ABSTRACT

Objective: The aim was to define the environmental teaching that students and teachers develop in the design of pedagogical strategies in primary school educational institutions in the municipality of Santa Marta, Magdalena, Colombia.

Methodology: The study presents a descriptive analytical field approach, with a non-experimental design. The population was made up of 450 students and 15 teachers, from three primary educational institutions in the municipality of Santa Marta, Magdalena, Northern Colombia. Likewise, to collect the information, a questionnaire was used aimed at the students with two dichotomous response alternatives (yes-no), and another with scale-type multiple alternative responses.

Result: Teachers establish practical activities and various methods that help students in the teaching process in a comprehensive manner towards environmental education, a situation that does not guarantee learning to improve the school environment.

Conclusion: The motivation model used by teachers towards students is aimed at offering a reward when students carry out an activity related to environmental education.

Keywords: Environmental Education, Basic Primary, Strategies, Pedagogy.
Conclusão: O modelo de motivação utilizado pelos professores para com os alunos visa oferecer uma recompensa quando os alunos realizam uma atividade relacionada à educação ambiental.


DIDÁCTICA AMBIENTAL EN UNA COMUNIDAD DE EDUCACIÓN BÁSICA PRIMARIA: ANÁLISIS DE ESTRATEGIAS PEDAGÓGICAS EN SANTA MARTA (CARIBE COLOMBIANO)

RESUMEN

Objetivo: Definir la enseñanza ambiental que desarrollan estudiantes y docentes en el diseño de estrategias pedagógicas en instituciones educativas de educación primaria del municipio de Santa Marta, Magdalena, Colombia.

Metodología: El estudio presenta un enfoque analítico descriptivo de campo, con un diseño no experimental. La población estuvo conformada por 450 estudiantes y 15 docentes, de tres instituciones de educación primaria del municipio de Santa Marta, Magdalena, Norte de Colombia. Asimismo, para la recogida de la información se utilizó un cuestionario dirigido a los estudiantes con das alternativas de respuesta dicotómicas (sí-no), y otro con alternativas múltiples de respuesta tipo escala.

Resultado: Los docentes establecen actividades prácticas y diversos métodos que ayudan a los estudiantes en el proceso de enseñanza de manera integral hacia la educación ambiental, situación que no garantiza el aprendizaje para mejorar el ambiente escolar.

Conclusion: El modelo de motivación utilizado por los docentes hacia los estudiantes tiene como objetivo ofrecer una recompensa cuando los estudiantes realizan una actividad relacionada con la educación ambiental.

Palabras clave: Educación Ambiental, Basica Primaria, Estrategias, Pedagogía.

1 INTRODUCTION

A mandatory environmental education is of no use, since many teachers for environmental teaching develop various activities without caring if they really have any meaning in the student's learning, they also ask questions without considering the time for the students to respond, on the other hand one passes from one activity to another without there being a space for reflection and the contents to be worked on are not posed as problems that can be addressed by all students (El Batri et al., 2022; Tapia et al., 2020; Kalathaki, 2015).

Therefore, in order to insert this learning, teachers should not ignore didactics as the necessary process of how people learn and, therefore, how it is the most appropriate way to contribute to the construction of knowledge. From what was stated, Park et al. (2022) expresses that a constructivist process is needed from didactics so that the development of the most
appropriate way to teach environmental education is more meaningful for students and the community in general.

Consequently, schools play a great role in the formation of environmental knowledge, through different ways of teaching. Therefore, it is necessary to establish constructive didactic processes that allow the entire community (students, parents and representatives among others) to be part of the environmental education process in a coherent, active way and taking into account the information reported by the students themselves (Lopez & Guerrero, 2022; Seikkula et al., 2021; Misiaszek, 2015).

On the other hand, in the Motivation Models A hierarchy of the needs that men have to seek it is established, in educational environments, it is initially related to a component of expectations, which includes the beliefs of students about their ability to execute a task; the second is associated with a value component, related to your goals and your perceptions about the importance and interest of the task; the third, to an affective component, which includes the affective-emotional consequences derived from the performance of a task, as well as the results of academic success or failure (Su et al., 2023; Lopez & de Gonzalez, 2020; Albareda et al., 2019).

Regarding the Teaching Methodology, it is nothing more than the different processes that the teacher carries out to achieve student learning, where the technique reflects the resources necessary for teaching (Piotrowska et al., 2022; Aza & Lica, 2019; Sabogal, 2015). Everything reflected then infers that to learn and get students to invent, be creative and discover for themselves, the teacher must then clearly establish the teaching method and techniques as a way to be more effective in the direction of learning that leads the child. to manage to integrate logic with the cognitive information provided by the reality where it develops (Martinez et al., 2023; Vega et al., 2015).

On the other hand and in the same order of ideas, Pietersersen & Plaatjies (2022), reflects how environmental education must be structured around four fundamental learnings, defined as pillars of knowledge, whose premise consists of better visualizing the information on environmental education, which allows each person to discover, awaken and increase creativity, thus renewing the hidden treasure in each of us, 'environmental sensitivity', which transcends a purely instrumental vision of environmental education, perceived as a mandatory way to obtain results. practical skills, experiences and acquisition of skills aimed at environmental conservation.

Moctezuma et al. (2022) suggests that the conception of the methodological strategy is based on the most important difficulties that afflict the Environmental Education process that
is currently being developed in career educational institutions; that is, the lack of a clear and proactive methodology that guides its development, as well as the insufficient preparation of teachers to develop Environmental Education.

Likewise, what Freire (2019) addresses is of great importance for the development of methodological processes in primary institutions, since it determines the project method-ology as the key to success in generating environmental education, on the other hand, so that Given this achievement, it is then necessary to consider that these schools establish a methodology that adjusts to the learning of each student in a concrete way, establishing the necessary tool for the transmission of content related to the environment, through the application of projects that arise from the classrooms to their external environment (Mar-tinez et al., 2020). For all that has been explained so far, we sought to define the environ-mental teaching that students and teachers develop in the design of pedagogical strategies in primary school educational institutions in the municipality of Santa Marta, Magdalena, Colombia.

2 METODOLOGY

The research is descriptive, analytical, field, with a quantitative approach and non-experimental design. The population is made up of four hundred and fifty students (450) and fifteen (15) teachers from the three primary schools in the municipality of Santa Marta, Magdalena, Colombia, as shown in Table 1.

Table 1
Population distribution

<table>
<thead>
<tr>
<th>Educational institution</th>
<th>Students</th>
<th>Stratum</th>
</tr>
</thead>
<tbody>
<tr>
<td>School A</td>
<td>150</td>
<td>38</td>
</tr>
<tr>
<td>School B</td>
<td>150</td>
<td>38</td>
</tr>
<tr>
<td>School C</td>
<td>150</td>
<td>38</td>
</tr>
<tr>
<td>Total</td>
<td>450</td>
<td>114</td>
</tr>
</tbody>
</table>

Source: Self made

The population of 15 teachers does not merit sampling, taking the student population of 450 subjects in the three institutions as a population census (Gonzalez et al., 2019), a probabilistic sample stratified by institution is taken, considering segments or groups of the population or strata. The value of the population sample to be studied is n=114 sub-jects for the three educational instances addressed and is stratified into 38 per institution.
The survey observation technique is used, and the application of a questionnaire aimed at teachers designed with scale-type multiple alternative response options, where the items are presented as statements to measure the subject's reaction, in five categories to which they are assigned a numerical value for statistical processing. The questionnaire addressed to the students is dichotomous and was prepared in a simple way to be answered by the subjects approached, they were applied in a self-administered and individual manner.

Once data collection is complete, they will be tabulated in a double-entry matrix to which descriptive statistics will be applied using the SPSS statistical package. For the descriptive analysis, the arithmetic average of the population distribution will be used as a measure of central tendency. Regarding the interpretation of the responses by the population under study and, since it is a population universe with a normal distribution, there is a scale containing range, interval and category of analysis based on the highest score, lowest of the reference scale to use (5-4-3-2-1), shown in Table 2.

**Table 2**

*Scale for the average*

<table>
<thead>
<tr>
<th>Range</th>
<th>Interval</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.00 – 1.99</td>
<td>Low</td>
</tr>
<tr>
<td>2</td>
<td>2.00 – 2.99</td>
<td>Moderate</td>
</tr>
<tr>
<td>3</td>
<td>3.00 - 3.99</td>
<td>High</td>
</tr>
<tr>
<td>4</td>
<td>4.00 – 4.99</td>
<td>Very high</td>
</tr>
</tbody>
</table>

Source: Self made

Likewise, frequency measurements were taken to reflect the behavior of the studied population and observe its trend. In Table 3, the data collected through the application of the questionnaire will be previously coded and organized in a double-entry table in order to prepare them for analysis.

**Table 3**

*Scale for the level of significance*

<table>
<thead>
<tr>
<th>Analysis Category qualitative</th>
<th>Frequency</th>
<th>Percentage</th>
<th>Valid percentage</th>
<th>Accumulated percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Moderate significance</td>
<td>5</td>
<td>33.3</td>
<td>33.3</td>
<td>33.3</td>
</tr>
<tr>
<td>3 High significance</td>
<td>7</td>
<td>46.7</td>
<td>46.7</td>
<td>80.0</td>
</tr>
<tr>
<td>4 Very high significance</td>
<td>3</td>
<td>20.0</td>
<td>20.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>15</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Self made
3 RESULTS AND DISCUSSION

Table 4 presents the results regarding environmental teaching developed by students and teachers in primary school educational institutions in the municipality of Santa Marta, Magdalena, Colombia.

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Teachers (15)</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average</td>
<td>Category</td>
</tr>
<tr>
<td>Pedagogical actions</td>
<td>4</td>
<td>Very high level of significance twenty%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yeah</td>
</tr>
<tr>
<td></td>
<td></td>
<td>99</td>
</tr>
<tr>
<td></td>
<td></td>
<td>86.50%</td>
</tr>
<tr>
<td>Motivation models</td>
<td>4</td>
<td>High level of significance 46.7%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yeah</td>
</tr>
<tr>
<td></td>
<td></td>
<td>103</td>
</tr>
<tr>
<td></td>
<td></td>
<td>89.80%</td>
</tr>
<tr>
<td>Teaching methodology</td>
<td>3</td>
<td>Very high level of significance twenty%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yeah</td>
</tr>
<tr>
<td></td>
<td></td>
<td>101</td>
</tr>
<tr>
<td></td>
<td></td>
<td>90.60%</td>
</tr>
<tr>
<td>Dimension</td>
<td>4</td>
<td>Very high level of significance twenty%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yeah</td>
</tr>
<tr>
<td></td>
<td></td>
<td>88.90</td>
</tr>
</tbody>
</table>

Source: Self made

Los Therefore, in relation to the pedagogical actions indicator, 20% of teachers almost always carry out practical activities to teach students to conserve the environment of their community, allowing them on several occasions to express ideas for the development of new activities to benefit them. of caring for the environment, presenting a category of Very high level of significance.

What was reflected above differs from what Gazabon et al. (2017) stated, when he expresses that pedagogical action arises to the extent when education realizes that the knowledge of practice is implicit and not thematized, then becoming a constant training process.

Thus, 86.50% of the students stated that they carried out practical activities to obtain learning that allows them to conserve the environment of their community. From this it is relevant to mention what Cano et al. (2017) refers to, when he expresses that pedagogical practice must be impregnated with more of the practice than of personal interests. Like-wise, 13.50% of the students consulted state that they do not take any action that allows them to obtain learning to improve the environment of their school, an approach that dif-fers from what was expressed by the author.
From the Motivation Models indicator, 20% of teachers reflect that they almost always offer prizes as motivation to students to carry out activities to improve the environment, by putting students' ideas into practice, this having a very high level of significance, from this the theory of Kalogiannakis & Papadakis (2017) is presented, when they reflect in their theory that the behavior of human beings generally obeys their motivation.

In addition, 89.80% of the students reported receiving prizes as motivation when carrying out activities to rescue the environment through creativity and their ideas. Situation that belongs to what is reflected by Gazabon et al. (2017). Likewise, 10.20% reflect that they do not receive any incentive that leads them to participate in activities aimed at serving the environment of their school, an approach that differs from the theory of the authors.

With respect to the teaching methodology indicator, 46.7% of the teachers surveyed reflect that they sometimes use various resources through a methodology that provides information to students about the environment, based at certain times on the use of the blackboard, where Sometimes he changes the ways to make his students learn, which constitutes a high level of significance for the teaching methodology in educational institutions, evidencing a very high level of significance.

What is referred to differs from what was stated by Molina & Ortiz (2020), when he establishes that the teaching methodology is nothing more than the different processes that the teacher carries out to achieve student learning, where the technique reflects the resources necessary for the teach. In this same order of ideas, 90.60% of the students stated that they used various resources through numerous forms of teaching by the teacher, including the use of the blackboard to generate environmental learning, what was presented belongs to the theory of Tejedor et al. (2019), since it states that the learning methodology is the set of criteria and decisions that globally organize the didactic action in the classroom, determining the role played by the teacher, the students, the use of educational resources and materials, the activities that They are carried out to learn, the use of time and space, the groupings of students, the sequencing of content and types of activities, etc.

At the same time, 9.40% expressed that the teacher never uses a different way of transmitting knowledge in favor of environmental education, a situation that differs from what was expressed by the author. In correspondence to the dimension, environmental teaching, it was obtained that 20% of the teachers surveyed almost always relate to other areas for the development of various activities related to the environment, this shows how the teacher must keep in mind the importance of environmental didactics as the necessary process for learning environmental education.
From the above, the theory of Zamora & Sanchez (2019), Varela et al. (2016) & Ramos et al. (2015) is reflected, where he establishes that mandatory environmental education is of no use, since many teachers for environmental teaching develop many activities without caring if they really have any meaning in the student's learning. Likewise, they ask questions without considering the time for the students to respond. On the other hand, they go from one activity to another without there being a space for reflection and the contents to be worked on are not presented as problems that can be treated by everyone. the students.

On the other hand, 88.90% of the students affirm that knowledge regarding environmental education is implemented through innovative actions, an approach that is relevant to what was proposed by Prado & Parco (2021). On the other hand, 11.4% of students report that teachers never apply innovative didactics for teaching the environment.

4 CONCLUSION

Environmental teaching is almost always related to other areas for the development of various activities related to the environment, where teachers do not always establish practical activities and various methods that help students in the teaching process in a comprehensive manner towards environmental education, situation that does not guarantee learning to improve the school environment. On the other hand, the motivation model used by teachers towards students is aimed at offering a reward when students carry out an activity related to environmental education. Design strategies aimed at practical activities inside and outside school, with the participation of teachers. Plan a training process for teachers to insert the learning of didactics as the necessary process of how to teach to contribute to the construction of knowledge. Form a work plan that allows them to generate research regarding motivation models, which leads to identifying and establishing the most appropriate one according to the activity to be carried out in terms of the environment. Seek specialist support that provides the teacher with the necessary tools to establish different motivation models for each student. That teachers remain in a constant research process about the different ways of teaching according to the needs of the students.

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Environmental Didactic in a Primary Basic Educational Community: Analysis of Pedagogical Strategies in Santa Marta (Colombian Caribbean)


Environmental Didactic in a Primary Basic Educational Community: Analysis of Pedagogical Strategies in Santa Marta (Colombian Caribbean)


