

Article

Exploration of the pedagogical impact of a playful-practical strategy around environmental awareness



Exploración del impacto pedagógico de una estrategia lúdico-práctica entorno a la conciencia ambiental

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Abstract

This research is related to the exploration of the pedagogical impact of a playful-practical strategy on environmental awareness, and it is carried out with the objective of exploring the pedagogical impact of a playful-practical strategy on environmental awareness in the eighth grade C of the IETABA of the Predio el Verde-municipality of Barbacoas. To achieve such objective, an intervention program is

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carried out focused on playful-practical workshops on topics such as vermiculture to produce organic fertilizer, planting of ornamental plants with PEP bottle pots, formation of love bottles, and visit to the Indigenous reservation *inkal Awá la Nutria Piman*. The study is carried out through the qualitative paradigm with non-experimental design. The techniques for data collection are the diagnostic evaluation of preliminary knowledge, strategy design and non-participant observation. The instruments chosen to evaluate the intervention are the survey, the pedagogical workshop and the field diary.

Keywords: Environmental awareness, use of the three r's (Reduce, Recycle and Reuse).

Abstract

La presente investigación, está relacionada con la exploración del impacto pedagógico de una estrategia lúdico-práctica entorno a la conciencia ambiental, y se la realiza con el objetivo de explorar el impacto pedagógico de una estrategia lúdico-práctica entorno a la conciencia ambiental en el grado octavo C de la IETABA del Predio el Verde-municipio de Barbacoas. Para lograr tal objetivo, se realiza un programa de intervención enfocado en talleres lúdico prácticos sobre temas como la lombricultura para producir abono orgánico, siembra de plantas ornamentales con macetas de botellas PEP, formación de botellas de amor, y visita a la reserva Indígena *inkal Awá la Nutria Piman*. El estudio se lleva a cabo por medio del paradigma cualitativo con diseño no experimental. Las Técnicas para recolección de información son la evaluación diagnóstica de conocimientos preliminares, diseño de la estrategia y lo observación no participante. Los Instrumentos elegidos para lograr evaluar la intervención son la encuesta, el taller pedagógico y diario de campo.

Palabras clave: Conciencia ambiental, uso de las tres eres (Reducir, Reciclar y Reutilizar).

Introduction

The lack of environmental awareness is a problem of concern in humanity and it is not an isolated problem if it is not immersed within the social and cultural development of communities that seek

economic development without giving real value to progressive and sustainable growth that does not affect the environment. In Colombia, this problem has not worsened in recent years due to the lack of laws or programs that promote environmental care, but rather due to the lack of articulation of scientific knowledge with the reality of the regions marginalized by the presence of pollution that deteriorates ecosystems and generates loss of biodiversity in the different regions of the country.

The IETABA Awá Bilingual Agro-environmental Bilingual Technical Indigenous Education Institution is part of an organizational process aimed at guaranteeing the physical and cultural survival of the Awá people. In the early days of the organization, the El Verde property had well-preserved forests, the streams were not contaminated and there was a diversity of wild species, according to the elders of the region. In spite of being an academic institution with an environmental emphasis and its Educational Mandate encourages the educational community to protect the environment, there is a lack of environmental awareness among young students, as they do not show importance to the care of nature and the principles of reciprocity of this culture, in relation to the use and conservation of the natural resources of their environment.

In such sense this research takes different sources of references, highlighting, for example, the research conducted by Díaz and Fuentes (2017) and Espino, et al., (2015) who address the issue of environmental awareness in students of different ages. From this perspective both studies recognize the importance of examining the role that social processes play in the generation of environmental problems.

For this reason it is important to minimize the lack of environmental culture in students, through the development of a playful pedagogical strategy that seeks to rediscover that protective spirit towards their environment that is being lost in young people. Being aware that the natural resources of the region have been used for the benefit of the inhabitants, but that the degradation of non-renewable resources that is being created in the long term must be avoided, for this the adequacy of ecological spaces is an alternative to enrich the traditional pedagogies being nature the first resource, hence this project leads to the realization of interdisciplinary activities.

Thus the proposal will offer students the opportunity to become aware of the environment through the activities programmed in meetings, discussions, field practices, opening frontiers to their imagination in a comprehensive training, as a continuous, permanent and participatory process that seeks to develop harmoniously all the capabilities and dimensions of human beings to achieve their full realization; Thus repairing the infants to a personal use in education for life, by promoting live and direct experiences with real materials, where through these help to explore the curiosity of children, and from Environmental Education to train future citizens, not only in the theoretical study of nature, but also to live with it, giving meaning to the world around them.

Therefore, the general objective was to explore the pedagogical impact of a ludic-practical strategy for environmental awareness in the eighth grade C of the IETABA of the Predio el Verde-municipality of Barbacoas.

- To achieve this objective, the following specific objectives are proposed:
- To identify the level of knowledge about environmental care of eighth grade C students at IETABA.
- Design and develop three intervention workshops as a playful-practical strategy that seeks to improve the use of organic and inorganic waste produced at IETABA in order to implement actions that develop the dimensions of environmental awareness.
- To evaluate the effectiveness of the intervention strategy developed with eighth grade C students at IETABA.

Materials and methods

This research has a qualitative approach. It is important to emphasize that qualitative research is a type of study oriented to the analysis of specific cases, in a specific time and space (Hernández, et al, 2014, p.7). They focus on the meanings that people assign to their thoughts, attitudes, behaviors and practices, according to Minayo, (2017), "All approaches have in common, that they integrate social reality, the recognition of subjectivity, the symbolic and intersubjectivity in relationships". The scope is an Action Research (AR) design, which is defined as the study of a social situation in order to try to improve

the quality of the action itself, its objective. The population is the I.E.T.A.B.A. community, the sample is non-probabilistic and intentional. The population sample is 8 students (6 females and 6 males) of the eighth grade C, which in this school year 2022 is made up of 15 females and 20 males.

In the first phase, a diagnosis of the problem was made through participant observation and behaviors were found such as inadequate handling of garbage cans, without discriminating whether it is organic or inorganic, throwing garbage on the floor and in water sources regardless of the fact that it generates discomfort in the community, on the other hand, ignorance and appropriation of the three RRR (reuse - recycle - reuse) was observed. Taking into account the above, in this phase a diagnostic technique is carried out, which consists of a survey to two groups of members of the educational community, parents and students, whose objective is to verify basic knowledge of environmental care and proper use of natural resources. In a second phase, playful and practical workshops on environmental awareness are designed; after the preliminary analysis of the survey applied, environmental playful workshops are carried out, highlighting the use of an initial group dynamic and then the application of workshops related to recycling techniques, planting of ornamental plants, use of the vermiculture technique and ecological tours through the Otter reserve near the institution, taking videos in order to make known the beauty of the natural environment of the institution.

For the evaluation stage of the implemented strategy, activities are assigned, such as making a bulletin board to inform others about what they learned to a group of classmates and presentation of the videos taken during the ecological tour. In this case, a field diary will be implemented to evaluate the attitudinal part of the student. Subsequently, feedback will be given through the analysis of videos allusive to the topic and word search games, and the participants will be given trees that will be planted around the institution, placing signs with the names of the trees planted. Finally, a survey will be conducted among the students who participated in the activities to identify the effectiveness or not of the strategy.

Results

After verifying the reliability of the data obtained in the survey, it can be deduced that respondents have ideas that highlight knowledge about environmental care, however, in practice these ideas are not reflected in household activities and in the use of non-biodegradable solid waste such as plastics from consumer product packaging.

Therefore, it is considered necessary to make the intervention process to foster in students the dimensions of environmental awareness. As mentioned to us by the author Rosales & Carmen (2019), "in addition, to broaden the knowledge of the problems, it is necessary to improve the understanding about the influence of human actions in contexts and on concrete socio-environmental conflicts" (p.106)

In this way, we see that it is important to educate and guide in environmental awareness because of the need that is observed from the contexts. "Environmental education is assumed as a style of education, which gives it identity and rational foundation, and not a mere strategy for the transmission of contents with protectionist functionality" (Valero and Castellanos, 2017).

In order to carry out concrete actions to improve environmental awareness and direct the negative attitudes of some students of adolescent age towards behaviors that reflect the strengthening of the dimensions of environmental awareness (affective, conative, active and cognitive), three intervention workshops were developed.

In the workshop "I know, take care and raise red Californian earthworms and plant plants", two dimensions of environmental awareness were worked on, the cognitive and the active; in the cognitive one, the students worked on learning about the vermiculture technique, recycling and its importance in their daily life, being a training stage. In this stage, each student began to make his own design of his pot and observed the color of the black soil with nutrients vs. soil poor in nutrients. In the active phase, the students were given a determined time to do the activities and in this way see the compliance and how they took care in decorating their pots to use them for planting a plant.

In the Love Bottle Formation workshop, the cognitive and conative dimensions were worked on; the cognitive dimension being the theoretical and practical training work carried out in this

intervention. The conative dimension was evaluated in the quality of the love bottle presented, where it was observed whether or not the student followed the indications given. And in the degree of commitment in the presentation to their classmates when they explained the technique to others.

In the workshop An ecological look at our reserve La Nutria, we worked on the affective dimension, observing the behavior and attitude in the field trip that took place, also in the delivery of the permission form signed by a guardian and in the predisposition to bring their lunch box and boots to attend the visit to the Indigenous reserve inkal Awá la Nutria Piman.

To evaluate the effectiveness of the intervention program implemented, two sessions were held to close the program and thus evaluate the organized process, for this purpose a video on environmental care was watched, a debate was held on the cartoon "I am Guna", an exercise of developing an alphabet soup was also performed and in the second session, some trees were planted.

Discussion

The reduction of solid waste is one of the most important factors that contributes to the environment, since this has become one of the best alternatives to reduce environmental pollution, making people aware and thus understand how valuable it is to take care of nature, agreeing with Rozzi (2001) who states that: "environmental ethics concerns human societies conditioning their relationship with nature and impact on it, and seeks the welfare of both".(p.83).

Chantita, et al. (2007), affirm that society must be educated so that it can live better in a healthy environment that does not lead to a crisis of people in their relationship with their environment, but that this education promotes values and everything that concerns the integrity of the human being, contributing to the rescue of the environment.

It is important to emphasize that environmental education plays a fundamental role in the coupling process to understand the concepts of what comprises to reduce, recycle and reuse, considering that through education, the educational community can understand what this entails in society according to the environmental issue and the events that are occurring, for this reason, emphasis is placed on

environmental education to transform people's behaviors and thus generate new alternatives to protect the environment. Thus, Rengifo, et al. (2012) state that, "environmental education should be imparted to an infinite number of sectors and using a great variety of didactic resources. (p.3).

The primary role of teachers is to offer an integral education, that is why they emphasize on this, to make students build an environmental culture, to be able to face problems. This has caused people to concentrate on a vicious circle such as consumerism, due to the excessive consumption of things that are often unnecessary, for this reason it is of vital importance to raise awareness and environmental culture, As it is known, it is key to emphasize that in order to obtain an ecological balance, the three R's (reduce, reuse and recycle) must be emphasized. In this case, emphasis is placed mainly on the concept of reducing, so that the students and the community in general understand that this can prevent excessive pollution of the environment. At this point (Lara, 2008) states that, "if we want to readjust the ecological triangle we must promote as the first "R" the reduction of consumption directly. We are talking about promoting conscientious consumption, environmentalized consumption, consumption that accounts for environmental costs." (p.47).

With this caveat in mind, it is essential to promote environmental education in order to understand the reality and from there to be able to develop different strategies. According to Otero (2001) "reuse is not generally encouraged as much as recycling" (p.142). For this reason, students should be encouraged to reuse recyclable materials. However, it should be noted that the students propose new ideas on how to use natural resources in an appropriate manner, which is a favorable aspect that enables the implementation of this project, since their learning would be benefiting, since it involves the creativity and magic of the learner, at the time of providing a new use for recyclable materials, which is often called as waste, therefore they wanted to get the best potential of these elements and thus transform their corner of knowledge about science and all its components.

In relation to the construction of the bottles, and in accordance with the above, it should be noted that the intention is to encourage the investigative spirit in students, since this issue is one of the aspects that most concerns society, because the school is only limited to

teach and not to educate for life, in other words the school must promulgate science as stated by Ruiz, (2017) "the best way to learn science is by doing science" (p.1), because there is no better alternative that works in an educational environment, that teachers instruct their students to create science, starting from a problem that arises in their environment, which in this case is the inadequate use of waste produced in the school.

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