world" (Becker, 2005). In this context, relating the study of soils to didactic practices, such as models, provides students with ease in the teaching-learning process and acts as a tool for the teacher. Based on this, the elaborated lesson aims to highlight to students the study of soil, more specifically the dynamics that occur closer to their reality, such as land use and occupation in the immediate region of the Açu Valley. In this scenario, the lesson followed some points to ensure that the content covered was clearly understood by the students, taking into consideration the didactic resource, the model.

Thus, the produced material aroused the curiosity of the students to understand the proposal, and then there was an articulation of the explanation about the theme, soil use, addressing some initial knowledge, such as a diagnosis of the students' understanding, taking into account the perception of the class as a whole and the individual knowledge of each student.

Initially, a round of conversations was conducted with the students to assess their prior knowledge and understanding of the soil theme, with an emphasis on the approach regarding the origin, occupation, use, and specific characteristics of each type of soil. Next, a more theoretical exposition was conducted with the aid of slides, focusing on the main pertinent concepts both in the formation and origin of soils, as well as in the modification of areas in different periods, as structured in the model (Figure 01).

Figura 01- Uso do solo em mesmo local em diferentes períodos



Fonte- Acervo dos autores

Therefore, in order for the students to have a more practical understanding of the content covered, we used the models, and during their presentation, the points were discussed with the students, seeking to contextualize the subject with their lived experiences. Continuing, the proposed activity was developed with the help of images showing different types and forms of land use, so that students could classify them accordingly, in order to identify what they had learned and to better consolidate their knowledge, as well as to improve and contribute to the teaching-learning process.

In the final stages, the class was divided into groups of six students, and it was evident that they were eager to participate in the activity; they remained very attentive, as the use of educational materials during the activity provided a different and more dynamic class. Through the results obtained with the use of models as a didactic tool, influencing the teaching-learning process, it was possible to highlight that bringing especially soil-related content in a more practical way proved to be effective. The educational material played a motivating role in students' curiosity and provided a better understanding of soil closer to reality, thus inherently linking theory to practice.

CONCLUSION

Therefore, the proposed educational material played a crucial role as a methodological instrument, contributing effectively and significantly to the assimilation of scientific knowledge by students. It was observed that both resources and experiments were essential in instilling tangible enthusiasm for the topics covered, providing a motivating approach. The material offered students contexts that strengthened their understanding of the importance of teaching and using soil.

In this sense, the playful approach reduces the pressure from numerous evaluations, relieving tension. The educational material emphasized student participation as active agents in the construction of their own knowledge, making the teaching-learning process more independent but also enriched by the exchange of experiences and knowledge. Consequently, the content that would normally be only briefly read acquired dynamism, allowing students to play a more active role in the educational process.

The students experienced pleasure in exploring this theme. Thus, it is the responsibility of the student to be guided by the desire to understand the unknown. In this context, it is the educator's duty to play a crucial role in instigating in the student the search for

unexplored knowledge, in order to facilitate and make the construction of their learning more rewarding. The pedagogical approach of the teacher, combined with the use of didactic resources, provides students with a stimulus to cultivate interest in research and the pursuit of new knowledge beyond the classroom.

It is concluded that educational materials not only assist in the teaching-learning process in various disciplines in a dynamic and interactive way but also assist the teacher from planning to practice, as the application of this material requires meticulous care, being thought of in its various possibilities alongside what can be understood in the classes where the material is presented. Additionally, it facilitates students' understanding of the topic addressed, soil use, and from there, in the speculations raised by the students, the accumulation of doubts and interests related to soil use is pertinent, as is the critical positioning of these students regarding ways that fit as appropriate and do not pose risks to society, using them in accordance with laws and respecting usage regulations, fostering environmental awareness about good practices in using this natural resource.

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