

COMMUNITY GARDEN AND ENVIRONMENTAL EDUCATION IN MORRO DO HORÁCIO (FLORIANÓPOLIS – SC): KNOWLEDGE SHARED IN AN UNIVERSITY EXTENSION PROJECT

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Abstract

This paper reports a component of the UFSC extension project entitled “Community Garden and Environmental Education in Morro do Horácio”, carried out at the Beneficent Educational and Assistance Association ‘Gente Amiga’ (Florianópolis/SC), between 2018 and 2020. Among the activities developed, there is an emphasis to the implementation of a vegetable community garden, actions of Agroecology, Permaculture and Environmental Education with the children and adolescents served by the Association and with the community in general. It was noted the importance of acknowledgement, approximation, and exchange of popular and academic knowledge, reinforcing the commitment of the University to adjacent communities and the role of the university extension.

Keywords: Pedagogical Garden. Agroecology. Vital Environmental Education.

HORTA COMUNITÁRIA E EDUCAÇÃO AMBIENTAL NO MORRO DO HORÁCIO (FLORIANÓPOLIS – SC): SABERES COMPARTILHADOS NA EXTENSÃO UNIVERSITÁRIA

Resumo

Este trabalho relata parte das experiências do projeto de extensão da UFSC intitulado “Horta Comunitária e Educação Ambiental no Morro do Horácio”, realizado na Associação Benéfica Educacional e Assistencial Gente Amiga (Florianópolis/SC), entre 2018 e 2020. Entre as atividades desenvolvidas destaca-se a implantação de uma horta comunitária, ações de Agroecologia, Permacultura e Educação Ambiental com as crianças e adolescentes atendidos pela Associação e com a comunidade em geral. Percebeu-se a importância do reconhecimento, aproximação e troca de saberes populares e acadêmicos, reforçando o compromisso da universidade com as comunidades adjacentes e o papel da extensão universitária.

Palavras-chave: Horta Pedagógica. Agroecologia. Educação Ambiental Crítica.

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Resumen

Este trabajo relata una parte de las experiencias del proyecto de extensión de la UFSC titulado “Huerta comunitaria y Educación Ambiental en el Morro do Horácio”, realizado en la Asociación Benéfica Educacional y Asistencial Gente Amiga (Florianópolis/SC), entre 2018 y 2020. Entre las actividades desarrolladas con los niños y adolescentes atendidos por la Asociación y con toda la comunidad se destacan: la implantación de una huerta comunitaria, acciones de Agroecología, Permacultura y Educación ambiental. Se percibió la importancia del reconocimiento, la aproximación y el intercambio de saberes populares y académicos, reforzando el compromiso de la universidad con las comunidades adyacentes y el papel de la extensión universitaria.

Palabras clave: Huerta Pedagógica. Agroecología. Educación Ambiental Crítica.



INTRODUCTION

The current technological advancement level and the consequent increase of the production and consumption capacity of the globalized world go together with environmental degradation, which directly impacts biodiversity and life quality of human beings (DIAS, 2004). It is urgent, in this scenario, the development of Environmental Education (EE) practices that contribute to a transformation of values and attitudes towards environmental¹ awareness and conservation (CARVALHO, 2005; COSTA, 2011).

In Brazil, although EE is guaranteed in all levels of education in article 225 of the Brazilian Federal Constitution (BRASIL, 1988), it has been worked on in a very incipient way, despite its transversal orientation in school contents. Furthermore, EE is not restricted to schools, and it should also take place in other educational spaces and society. The intensification of environmental degradation and the drastic loss of biodiversity makes this challenge more complex. However, even with EE contributions to change the picture of increasing socio-environmental degradation, obviously this alone is not enough (JACOBI, 2003).

According to Jacobi (2003), “the reflection on social practices, in a context marked by the permanent degradation of the environment and its ecosystem, involves a necessary articulation with the production of meanings about environmental education.”

Thus, we focus on the importance of a critical approach to Environmental Education, which must transcend the preservationist perspective or teaching “good behaviours”, advancing towards an emancipatory vision that promotes and strengthens democratic and cooperative practices, citizen participation, the understanding, and the transformation of social reality (JACOBI, 2003; DICKMANN; CARNEIRO, 2012; PINTO; GUIMARÃES, 2017).

According to Dickmann and Carneiro (2012), critical EE “implies processes of construction of environmental citizenship, which are political processes that transform concrete realities.” Therefore, it is necessary to develop educational processes that allow knowledge about reality, but not from a perspective of critical-reproducing reading, but rather a reading of critical-transforming reality (TREIN, 2012). However, “it is not enough for criticism to be made only as a denial of the existing, but it is important that it also be done as an announcement of another

¹ In this article, we chose to use the term “ambiente” instead of “meio ambiente”, in Portuguese, even in indirect quotes. Both words mean environment in English. However, “meio” also means half. According to Dickmann and Carneiro (2012), it is necessary to overcome the false idea of the dichotomy between society and nature, being nature (ambiente) the half (meio) to be preserved, because there is no society outside nature. As the human being is part of nature, anthropic action must overcome the “denial of nature”, given the inseparability of human being-nature (MACHADO; MACHADO-FILHO, 2014).

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direction”, as “we cannot dispense with a critical environmental education that contributes to transforming social relations of production towards another civilizing project” (TREIN, 2012).

Hence, we approach the EE discussion with Agroecology, as it contributes to the necessary restoration of metabolism between human beings and nature, in the sense of overcoming the exploitation of natural resources (GAIA; JANATA, 2020).

Knowing that the university must be one of the links among spaces of knowledge production and different groups and social actors (PILON, 2005), this articulation is needed for the democratization and dissemination of Environmental Education in communities, as the appropriation of environmental knowledge can contribute to preserving the environment we live in and depend on. Such articulation can take place through various activities linked to university extension, which is an essential part of the undergraduates’ training, due to academic, professional, and personal growth, in addition to stimulating praxis (theory-practice reflection) and interaction with the social (SANTOS *et. al.*, 2016).

Therefore, this work is the result of an extension project of the Federal University of Santa Catarina (UFSC) entitled “Community Garden and Environmental Education in Morro do Horácio.” It has started in 2018 with the organization of a garden space on a terrain located near the Charitable Educational and Assistance Association ‘Gente Amiga’, in the community of Morro do Horácio (Florianópolis/SC). The work was structured based on the elements that compose the interaction among teaching, research, and extension, seeking to bring together popular knowledge about garden management and planting with scientific knowledge, contributing to comprehensive training for children and teenagers served by the Association, as well as to the UFSC students and the community in general.

Creating a pedagogical garden emerged as a demand from the ‘Gente Amiga’ Association and the community, especially the students, who longed for having a training and leisure space that offered outdoor activities, in addition to the Physical Education classes developed on a small sports court. In dialogue with the staff of the Association, work and action planning methods were proposed for the integral development of children and adolescents and their families, in their social context, ensuring practical, reflective, and participatory activities in the peripheral urban context. This action is aligned with the Political Pedagogical Plan (PPP) of the Association, which proposes activities that promote well-being, physical, mental, emotional, and intellectual development, considering children and adolescents as agents that transform social conditions in their communities (GENTE AMIGA, 2020).

Consequently, this work aims to describe and analyze the actions taken by the extension project, which aimed to implement a space for interaction and leisure integrated with a green

community area at 'Morro do Horácio', through educational and practical actions with students of the 'Gente Amiga' Association, their families, and the community in general.

MATERIALS AND METHODS

The extension project was developed at the Charitable Educational and Assistance Association 'Gente Amiga', located in 'Morro do Horácio' (Florianópolis, Brazil). 'Morro do Horácio' is one of the communities that comprises the Massif of 'Morro da Cruz', in the central region of the city, where many families live in situations of risk and social vulnerability. The 'Gente Amiga' Association is a non-profit entity governed by private law and registered in the Municipal Council for Social Assistance and of Children and of Adolescents. It was founded in 2004, and it is as an after-school activities center serving approximately ninety children and teenagers, from seven to eighteen years old. This Association is becoming a reference for local families due to the bonds established within the community, the provision of social and educational assistance.

Starting in 2018 until now, the project has the participation of extension fellows of the Geography course and volunteer students from several UFSC undergraduate courses, under the advisor's coordination.

For the development of activities, two integrated action methods were adopted:

- i. Area Environmental restoration and revitalization: collection of local data on the space's natural processes, planning using Permaculture techniques, implementation and maintenance of an agroforestry system and agroecological bed by planting vegetables, actions to combat erosion and recovery of degraded areas;
- ii. Awareness and Environmental Education: implementation of educational and cultural activities and knowledge exchange with the community through participatory workshops, courses, experiences, and joint efforts, as well as the reception of school groups, university community and other interested parties.

The plot of land assigned for the garden is across from the Association, in a high slope area (Figure 1). As the vacant lot had no social function, there were previously some occupation attempts to implement improvised housing. For years the area was used as a dump for bulky garbage, and occasionally this garbage was burned. The Mombasa grass was also a concern because of the presence of venomous animals.

Figure 1 – Terrain view across the Association.



Source: Project Archives, 2018.

RESULTS AND ANALYSIS

At the beginning of the activities, in 2018, we cleared the terrain, providing an adequate end to its waste, and weeded the area. With the constant participation of UFSC Geography students, we sought to understand the sedimentary and hydrological flows dynamics in the terrain, requiring the construction of drainage ditches. In the sloping parts of the land, we planted native and creeping species to protect the soil from river erosion, and riparian vegetation on the stream banks, which is located at the far side of the terrain, aiming to protect the area. We also delimited the paths and built stone steps in the area.

For the project to fulfil its objective of bringing together the community actors, people could access the garden even when the Association was closed, as it is an open space, and the project was not restricted only to class time. We sought, then, to bring the students' families together by presenting proposals for joint efforts, introducing approaches to environmental awareness and the importance of preserving that space. Besides being a community garden, it could also be a space for coexistence and leisure. The strengthening of the bonds and the use of the area by the external community became the best way to guarantee the preservation of the space, awakening a feeling of belonging.

The construction of a composting pile to incorporate kitchen organic waste (Figure 2) was a milestone in the work progress, but the expansion of plant beds only took place after the incorporation of two loads of compost and litterfall donated by the City's maintenance and cleaning company.

Figure 2 - Students composting at 'Gente Amiga'.



Source: Project Archives, 2020.

A dynamic that greatly enriched and facilitated the beginning of activities was the participation of a scholarship holder that was also a previous IT educator of the Association. This experience contributed to the project due to his prior bonds with the children and adolescents, and through researching activities and texts production developed in the IT classroom. They had addressed topics such as solid and organic wastes and their impacts, the differences between conventional agricultural production and Agroecology (applying its principles in the management of seedbeds), researching, and discussing the importance of creole seeds, consumption, water, local fauna, principles of Permaculture, the construction of garden maps correlating the sun's position for better distribution of species to be planted in the area, etc.

Students and fellows had developed activities in the field, focusing on awareness and Environmental Education, implementing, and managing six beds for vegetables' cultivation that were used in meals of the Association (Figure 3). A seedlings' nursery was built, fruit trees were planted and the fields were prepared for crops of great nutritional value (cassava, corn, wheat, sweet potatoes, and yam). Thermophilic composting piles were also implemented to manage organic wastes originated from meals, besides four vermicomposting bins (worm farm) for educational purposes. They also built a bed for medicinal herbs, and a spiral garden made of stones for spices and medicinal herbs.

Figure 3 – Project actions.



Source: Project Archives, 2018-2019.

In 2018 and 2019, activities were executed with the students' parents, or their legal guardians, and the community. Joint efforts were carried out to build new plant beds. They discussed topics such as environmental awareness, involving various themes of erosive dynamics in hills, rudimentary cesspits, and their impacts on streams and on the sea, solid waste management on an island, composting, the good practices of the Revolution of the Buckets case (that took place in the Monte Cristo neighborhood in Florianópolis), medicinal plants, the redefinition of public spaces, and cooperative dynamics.

Bamboo pyramids and tire swings were also built in the space, with the participation of adolescents in the construction of these ecological toys for leisure time.

Periodically, evaluations and adjustments were developed in the planning of activities, as, for example, it became evident that the plans worked better in activities with the morning groups. In the afternoon groups, it was necessary to adopt more playful educational practices and games, harmonizing activities and free time, understanding that free time in nature is also pedagogical.

As a result of the UFSC Geography non-compulsory subject "Introduction to Permaculture", a field activity was carried out with university students in the Association's vegetable garden, in classes on "Invisible Structures", in each semester of 2018 and 2019. In 2018, the young people of the Association acted first as tour guides for university students, mediated by the scholarship holders, and later as mediators of space management activities, overseeing corn planting, compost management and vegetable harvesting.

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In the neighborhood, partnerships were strengthened with the community leader of the Morro do Horácio Residents' Association, with community leaders and other actors who brought and exchanged seedlings, seeds and knowledge throughout the project.

The activities had repercussions in the mass media of Florianópolis, having been featured in a newspaper cover, an article on a journalistic website and a television program.

The university project students also joined other actions beyond the 'Gente Amiga' Association, showing the project's repercussion and the importance of the themes for the broader community. Answering a demand presented by Casa São José, a non-governmental organization located in the Serrinha community, near Morro do Horácio, during the 2019 UFSC students' strike, some joint efforts were executed to implement a vegetable garden in that institution, such as clearing the ground and terracing, implementing drainage channels, planting species of ecological interest. The project experience also reached specific demands for other educational spaces, such as the workshops held in partnership with the Teaching Initiation Scholarship Institutional Program (PIBID-UFSC) on Urban Agriculture and Environmental Education, held at the Américo Vespúcio Municipal Basic Education School (São José, Santa Catarina, Brazil).

Due to the COVID-19 pandemic, since March 2020, and the suspension of face-to-face activities in the education sector, the actions of the project were adapted to the remote format, through communication with families in social networking applications. Activities were sent weekly to students, and meetings were scheduled via video call for periodic monitoring. First, because of the thematic urgency, the meetings addressed sanitary and hygienic care to prevent the spread of the novel coronavirus. Afterwards, the remote activities discussed environmental themes, stimulating creation, playfulness, critical thinking, logic, and more, emphasizing activities of manufacturing toys from recycled items, building a homemade mini-composter, germinating beans, and potatoes, etc. Some thematic videos about EE were also made, and at other times, along with the pedagogical team, videos focusing on good mental health practices, a latent theme in this pandemic time.

Throughout 2020, the Association prepared and distributed food parcels, hygiene products and face masks to the families, with the aid of students from the extension project. "Clotheslines of Solidarity" were implemented to distribute warm clothing, blankets, and duvets in good condition, donated and raised with the help of students and the academic community.

The garden's management was also followed monthly, respecting social distancing protocols. In the same format, planting activities and management of the green area were carried out fortnightly. It counted with the participation of students and some family members,

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emphasizing the planting of vegetables, tubers, corns, pumpkins, legumes, and native tree seedlings (donated or germinated by the scholarship holders in their homes), aiming to implant agroforestry nuclei.

External partnerships continued to take place during the pandemic period. In 2020, the joint efforts at Casa São José were also developed, with a few participants and keeping social distance. They planted native species seedlings and built a terrain scale model to assist in the planning of activities. Also in partnership with the UFSC Agroecology Nucleus of the Experimental Farm of Ressacada, a fellow of the project contributed to the training activities in the “Solidarity Agroecological Plantation”, another UFSC extension project that aims to produce and distribute agroecological food for families in social vulnerability during the pandemic.

It can be observed that over the project's 3 years, that practices of Environmental Education while re-signifying a degraded space and transforming it into a didactic green area, also demands planning. Restrictions are not only regarding practical management activities, as it also involves the inclusion of students in this action, making it a space for mutual teaching and learning, a space for interpersonal exchanges. It also contributes to rethinking idle public spaces, as in the present case: where before it was just an irregular garbage dump, it has become a place for healthy interactions and outdoor activities.

Based on this experience, we agree with Dickmann and Carneiro (2012) on the need for EE to assume the political dimension of the educational act, qualifying it as a strategy for intervention and social transformation, in the necessary overcoming of the society-nature dichotomy, based on the contextual reality of students and educators. For the authors, “the changes and transformations in the world are related to pedagogical moments in which the subject-students are formed in action-reflection, as citizens politically aware of their living spaces.”

And, dialoguing with Jacobi (2003), the development of the garden and related actions allowed the construction of an educational practice capable of articulating and simultaneously tackling environmental degradation and social problems. Examples of this were the discussions about a healthy diet, the right to the city, the use of collective public spaces, the responsible management of natural resources and waste, the recovery of degraded areas, and more. Thus, in addition to the qualification of the academic training of UFSC students, the project aimed to contribute to democratizing important knowledge for that community and reality.

FINAL CONSIDERATIONS

Since the beginning of the educational activities, children, teenagers, their families, and the community were active participants of the Association. In addition to creating the green area, they had their own demands. They planned and dreamed together, with many exchanges of knowledge and the construction of new knowledge.

Through this project, we observed that implemented practices constituted the base of other EE projects in other spaces, as well as the role of environmental educators developed by university students being used in other educational spaces. Thus, the initiative, in addition to “bearing fruits”, is already germinating in other spaces, reinforcing the importance of university extension activities in the training of undergraduates.

Despite the current world environmental scenario, with its accentuated loss of biodiversity, the enthusiasm shown by the students through their practices, speeches, knowledge, and criticisms, reinvigorated this current topic and the importance of humans reconnection to nature.

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