Brazilian Journal of Development

Birdwatching: pedagogical trail on the story of animal trafficking

Passarinhando: trilha pedagógica sobre a história do tráfico de animais

DOI:10.34117/bjdv6n7-691

Recebimento dos originais: 27/06/2020
Aceitação para publicação: 27/07/2020

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ABSTRACT
Involving animals in environmental education themes is a playful strategy that contributes to the formation of a conservationist awareness in children. Activities with birds arouse children's interest, stimulate dialogues about biodiversity, and assist in the construction of humanistic values focused on the environment. The present study reports on a pedagogical experience that consisted of a trail called "birdwatching", which integrated characters and taxidermized birds in a story about the traffic of wild animals. The story was presented to children from the 3rd year of elementary school, from Objetivo Alto Padrão school, in the municipality of Franca, SP, Brazil. With the proposed activity, it was realized that environmental issues are of interest to children. Furthermore, the playful approach used created a feeling of belonging to the environment, facilitating the teaching-learning process through the active participation of students.

Keywords: environment, birds, educational trail.

RESUMO
Envolver animais em temas de educação ambiental é uma estratégia lúdica que contribui para a formação de uma consciência conservacionista em crianças. Atividades com aves despertam o interesse infantil, estimulam diálogos sobre a biodiversidade e auxiliam na construção de valores humanísticos voltados ao meio ambiente. O presente estudo relata uma experiência pedagógica que consistiu em uma trilha chamada "passarinhando", a qual integrou personagens e aves taxidermizadas em uma história sobre o tráfico de animais silvestres. A história foi apresentada à crianças do 3° ano do ensino fundamental, do colégio Objetivo Alto Padrão, no município de Franca, SP, Brasil. Com a atividade proposta percebeu-se que questões ambientais são de interesse do universo infantil. Ademais, que a abordagem lúdica empregada criou um sentimento de pertencimento ao meio ambiente, facilitando o processo ensino-aprendizagem por meio da participação ativa dos estudantes.

Palavras-chave: ambiente, aves, trilha pedagógica.

1 INTRODUCTION

The humanistic training must involve environmental education, which can act as a tool for inserting the individual in projects related to biodiversity conservation. The Law 9.795, of April 27, 1999, defines environmental education as the processes through which the individual and the community build social values, knowledge, skills, attitudes, and competencies aimed at the conservation of the environment. To carry out successful activities in environmental education, it is essential to stimulate perceptions about the environment. This perception can be an activity that embraces the organism and the environment and that depends on the sense organs, that is, that involves sensation or cognition (MARIN, OLIVEIRA, COMAR; 2003).

The opportunity to meet different birds and their vocalizations stimulate and activate sensibility and affective channels in children, facilitating learning (ALVES, 2006) and the creation of conservationist values. School-aged children can learn about nature through a plot, with narratives, well-crafted characters, and interaction with elements of the environment.

The use of a narrative with birds is justified by the high Brazilian ornithological diversity, with an estimated 1919 species (CBRO, 2015). The biomes that stand out the most in terms of richness and endemism of avifauna are the Amazon and the Atlantic Forest (MITTERMEIER et al, 2003). In addition, birds constitute a group of vertebrates considered an indicator of environmental quality. Increasingly, they are becoming the target of studies and protective actions, because of habitat fragmentation and wild animal trafficking, several species are at risk of extinction.

In the neotropical region, Brazil is the country with the highest number of threatened bird species (CAVALCANTI, 1999). Trafficking in wild birds is still an expressive activity in the country (RENCTAS, 2002), with an average of 12 million animals trafficked every year (LAÇAVA, 2000). These are captured in several locations and sold in more than 250 cities, most of them in northern Brazil (RENCTAS, 2002). In this context, it is urgent to develop environmental education strategies in schools, such as pedagogical activity involving birdwatching, which is an important educational tool for environmental conservation (COSTA, 2007). The use of birds in education is a playful strategy, of a formal and sensitizing nature, which teaches about the importance of fauna (TOZONI-REIS, 2006).

As a conservation strategy to protect endangered species (ALVES et al., 2000; MARINI; GARCIA, 2005; SILVA; MAMEDE, 2008), it is necessary to raise awareness among school-age children about concerns related to the social crisis and natural resources (SILVA; MAMEDE, 2008). Knowledge acquired at school, regardless of the type of methodology used (constructivist, collaborative, or participatory), can result in behavior changes, transforming children into critical, autonomous, and ethical individuals (FREIRE, 1996; AMORIM, 2005).

This study aimed at offering a report of experience based on ornithology and the birdwatching simulation, which was applied to elementary school children.

2 METODOLOGY AND DEVELOPMENT

A pedagogical trail simulating birdwatching was carried out with 30 children from the 3rd year of elementary school at Objetivo Alto Padrão school, in the municipality of Franca, SP. To carry out the activity, the children were distributed in groups (n=10/each). A narrative with taxidermized birds from the Cerrado and Atlantic Forest biomes was presented to the children. The taxidermized

birds used in this study belonging to the UNIFRAN Zoology Laboratory. Dramatic characters conducted a story of environmental education and wildlife trafficking.

The educational activity was interactive, with the distribution of riddles, so that participants could find a hunter who stole an egg from one of the characters. The trail was set up in a wooded area, located on the UNIFRAN campus, simulating an enchanted forest. Taxidermized birds and characters from the narrative were strategically distributed along the trail to conduct the story.

At the beginning of the trail, the children were welcomed by the forest fairy (Figure 1A) who explained the place and the species that lived there. The children were invited to enter the forest, being able to get close to the birds (Figure 1B), and received information about feeding, behavior, and ecological importance of the exposed species. Through a hidden speaker, the bird vocalizations were presented (Figure 1C), so that the children could discover the species and establish associations with the animals seen.

During the trail, a character characterized as a mommy bird went to meet the children (Figure 1D), welcoming them and giving information about their species (red-and-green macaw; *Ara chloropterus*). Then, a man approached the group of children and removed an egg from a nest (built with shavings). The mommy bird told the children that her egg was stolen.

A character characterized as a messenger bird, who watched the scene from a distance, approached and informed the children that the man was a hunter who was trafficking forest animals (Figure 1E). She asked the group for help to find the hunter, retrieve the mommy bird's egg, and free other animals that had been imprisoned. The children accompanied by the mommy bird and the messenger bird roamed the forest in search of the hunter. Several riddles and footprints were distributed on the trail to take the children to the hunter.

At the end of the trail, the children found a hut in which the hunter was hidden. Inside were cages containing toys representing animals from Brazilian fauna, in addition to the mommy bird's egg. A character characterized as environmental police appeared, arrested the hunter, and helped the children in releasing the animals (Figure 1F). Upon returning the egg to the mommy bird, the children received bird origamis as a thank you (Figure 2). The environmental police explained the importance of biodiversity conservation.

3 FINAL CONSIDERATIONS

The pedagogical trail showed that issues of an environmental nature are of interest to the children's universe. Furthermore, the playful approach used, with the active participation of children, aroused a feeling of belonging to the environment, facilitating the learning process, as previously observed by Costa (2007).

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The story about trafficking in wild animals, involving birds and well-worked characters, sensitized the children about the issue in question. The applied methodology was based on the premise that "the human being is at the same time rational, affective, psychic and social; therefore, knowledge must recognize this multidimensional nature" (MORIN, 2000).

The use of birds in the narrative, in addition to the ecological importance, is due to the fascination they awaken in humans. Activities in birdwatching, combining education, conservation, and the exhibition of photographs, are becoming increasingly popular among adults and children.

The results observed in this work, based on children's participation and reaction, are added to Costa's (2007); Vieira-da-Rocha and Molin (2010); and Sepini (2010), showing that practical approaches, with stories about animals, favor the teaching of environmental education, enabling the absorption of conservationist knowledge and learning about good ecological practices.

Figure 1. Drawing illustrating the pedagogical trail carried out with the children. In A, children are received by the forest fairy character. In B, children can see taxidermized birds, and in C, hear the birds' vocalizations. In D, the mommy bird tells the children that her egg has been stolen. In E, the messenger bird leads children in the search for the egg. In F, the hunter is found and arrested for animal trafficking.

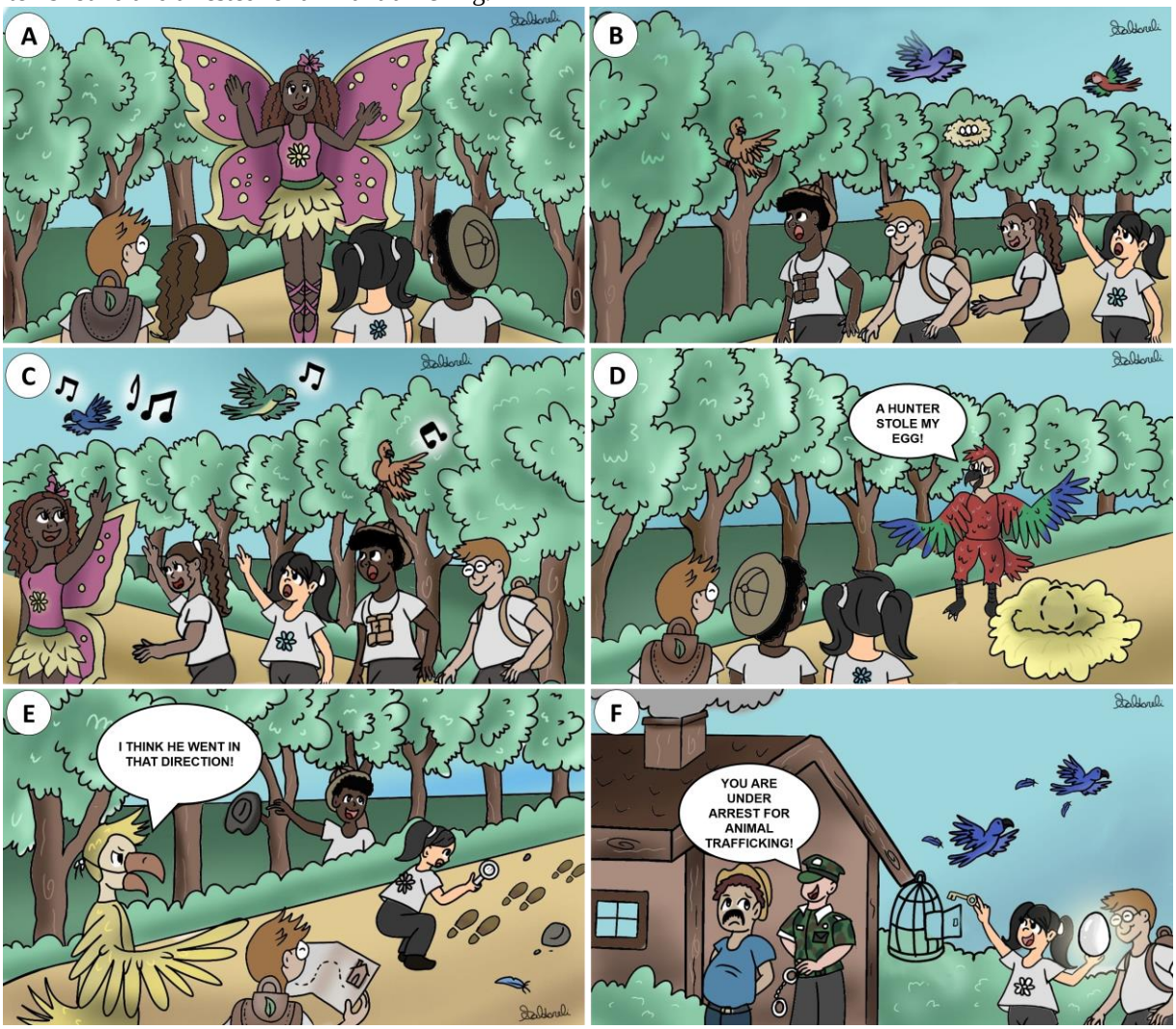

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Figure 2. Origami distributed to children who participated in the ecological trail.

ACKNOWLEDGMENTS

This study was financed in part by the "Coordenação de Aperfeiçoamento de Pessoal de Nível Superior" – Brasil (CAPES) – Finance code 001.

We thank the "Comitê de Integração com o ensino Básico" – UNIFRAN and ACEF S.A. We also thank the students Jéssica Cristina de Barros, Suellen Maia Rodrigues, and Jennifer dos Santos Diniz.

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