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Artículos Científicos

Cultura ambiental y técnicas de enseñanza. El caso de una secundaria general de Cd. Victoria, Tamaulipas

Environmental Culture and Teaching Techniques. A Case of a Middle School in Cd. Victoria, Tamaulipas

Cultura ambiental e técnicas de ensino. O caso de um secundário geral do Cd. Victoria, Tamaulipas

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Resumen

La cultura ambiental actualmente es un tema relevante y prioritario alrededor del mundo. Su importancia recae en que, con una conciencia crítica, los recientes sucesos que afectan el medio ambiente pueden interrumpirse. En este sentido, es necesario enfocar la educación ambiental hacia la formación de valores y concientización para crear actitudes favorables con el planeta. En los programas de estudio de educación secundaria se incorpora este tema, y resulta interesante saber cómo se enseña por parte de los profesores.

Este estudio tuvo como objetivo principal analizar las técnicas de enseñanza que utiliza el docente y descubrir si estas permiten desarrollar un pensamiento crítico y de reflexión respecto al cuidado del ambiente en estudiantes de secundaria. Consecuentemente, se consideró prioritario explorar la manera en la que los alumnos conciben la educación ambiental que reciben en el aula, y de qué forma impacta en su conducta diaria.

La investigación fue de tipo cuantitativa-explicativa. Se encuestó a dos profesores de la asignatura de Ciencias I. Los principales resultados arrojaron que el camino mediante el cual el profesor los lleva a la reflexión es a través de técnicas como el debate dirigido. Esto les permite a los alumnos informarse sobre problemáticas, al igual que debatir y reflexionar sobre su forma de actuar. Asimismo, al preguntar sobre la forma en cómo el docente imparte la clase, los porcentajes apuntan a que, cuando los alumnos no cuentan con información clara, hay una explicación oportuna. Por lo tanto, los resultados sugieren que las técnicas que utilizan los docentes en la secundaria general permiten que los estudiantes desarrollen un pensamiento crítico sobre el cuidado del medio ambiente.

Palabras clave: cultura, educación ambiental, técnica de enseñanza.

Abstract

Nowadays, environmental culture is a relevant and priority issue all around the globe. Its relevance lays on the recent events that affect the environment and that could be prevented. Accordingly, it is necessary to focus environmental education towards the formation of values and raising awareness to create beneficial attitudes towards the planet. In middle school education study programs this topic is included; therefore, it is interesting to explore how teachers teach it.

The main objective of this study was to analyze the teaching techniques used by the middle school teacher to understand if they allow the development of a critical thinking and reflection on environmental care in middle school students. Therefore, we consider as a priority to explore the way in which students conceive the environmental education they receive in the classroom, and how it influences their daily behavior.

This research was quantitative-explanatory. Two professors of the science courses were surveyed. The main results show that the teacher leads them to reflection through techniques such as moderated discussions. This allows students to learn about problems, discuss their importance and reflect on their way of acting. In addition, when asking about the way in which the teacher teaches the class, the percentages suggest that when students do not have clear information, there is a timely explanation. Therefore, the results suggest that the techniques used by teachers in general middle school allow students to develop critical thinking about the care of the environment.

Keywords: culture, environmental education, teaching techniques.

Resumo

Atualmente, a cultura ambiental é uma questão relevante e prioritária em todo o mundo. Sua importância reside no fato de que, com uma consciência crítica, eventos recentes que afetam o meio ambiente podem ser interrompidos. Nesse sentido, é necessário focar a educação ambiental na formação de valores e conscientização para criar atitudes favoráveis com o planeta. Esse tópico é incorporado aos programas de ensino médio e é interessante saber como é ensinado pelos professores.

O principal objetivo deste estudo foi analisar as técnicas de ensino utilizadas pelo professor e descobrir se elas permitem o desenvolvimento de pensamento crítico e reflexão sobre o cuidado com o meio ambiente em alunos do ensino médio. Consequentemente, foi considerado prioritário explorar a maneira pela qual os alunos concebem a educação ambiental que recebem na sala de aula e como isso afeta seu comportamento diário.

A pesquisa foi quantitativa-explicativa. Foram pesquisados dois professores da disciplina de Ciências I. Os principais resultados mostraram que o caminho pelo qual o professor os leva à reflexão é por meio de técnicas como o debate direcionado. Isso permite que os alunos aprendam sobre os problemas, além de discutir e refletir sobre sua maneira de agir. Além disso, ao perguntar sobre a maneira como o professor ensina a classe, as porcentagens sugerem que,

quando os alunos não têm informações claras, há uma explicação oportuna. Portanto, os resultados sugerem que as técnicas utilizadas pelos professores no ensino médio em geral permitem que os alunos desenvolvam um pensamento crítico sobre o cuidado com o meio ambiente.

Palavras-chave: cultura, educação ambiental, técnica de ensino.

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Introduction

The environmental problems we face today are a consequence of the misuse we are giving to the natural resources that the planet offers us. To such a degree that the damages are almost irreversible. However, we have an indispensable tool that we need to use to face this great challenge: environmental education. Environmental education seeks to help people and social groups to acquire greater sustainability and awareness of the environment in general and related problems. And he wants them to acquire a basic understanding of the environment as a whole. That is why, as mentioned by the joint programs of the United Nations Educational, Scientific and Cultural Organization [Unesco] (2018), it is necessary to promote education in environmental sustainability in wealth management.

Environmental education, through the recommendations of UNESCO (2018), disseminates, at local and global level, different trends in order to create positive attitudes to face a change that although it seems very distant is not impossible, of course, with the help of all human beings. No doubt the ecological crisis was the cause of putting this topic on the discussion tables and analyzing the origins of the factors involved in the destruction of planet Earth.

The current social conceptualization of sustainable development must be understood as a continuous and ongoing process that constitutes a dimension of the integral education of all citizens, oriented to the acquisition of knowledge, development of habits, skills, abilities and attitudes and in the formation of values that strengthen relationships between human beings and nature (Secretaría de Educación Pública [SEP], 2011b).

In this sense, environmental education must be used to develop an environmental culture, use it as a tool for society, and replace the vision we have of the concept of environmental care, because the planet's balance is threatened by our civilization. It is important to highlight that many

years ago the situation that exists today regarding environmental changes was unimaginable, but, due to the profound transformations that constantly force modernization of man, these changes are already, in many cases, irreversible.

Both in Mexico and in other countries, subjects that address environmental education in curricular proposals have been implemented at various educational levels. It would be very ambitious in this research to try to address each of the factors involved in the educational process, so it was a priority to analyze the way in which the teacher addresses the issue of environmental education based on the curriculum. It is important to review the techniques it uses with its students and find out if they are suitable for them to acquire a tangible or real culture about environmental education.

In the case of the education system in Mexico, environmental education is approached at a secondary level from the science subjects as an important content for the teaching of environmental problems that are currently affecting us, but is it relevant when creating an environmental culture? Or isn't it good enough to create a true culture of environmental preservation?

Studying and analyzing this issue is of the utmost importance with a view to providing solutions on the teaching of environmental education and the impact it has on environmental culture. Society is not giving it due importance, as positive changes in nature are not yet being reflected. In that sense, Wildemeersch, Finger and Jansen (2000; cited in Avendaño, 2012) suggest that it is necessary to combine a critical, ethical and aesthetic perspective to reinvent the relationship between responsibility on the part of education and responsibility on the part of society .

The educational field is very complex. In fact, as paradoxical as it sounds, it has a complexity very similar to that of a machine in which different factors are involved, where teachers, students, teaching methods, curriculum design, among others, are the gears that, in together, they make the teaching system work, something that has always been indispensable for the progress of people.

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Concept of environmental education and definition of environmental culture

Today environmental education is part of the educational material in schools at all levels, although not including it in the curriculum in a formal way. It is true that it is not an easy task, since it implies the dedication and effort of all as the great community that we are.

This theme is increasingly charging more bills in modern society. In this sense, it is intended that environmental education assume another of its functions, which is the development between society and nature, but for this it is important to know the concept of environmental education from its conception.

Environmental education, from a broad perspective, must have the capacity to promote systemic schemes according to socio-cultural development in the environmental plenary, as Ballesteros and Covarrubias says (1997; cited in Maldonado, 2005). In addition, it must be assumed as an integral educational process, which expresses continuity through knowledge and useful experiences about nature and its ecological conservation (Avendaño, 2012).

If there were more formal matters concerning the environment at all educational levels, such as in undergraduate, postgraduate and other careers related to the environment, the new generations would end each of the degrees with greater weapons and with greater critical thinking to be able to face the environmental problems we have today and those that come for the next few years.

On the other hand, culture of this type can be said to include everything that humanity has incorporated into nature, in order to dominate it, transform it, establish successful social relationships, generate answers to its questions, as expressed Beldarrín (2004; citado en Malluk, Delgado y Figueroa, 2016).

In view of the fact that the theme of environmental culture is so broad, it is necessary to define its study. For Bayón (2006), the environmental culture “must be based on the relationship between man and his environment, and in this relationship the set of styles, customs and living conditions of a society with its own identity, based on traditions, is implied. , values and knowledge” (pág. 7).

Environmental education in the study programs of the SEP

Within the study programs, environmental education has been part of the content to be taught, mainly in programs that focus on the area of science; however, also transversely in other subjects.

As is known by all, the Political Constitution of the United Mexican States (Official Gazette of the Federation [DOF], January 29, 2016) emphasizes that education should be provided to all Mexicans and Mexicans, and although it does not include environmental issues, natural elements and preservation should be studied, as well as the restoration of ecological balances. Environmental education, as of the 2000s, has been integrated into curricula, although not in a formal way.

Thus, the study programs have incorporated elements according to current trends. In a comparison of the 1993 and 2009 curricula, carried out by the SEP (2009) in the context of the comprehensive reform for basic education, it was found that the changes to the natural science programs are due to the consideration of the following aspects:

- Ways of constructing scientific notions are incorporated, which includes the recovery and use of previous ideas or knowledge as the basis for the construction of a limited number of scientific notions, concepts or processes and the development of functional representations, consistent with the competences for life and graduation profile of basic education.
- A selection of contents of greater interest for the students is included, according to their levels of understanding, relevant, lasting and applicable to the resolution of problematic situations and the social context of the students.
- Practical experience, intuition, analysis and deduction, as a way of approaching scientific notions
- Stresses the importance given to strengthening attitudes of responsibility and respect in students, based on the knowledge of their body, and in addition to recognizing capacities to take initiatives favorable to their well-being, linked to the culture of prevention and Health promotion.
- Environmental education for sustainability is strengthened by studying issues of social interest: its natural and social components, its interactions and impact on the environment, and the promotion of responsible consumption.

In the case of Agreement 592, it is established that in the area of science at the secondary level: "The culture of prevention is one of its priority axes, since the subject favors responsible and informed decision making in (…) the environment ; (…) Relates, from reflection, the scope and limits of scientific knowledge "(SEP, 2011a, p. 30).

In the program of studies of Sciences I, currently in force and taught in the first grade of secondary school (SEP, 2011b), within block III it was found that it stands out because the consequences of the increase of the greenhouse effect are analyzed, in terms of Global warming and climate change. Which gives context to promote reflection on the causes of air pollution and its effects on the quality of life.

The changes observed with respect to environmental education have not been significant in the curricula of the year 1993 until 2011. In addition, the training courses in force in particular in the state of Tamaulipas, which are offered in the Directorate of Training and Teacher Update, they are not aimed at training or updating teachers on environmental issues (SEP, 2017).

Environmental education should not focus on the transmission of knowledge in the area of natural sciences. It is necessary to understand this as one that is covered transversally from all educational areas. Since the Tbilisi conference (1977; quoted in Ortega and Velasco, 2006, p. 24), a widely accepted criterion was established today: environmental education in school programs must infuse environmental issues in both natural and social disciplines, since that pursues an interdisciplinary approach to its complete understanding and that of its ultimate causes.

Teacher teaching techniques and their role in environmental education

Nowadays environmental education is an emerging field and construction of new proposals for the care of the planet. And in that sense demand from other fields of study. But why do we call it an emerging field. The answer is easy to decipher: its importance has grown as a result of the environmental deterioration that exists today and the lack of awareness that exists in people. One of the ways to reinforce this type of education points to how the teacher imparts this type of knowledge together with the student, who is the one who guides, the subject who builds his own knowledge.

The school, like the teacher, plays an important role in the education of people for the formation of knowledge related to the protection of the environment, through the linking of environmental education to the content of the subjects (Miranda, 2014).

However, teachers are not prepared for the treatment of environmental problems in their daily work with students, since in educational content they only take a look at environmental situations. Hence the need to reinforce the curriculum, including this discipline in its curricula, from preschool to undergraduate and engineering levels, and to identify the contents that may allow linking environmental education to the other subjects.

Thus:

> The teacher's way of acting in view of the needs that educational reforms have been raising throughout the cultural history of schooling, has required different capacities that teachers do not always develop, leading them to a crisis situation in the exercise and practice of his profession (Oviedo y Oviedo, 2017, p.5).

The teacher, through a learning process, should facilitate the understanding of the realities of the environment in the students. This process also has the purpose that each individual has an adequate awareness of their environment. The main solution to the current environmental problems is environmental education at all educational levels and sectors of society, taking into account that the devastating consequences of climate change do not know how to differentiate between social classes.

In this teaching class, the teacher stops being an expert in the subject, stops transmitting already established theoretical knowledge, in order to be a facilitating guide in the construction and acquisition of knowledge that can strengthen the daily practice focused on learning. One of the main recommendations that the programs themselves include is that teachers take ownership of the subject's learning, which is not restricted to natural elements, and, in turn, acquires the necessary skills to develop the sustainable approach to education. environmental education (Calixto, 2015).

Part of the general objective of this work was to know the teaching techniques that the teacher uses with the students, and thus verify that they are adequate so that this type of education has an impact with respect to the institutional commitment. Environmental education already formally included in the curriculum should promote institutional innovations that favor the establishment of the educational establishment. The impact of environmental education initially has a commitment to students and teachers, and then, once this binomial is over, access the entire educational community. It should be noted that the teachers of the educational institutions must fulfill the role of stimulating the learning processes in the students to promote reflection on these

types of topics, but in order to facilitate the student's learning it is necessary for the teacher to put in action the right teaching techniques.

Teaching techniques are defined as “the set of activities that the teacher structures so that the student constructs the knowledge, transforms it, the problem, and evaluates it; besides participating together with the student in the recovery of their own process ”(De la Herrán, 2011, p. 3). In this sense, it is proposed that the techniques used by the teacher to direct the teaching have a predominant role in the teaching-learning process because they must go in the direction of facilitating the construction of knowledge with their students.

Table 1 shows some of the recommended techniques, based on de la Herrán (2011), and which can undoubtedly be fundamental in the teaching of environmental issues.

Tabla 1. Descripción de técnicas de enseñanza

Técnica de enseñanza	**Descripción**
Debate dirigido	Se utiliza para presentar un contenido y poner en relación los elementos técnicos presentados en la unidad didáctica con la experiencia de los participantes. El formador debe hacer preguntas a los participantes para poner en evidencia la experiencia de ellos y relacionarla con los contenidos técnicos. Durante el desarrollo de la discusión, el formador puede sintetizar los resultados del debate bajo la forma de palabras clave para llevar a los participantes a sacar las conclusiones previstas en el esquema de discusión.
Técnica expositiva	Consiste principalmente en la presentación oral de un tema. Su propósito es transmitir información de un tema, propiciando la comprensión del mismo. Para ello el docente se auxilia en algunas ocasiones de encuadres fonéticos, ejemplos, analogías, dictado, preguntas o algún tipo de apoyo visual; todo esto establece los diversos tipos de exposición que se encuentran presentes y que se abordan a continuación: exposición con preguntas, en donde se favorecen principalmente aquellas preguntas de comprensión y que tienen un papel más enfocado a promover la participación grupal.
Lluvia de ideas	Es una técnica en la que un grupo de personas, en conjunto, crean ideas, tal cual, las expones, las anotan aunque después las vayan sistematizando, priorizando y ordenando. Esto es casi siempre más productivo que cada persona pensando por sí sola.

Fuente: Elaboración propia con información de de la Herrán (2011)

Main uses of teaching techniques

There are countless techniques to achieve the expected objectives, in this case student learning. It is only a matter of the teacher identifying the appropriate one or ones to facilitate the acquisition of the expected knowledge. When we want or need to obtain a group conclusion in relation to a problem that involves an entire group, it is important to motivate each of the members, taking into account the participation of all, under certain rules (Moreno, 2004). Therefore, the research question that governs this work was the following: What are the teaching techniques used

by the teacher for the formation of a critical and reflective thought about the care of the environment in students?

Objective

Analyze the teaching techniques used by the teacher for the formation of a critical and reflective thinking about the care of the environment in students.

Method

Study design

This research was based on a quantitative model. And also an explanatory study design was chosen, since it is a little studied subject although it is a phenomenon that is latent. Explanatory designs go beyond the description of concepts or phenomena, or the establishment of relationships between concepts; They are aimed at responding or finding the causes of physical or social events. It focuses on explaining why a phenomenon occurs and under what conditions it occurs, or why two or more variables are related and provide a sense of understanding of the phenomenon they refer to (Hernández, Fernández and Baptista, 2010).

The variables of the study are the following:

- Dependent variable: Formation of critical and reflective thinking on environmental issues.
- Independent variable: Teaching techniques.

Participants

This research had the teacher and student as participants, since he is in charge of addressing and presenting environmental issues and is to modify his behavior and thus create a formal environmental culture. It was applied to two teachers who teach science and 23 first grade students. The method of selecting the sample was for convenience, as the job was presented to the high school managers and it was they who assigned the group and teacher to apply the instruments.

Instrument

The first instrument that was applied to teachers consisted of 23 questions, which were multiple answers, using a 5-point Likert scale, which ranged from “Strongly disagree” to “Strongly agree”. The questions were directed towards issues that relate to their teaching practice: if you use didactic material to address environmental issues, if you clarify the students' doubts during and after addressing the issues, as well as if you highlight to your students the importance of preserving the planet.

The second instrument was applied to students, since it is essential to know their opinion regarding issues related to environmental care. The questionnaire was made up of 29 questions with multiple answers, as was the previous sample.

The two questionnaires were designed by the authors and were validated based on expert judgment, which is a useful validation method to verify the reliability of an investigation and is defined as “an informed opinion of people with experience in the subject, which they are recognized by others as qualified experts in this, and who can give information, evidence, judgments and assessments ”(Escobar and Cuervo, 2008, p. 29). The experts who validated the instrument were a total of four, two experts on environmental issues and two secondary school teachers. The recommendations they made were oriented to the writing in three items aimed at students, with the aim of improving their understanding.

Results and Discussion

According to the findings found and the analysis of the results, the individuals involved are appropriating environmental education as a tool that leads them to the preservation of the environment.

In the case of teachers, they were asked questions about their profile and perception of environmental issues, as shown in table 2.

Tabla 2. Perfil y percepción de los profesores sobre temas ambientales

Preguntas a profesores	**1**	**2**	**3**	**4**	**5**
1. ¿Su perfil de docente está diseñado de acuerdo con programa de estudios de la materia Ciencias I (Biología)?	0	0	0	0	2
4. ¿Considera que el programa de estudios de la materia Ciencias I contiene una buena temática ambiental?	0	0	0	0	2
6. ¿La institución cuenta con alguna actividad para crear una cultura de preservación del ambiente?	0	0	0	0	2
10. ¿Le resulta suficiente el tiempo dedicado a los temas ambientales?	0	0	0	2	0

1: Muy en desacuerdo; 2: En desacuerdo; 3: Indiferente; 4: De acuerdo; 5: Muy de acuerdo.

Fuente: Elaboración propia

Based on the answers, the teachers have the profile to teach the subject and perceive that the program and the institution contribute to creating a good culture of preserving the environment.

In the case of teaching techniques, Tables 3 and 4 show the results of the most relevant questions made to both teachers and students. In them, the frequencies show a positive attitude in the key questions, for example, by questioning the student and the teacher how they address these issues of great importance; It was also questioned whether the teaching techniques used by the teacher favor student learning. As can be seen in Table 3, the results were favorable to the questioned.

Tabla 3. Técnicas de enseñanza (cuestionario a profesores)

Preguntas a profesores	1	2	3	4	5
10. ¿Le resulta suficiente el tiempo dedicado a los temas ambientales?	0	2	0	0	0
11. ¿La cultura en el alumnado la considera importante para el aprendizaje de la educación ambiental?	0	0	0	2	0
13. ¿Aplica actividades de reflexión a los alumnos para la preservación del medio ambiente?	0	0	0	0	2
15. ¿Pone en práctica actividades extraclase con los alumnos que ayuden a mejorar el ambiente?	0	0	0	2	0
16. ¿Estudia aprendizajes previos para abordar temas ambientales con sus alumnos?	0	1	0	1	0
18. ¿Realiza actividades previas para captar la atención de los alumnos, antes de abordar temas ambientales?	0	0	0	0	2
19. ¿Utiliza material didáctico (proyector, diapositivas, videos etc.) para la impartición de temáticas ambientales?	0	0	0	0	2
21. ¿Fomenta la exposición para hablar de temas ambientales?	0	0	0	0	2
22. ¿Fomenta la lluvia de ideas con los alumnos para hacer más entendibles los temas?	0	0	0	0	2
23. ¿Aplica actividades de debate con sus alumnos para aclarar las dudas que tengan?	0	0	0	2	0

1: Muy en desacuerdo; 2: En desacuerdo; 3: Indiferente; 4: De acuerdo; 5: Muy de acuerdo.

Fuente: Elaboración propia

The results show that teachers use techniques such as exposure, brainstorming and debate, through which they promote reflection in their students, as well as clarify the doubts that arise in them to promote a good environmental culture in their training. It should be noted that the professors surveyed indicated that they disagreed with question 10, that is, they did not find enough time allocated to environmental issues.

Table 4 shows some relevant questions asked of students that allow teachers to compare the answers.

Tabla 4. Técnicas de enseñanza (cuestionario a alumnos)

Preguntas a alumnos	**1**	**2**	**3**	**4**	**5**
5. Respeto las áreas verdes dentro y fuera de la escuela.	2	1	3	11	11
11. ¿Tu profesor hace exposiciones acerca de temas relacionados con el medio ambiente?	2	0	4	6	16
13. El profesor aplica actividades de reflexión a los alumnos para la preservación del medio ambiente.	0	2	4	10	12
16. ¿Tu profesor utiliza material didáctico (proyector, láminas, etc.) para explicar temas ambientales?	3	2	3	10	10
17. El profesor aplica la técnica de lluvia de ideas en temas ambientales.	2	1	1	12	12
24. El profesor aplica actividades en el aula para fomentar el cuidado del medio ambiente.	2	4	2	9	11
27. El profesor fomenta el debate como estrategia de aprendizaje.	2	4	5	7	10

Fuente: Elaboración propia

From the above it can be inferred that the level of compliance with the objectives set at the beginning of the investigation was high, since, after performing an analysis of the objectives set and reviewing the results of both samples that were applied, the results demonstrate that the teaching techniques that the teacher is using to impart environmental issues are being adequate, and that they are favoring the student to create a critical and reflective thought about the current situation of the planet. This means that young people develop a culture of preservation while their behavior is modified.

Only through education is the way in which the individual internalizes the culture to be able to build knowledge and in turn modify their actions and contribute as an individual subject to the transformation of the reality of the environment (Ferrer, Menéndez and Gutiérrez, 2004).

In the case of the students, when asked if the teacher explains to the students the importance of taking care of the environment, 50% said they agreed very well, and only 7.1% answered the opposite. To further improve this aspect, the teacher has to place greater emphasis on the importance of taking care of the Earth. Since the preservation of the environment implies respecting nature, making good use of water, practicing recycling; otherwise, the consequences are serious:

respiratory diseases, demand for drinking water and temperatures would increase, the latter, in turn, will allow the reproduction of certain insects that will cause diseases to plants and affect crops, to mention such just an example.

In the case of the question about whether your teacher encourages reflection activities about caring for the environment, 42.9% of the students answered the option “Strongly agree”. This is one of the most important questions in the survey, since the student's practice of reflection activities will help him modify his behavior and be more aware of current environmental problems. In this way, they agree that the path through which the teacher leads them to reflection is through techniques such as directed debate, where students are informed about any problem, discuss their importance and reflect on their way of acting.

When questioning students if their teacher encourages some of the teaching techniques already mentioned, the results suggest that they are put into practice. That the results of these questions are favorable indicates that this type of techniques implemented by the teacher are proactive for the student to develop the formation of a critical and reflective thought about the care of the environment.

On the part of the teacher, he was also questioned if he uses these teaching techniques, the result of the surveys indicates that they are being put into practice. It is important to implement the various teaching techniques because they are in constant relationship with the personal characteristics and professional skills of the teacher. As mentioned in one of the previous sections, this helps the student develop their learning in a more appropriate way and improve their behavior with the environment. Finally, when questioning the student about the way in which the teacher teaches the class, the percentages indicate that the latter explains when they, the students, do not have clear information, and that it does solve the doubts that arise when concluding a topic . These data were shown in items 19, 23, 26. That the teacher solves the doubts of his students tells us about his knowledge of the contents.

Conclusions

Environmental conservation must be linked to adequate environmental education, given that it is a process that aims to promote attitudes of conservation and improvement of the environment that lead to create a culture of preservation. The teacher's task is to continue developing strategies in search of transforming the culture of his students, since having continuous learning about this topic will lead to a better future for the next generations.

Institutions, like the teacher, play an important role in the environmental education of their students. The teacher as a guide and facilitator of learning, through the constant updating of environmental issues, as well as the improvement of teaching techniques used daily with their students, as these are a fundamental tool for the development of environmental culture . It is also necessary to find a way to address the doubts that remain at the end of each topic, because in this way it will be easier to conceive the student's learning. The institution, for its part, must have the initiative to implement new programs, activities and actions to favor the care of the planet. For example, to design methods for saving water, for saving energy, controlling waste inside and outside the institution, and involving parents and community residents to replicate these types of actions.

The implementation of teaching strategies can not only be within the classroom, but also outside it, such is the case of promoting the participation and linking of the same educational community with the support of managers. This will help to be on the same channel; For example, an effective way of learning is to promote recreational activities through workshops or competitions focused on the importance of different environmental factors. The competition generates that characteristic of the individual to take advantage of the information and work as a team to achieve a goal. This type of activity will contribute to generate environmental awareness.

There are several ways to achieve the objectives set to preserve the environment. The challenge is to find the most appropriate way to achieve it. We know that one of the best weapons is education. The teacher's task is to be updated in designing new teaching strategies because times change and new generations of students demand new ways of learning. In this sense, this work can serve as a guide for future research that could focus on teaching. It would be recommended to make an observation to verify that the techniques to which the teachers allude are those that are carried out in the classroom, or, to observe the students and check that their participation in the care of the environment has improved with the implementation of these methods teaching. Likewise, they

could be guided in analyzing the articulation and sequence of the teaching techniques used throughout basic education to know if they have an impact on the graduate.

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