Environmental culture in primary basic students and teachers: characterization in educational institutions of Santa Marta (Magdalena, Northern Colombia)

Cultura ambiental em alunos e professores do ensino fundamental: caracterização em instituições educacionais de Santa Marta (Magdalena, Norte da Colômbia)

Cultura ambiental en estudiantes y docentes de primaria básica: caracterización en instituciones educativas de Santa Marta (Magdalena, Norte de Colombia)

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ABSTRACT
The environmental culture in students and teachers of primary school educational institutions in the municipality of Santa Marta, Magdalena, Colombia was characterized. 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. Teachers do not always lead the student to carry out research regarding the environment; the strategies applied are sometimes planned without taking into account the importance of generating environmental values in the student and a positive change in environmental behavior. Strategies must be established in the classroom that force students to carry out research processes in each of the tasks assigned by the teacher.

Keywords: environmental training, environmental values, environmental behavior, students, teachers, primary education.

RESUMO
Caracterizou-se a cultura ambiental em alunos e professores de instituições de ensino primário do município de Santa Marta, Magdalena, Colômbia. O estudo apresenta abordagem de campo analítica descritiva, com delineamento não experimental. A população era composta por 450 alunos e 15 professores, de três instituições de ensino primário do município de Santa Marta, Magdalena, norte da Colômbia. Da mesma forma, para coletar as informações, foi utilizado um questionário direcionado aos alunos com duas alternativas de resposta dicotômicas (sim-não), e outro com respostas alternativas múltiplas do tipo escala. Nem sempre os professores levam o aluno a realizar pesquisas sobre meio ambiente; as estratégias aplicadas às vezes são planejadas sem levar em conta a importância de gerar valores ambientais no aluno e uma mudança positiva no comportamento ambiental. Devem ser estabelecidas em sala de aula estratégias que obriguem os alunos a realizar processos de investigação em cada uma das tarefas atribuídas pelo professor.

Palavras-chave: formação ambiental, valores ambientais, comportamento ambiental, alunos, professores, ensino básico.

RESUMEN
Se caracterizó la cultura ambiental en estudiantes y docentes de instituciones educativas de educación primaria del municipio de Santa Marta, Magdalena, Colombia. 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 dos alternativas de respuesta dicotómicas (sí-no), y otro con alternativas múltiples de respuesta tipo escala. Los docentes no siempre incitan al estudiante a realizar investigaciones respecto al medio ambiente; las estrategias aplicadas en ocasiones se planifican sin tener en cuenta la importancia de generar valores ambientales en el estudiante y un cambio positivo en el comportamiento ambiental. Se deben establecer estrategias en el aula que obliguen a los estudiantes a realizar procesos de investigación en cada una de las tareas asignadas por el docente.
1 INTRODUCTION

The communities of the world need everyone to be part of their care, achieving this, through educational processes, to sensitize human beings towards an environmental culture that leads to the care of the environment, which is characterized by the promotion of positive attitudes. from an early age, around the improvement of the environmental conditions of our immediate surroundings and the cultivation of environmental values and good habits at home (Kryukova et al., 2021; Blas et al., 2020).

In that sense, students must participate, preparing them to awaken interest in understanding how important caring for the environment is for everyone. Education has the great responsibility of providing quality, linked to the environment, that is, we increasingly request more an adequate environmental culture and ensure that the future that is to come (Tofig 2023; Sierra et al., 2016).

Therefore, it must be ensured that primary school teachers undertake learning from the transversality of the environmental contents of each of the subjects that correspond to them. (Karl & Molnár, 2020). In this sense, the educational sector has the enormous commitment to offering quality education, capable of preparing competitive and productive citizens committed to the environment (Grineva et al., 2022).

At the same time, environmental training, Its purpose is to offer knowledge, from new tools, techniques and skills that allow the development of skills to achieve the proposed objectives. (Acuña & Quiñones, 2020), strengthening the ability to change society, the teacher must rely on strategies such as solving problems focused on environmental issues or problems, which implies a series of research tasks that can support the resolution. giving a series of guidelines focused on choosing priorities regarding the investigation of environmental problems (Paluru, 2017), alt is also developed through a practice totally related to the community, values and attitudes that promote behavior directed towards the innovation of environmental reality (Wagner, 2018).
For their part, environmental values are the fundamental axes that guide human life and constitute the key to people's behavior; takes on special importance since ecological and environmental conservation training is based on the attitudes that are experienced around the object of study and, consequently, allows the internalization of conservationist values. (Bakhronovna, 2022). From what was proposed by the author, it is established that environmental values accommodate and guide the action of human beings with nature, from love and respect and from this encourages the individual to conserve nature, these values are part of education. morality that the natural environment needs (Sadat & Farbin, 2014). Education must aim to form honest, critical citizens who are permeated and committed to the ideals of democracy, responsibility, justice and respect for others and for the environment that surrounds them both in their homes as well as in their educational institutions (Down, 2015).

In the same context, Environmental Behavior establishes that the way of each human being is the precise mechanism for the process of information and giving responses from stimuli to improve the environment, which is why, from primary schools, positive actions must be generated that shape behavior of each student towards the conservation and improvement of the environment (Muxtarova, 2021).

The awareness of the population with environmental problems worldwide guides the execution of conservation and preservation actions by the actors who make life in different human and social spaces. (Sawitri et al., 2021). Based on what has been stated so far, the objective of the research was to characterize the environmental culture in students and teachers of primary school educational institutions in the municipality of Santa Marta, Magdalena, Colombia.

2 METHODOLOGY

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: Authors

The population of 15 teachers does not merit sampling, taking the student population of 450 subjects in the three institutions as a population census (Arredondo et al., 2018), 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 subjects 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: Authors

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>fifteen</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Source: Authors

3 RESULTS AND DISCUSSION

Table 4 shows the results for the environmental training indicator, 46.7% of the teachers approached sometimes assign research work, organize talks for students, and plan visits to different environments aimed at knowing how to care for the environment, environment highlighting its vital importance in conversations with students, this having a high level of significance.

Table 4. Environmental culture by indicators

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Teachers</th>
<th>Students</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average</td>
<td>Category</td>
<td>Yes</td>
</tr>
<tr>
<td>Environmental training</td>
<td>3</td>
<td>High level of significance 46.7%</td>
<td>99</td>
</tr>
<tr>
<td>Environmental values</td>
<td>4</td>
<td>Very high level of significance twenty%</td>
<td>105</td>
</tr>
<tr>
<td>Environmental behavior</td>
<td>3</td>
<td>High level of significance 46.7%</td>
<td>98</td>
</tr>
<tr>
<td>Dimension</td>
<td>3</td>
<td>High level of significance 46.7%</td>
<td>101</td>
</tr>
</tbody>
</table>

Source: Authors
The aforementioned differs from the theory of Salcido & Núñez (2020), since it establishes how, from the constant training process to improve environmental problems, teachers must establish a strategic process to achieve the purpose of the programs and projects from the development of programs and projects. itself and generate action research constantly, since the environment alone cannot be protected.

Likewise, 86.50% of the students consulted stated that they carried out research work on the environment, attended talks organized by teachers and shared visits with their classmates to the natural environments closest to the school, all to obtain learning to protect the environment, an approach that corresponds to Candelario (2021), where they establish that training for environmental education goes beyond traditional education, that is, the simple fact of imparting knowledge, so that through environmental education the man relates to his environment, with his surroundings and seeks a change in attitude, an awareness about the importance of conserving for the future and to improve our quality of life.

While 13.50% thought that not all the actions established for environmental training are carried out, an approach that differs from what was addressed by the authors. In relation to the environmental values indicator, 20% of teachers almost always provide information to their students so that they care for, love and respect the environment that surrounds them, this having a very high level of significance.

From the results discussed in the previous paragraph, the theory of Arredondo et al. is mentioned. (2018), who highlights that education in environmental values takes on special importance since ecological and environmental conservation training is based on the attitudes that are experienced around the object of study and, consequently, allows the internalization of conservationist values.

Likewise, 92.10% of the students surveyed say they carry out research work related to environmental issues, attending talks in the company of the teacher and their classmates and visiting parks to take care of the environment. Muxtarova (2021) points out that environmental values basically consist of having a social and individual education about ecology and the environment. Consequently, 7.90% of the students report that they do not carry out the actions presented by the teachers.

Regarding the indicator, environmental behavior, 46.7% of teachers sometimes generate actions that motivate and commit the student to take care of the school environment through
recreational activities on a voluntary basis, an approach that leads to a high level of significance. Results that merit taking into account what was stated by Bakhronovna (2022), where she establishes that one of the ways to generate changes in people's environmental behavior is by addressing the factors that inhibit or promote pro-environmental behavior.

Likewise, 86.0% of students feel committed to protecting and maintaining a clean environment at school, as reflected by Tofig (2023), who refers to environmental behavior in the development of specific behaviors, direct or indirect, individual or collective, aimed at the prevention of problems in the study environment, its correction or repair in order to improve environmental quality or the conservation of the natural and/or artificial resources that comprise it.

While 14.0% of the students reported not taking any actions to take care of the school, a situation that disagrees with Ruíz & Pérez (2014). Now, in correspondence to the environmental culture dimension, 46.7% of teachers sometimes develop a new culture from school aimed at preventing environmental problems since the responsibility of the actions that support the protection and conservation of the environment, presenting a high level of significance, a situation that differs from what is addressed by Llanos (2023), when he defines environmental culture as the promotion of positive attitudes from an early age, around the improvement of conditions, environmental values of our immediate surroundings and the cultivation of environmental values and good habits at home.

On the other hand, 87.87 of the students present a positive culture by acquiring their own commitment so that the environment of their school is improved, a situation that corresponds to what was expressed by Sabogal (2015). On the other hand, 114.40 of the students state that they do not have an environmentalist culture, a statement that differs from the author.

4 CONCLUSION

It is concluded that teachers do not always lead the student to carry out research related to the environment, a situation that allows not to generate a culture towards learning environmental issues, likewise the strategies applied are sometimes planned without taking into account the importance of generate environmental values in the student and a positive change in environmental behavior. Strategies must be established in the classroom that force students to
carry out research processes in each of the tasks assigned by the teacher. Plan workshops with all the teachers belonging to the school to discuss and promote guidelines that lead to the planning of strategies that lead to highlighting the values that are needed for the development of environmental education.
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