

**TITLE.**

Chandas Urbanas: Design of an Interactive Digital Book to Promote Responsible Coexistence

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**RESUMEN**

El presente proyecto propone el diseño de un libro digital interactivo e ilustrado dirigido a niños y niñas de 8 a 12 años en Bogotá, con el fin de comunicar de manera clara y atractiva la importancia de la coexistencia responsable con los animales urbanos. En la ciudad, especies como palomas, ratas, perros y gatos callejeros suelen ser percibidas negativamente, lo que genera actitudes de rechazo y maltrato. Este fenómeno evidencia una falta de educación ambiental que impide reconocer su papel en el ecosistema urbano.

El proyecto adopta una metodología mixta, aplicada y exploratoria, basada en el modelo del doble diamante del diseño y el enfoque Design Thinking, para desarrollar una propuesta educativa visual e interactiva que despierte empatía y conciencia ecológica. A través de narrativas visuales, historias y actividades dinámicas, el libro busca fortalecer valores de respeto y responsabilidad ambiental desde la infancia. Como resultado, se plantea una herramienta pedagógica alineada con el ODS 15: Vida de Ecosistemas Terrestres, que promueve la valoración de la biodiversidad urbana y el vínculo entre los ciudadanos y su entorno natural.

**PALABRAS CLAVE**

Animales urbanos, educación ambiental, diseño interactivo, infancia, biodiversidad.

**ABSTRACT**

This project proposes the design of an interactive and illustrated digital book aimed at children aged 8 to 12 in Bogotá, to clearly and attractively communicate the importance of responsible coexistence with urban animals. In the city, species such as pigeons, rats, stray dogs, and cats are often perceived negatively, generating rejection and mistreatment. This reflects a lack of environmental education that prevents recognizing their ecological role in urban ecosystems.

The project follows a mixed, applied, and exploratory methodology based on the Double Diamond model and the Design Thinking approach to develop a visual and interactive educational proposal that fosters empathy and environmental awareness. Through visual narratives, stories, and dynamic activities, the book aims to promote values of respect and responsibility among children. The outcome is an educational tool aligned with SDG 15: Life on Land, contributing to the appreciation of urban biodiversity and strengthening the relationship between citizens and their natural environment.

**KEYWORDS**

Urban animals, environmental education, interactive design, childhood, biodiversity.

## **INTRODUCTION.**

In Bogotá, coexistence with urban animals such as pigeons, rats, stray dogs, and cats has been affected by a negative perception that associates them with dirt or danger, overlooking their ecological role within the city. This phenomenon reflects a social and communicative problem that can be addressed through environmental education and design.

The project *Urban Animals in Bogotá* proposes a digital educational tool to transform this perception, fostering respect and empathy towards urban fauna from childhood. The general objective is to effectively communicate the importance of responsible coexistence through an interactive and illustrated digital book, integrating visual narratives and didactic activities. The methodology is based on Design Thinking and the Double Diamond model, under a mixed (qualitative and quantitative), applied, and exploratory approach.

The most relevant result is the development of a digital pedagogical resource that contributes to the achievement of SDG 15 by promoting the appreciation of urban biodiversity and fostering ecological awareness among new generations.

## **STATE OF THE ART.**

In cities, urban animals play an essential role as indicators of biodiversity and ecological balance, while coexisting directly with people (Pontificia Universidad Javeriana, 2022; Alcaldía de Bogotá, 2025). However, this relationship is often marked by negative perceptions of species such as pigeons, snakes, or rodents, which are associated with dirt or danger (Concejo de Bogotá, 2017, 2024; Vice, 2021; Semana, 2021). These ideas reveal a lack of environmental knowledge and education, especially among children.

Recent studies show that school-aged children are particularly receptive to environmental learning when offered participatory, visual, and interactive resources (Takacs et al., 2023). In this sense, digital books and immersive experiences have proven to be effective tools for fostering empathy and ecological understanding (Chen et al., 2023; Li et al., 2024).

In Bogotá, various projects have addressed the relationship between childhood, fauna, and the environment from complementary perspectives. El Camino de la Tortuga, developed by Idartes in 2024 as part of the Nidos program, is an interactive digital book that allows children to actively participate in the story. Although it is aimed at early childhood and does not focus on urban fauna, its participatory structure inspires Urban Tracks, demonstrating how interactive decisions generate engagement and empathy with animals (Idartes, 2024).

Additionally, the Bogotá Silvestre platform, created by the Observatorio Ambiental de Bogotá (2023–2024), provides educational cards and games about more than 150 urban species. This project offers reliable and contextualized scientific content, though its static format reveals the need to advance toward more interactive experiences. From a design perspective, this insight guides the development of an immersive interface that turns information into exploration and active discovery.

Finally, El Bosque Urbano en la Imaginación de los Niños, carried out by the Bogotá Botanical Garden (2024), involved children aged 4 to 12 in playful and reflective activities about urban nature. Its participatory approach confirms the value of play and imagination in environmental education, enriching the pedagogical dimension of the digital book by incorporating strategies of exploration and emotional learning.

Together, these references demonstrate that Bogotá has made progress in proposals linking childhood, nature, and learning. However, none have yet integrated digital narrative, scientific knowledge, and playful interaction simultaneously. Urban Tracks seeks to fill this gap by combining graphic design, narrative, and interactivity to humanize scientific information and transform children’s perceptions of urban animals—promoting a more respectful and conscious coexistence.

#### **GENERAL OBJECTIVE.**

To communicate the importance of coexistence with urban animals through the design of an interactive and illustrated digital book for children aged 8 to 12 in Bogotá.

#### **SPECIFIC OBJECTIVES.**

1. To research and select information about Bogotá’s urban fauna, highlighting their ecological functions and connection to the city.
2. To design interactive illustrations and graphic content that inspire children’s interest and empathy.

#### **METHODOLOGY.**

The project follows a mixed methodology (qualitative and quantitative), with a non-experimental design and an applied and exploratory orientation.

The Design Thinking method, structured through the Double Diamond model, guides the process in four stages:

1. **Discover:** Documentary research, observation, and interviews to understand perceptions and attitudes.
2. **Define:** Analysis of findings and formulation of the design challenge.
3. **Develop:** Creation of characters, narrative, illustrations, and digital prototype.  
**Deliver:** Validation with users through usability testing and focus groups.

This approach enables the creation of an educational solution that emotionally connects with children and promotes respect toward urban animals.

#### **RESULTS.**

The main result is the design of an interactive digital book that combines illustration, narrative, and didactic activities to teach children about the importance of coexisting with urban animals. Initial user tests demonstrated an increase in understanding and empathy toward these species, showing the potential of design as an educational and social change tool.

The final product contributes to **SDG 15: Life on Land**, by encouraging the conservation and appreciation of biodiversity within the urban environment.

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