

Research Reports

Iguanas: a project for the strengthening social skills of children of Transition B to Instituto Tecnico Empresarial el Yopal

Las iguanas: proyecto para fortalecimiento de habilidades sociales en niños de Transición B, Instituto Técnico Empresarial El Yopal

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Abstract

This research experience was carried out within the framework of the ONDAS- Early Childhood program, in agreement with the Universidad Autónoma de Bucaramanga- UNAB. Its purpose was to strengthen social skills (empathy, collaborative work, listening) in children, through the exploration of the iguanas of the Instituto Técnico Empresarial el Yopal- ITEY. Taking advantage of the resources of the environment, the curiosity of preschoolers (5-6 years old) and evidenced behaviors, such as disruptive behaviors among peers and with nature, the need arises to generate strategies of approach, recognition, care and change in the perception of iguanas; as well as the management of children's own emotions, the development of thinking and scientific skills from an early age. This qualitative research under the action-participation approach highlights the possibility of interacting with iguanas and promoting environmental conservation, as well as restructuring pedagogical practices by proposing new ways of connecting with knowledge and emotions to generate holistic scaffolding from the transition grade; it is also emphasized that coexistence and social skills are learned, strengthened and structured from practice and must be guided and mediated by adults who accompany the processes.

Keywords: activity learning; participatory research; social skills; scientist thinking; teaching practice.

Resumen

Esta experiencia investigativa fue llevada a cabo en el marco del programa ONDAS- Primera infancia, en convenio con la Universidad Autónoma de Bucaramanga- UNAB. Su propósito fue fortalecer las habilidades sociales (empatía, trabajo colaborativo, escucha) en los niños, a través de la exploración de las iguanas del Instituto Técnico Empresarial el Yopal- ITEY. En aprovechamiento de los recursos del entorno, la curiosidad propia de preescolares (5-6 años) y comportamientos evidenciados, como conductas disruptivas entre pares y con la naturaleza, se suscita la necesidad de generar estrategias de acercamiento, reconocimiento, cuidado y cambio en la percepción de las iguanas; así mismo la administración de emociones propias de los menores, el desarrollo del pensamiento y habilidades científicas desde tempranas edades. Esta investigación cualitativa bajo el enfoque investigación acción participación (IAP) resalta la posibilidad de interactuar con las iguanas y fomentar la conservación del medio ambiente, así como reestructurar las prácticas pedagógicas proponiendo nuevas formas de conexión con el conocimiento y las emociones para generar andamiajes holísticos desde el grado transición; se recalca también que la convivencia y las habilidades sociales se aprenden, fortalecen y estructuran desde la práctica y deben estar orientadas y mediadas por los adultos que acompañan los procesos.

Palabras clave: aprendizaje activo; investigación participativa; habilidades sociales; pensamiento científico; práctica pedagógica.

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Data availability: The development of social skills is a fundamental part of the comprehensive education of children from the earliest stages of learning, as these skills lay the foundations for solid and secure relationships, which will enable them to face everyday challenges throughout their lives. In this sense, skills are understood as acquired competencies that can be continuously improved and developed, as pointed out by Pujantell Obiols and Escales Sánchez (Pujantell Obiols; Escales Sánchez, 2024).

In this context, an educational proposal entitled "Iguanas: a project to strengthen social skills in transition B children" has been developed at the Instituto Técnico Empresarial El Yopal. It uses interaction with these animals to enhance social skills, while promoting the care and conservation of local wildlife.

The research was based on a qualitative approach to observe and understand educational experiences (Rojas-Gutiérrez, 2022). Participatory Action Research (PAR) was applied, defined by Fals Borda (Fals Borda, 1999) as a collaborative process that promotes reflection and continuous improvement through active participation. The children participated through activities based on play, art, music, literature, and exploration of the environment. The lead teacher led the study, using direct observation recorded in logs during the four phases of the PAR, which allowed the process to be documented and behavioral changes linked to the solution of the problem to be captured.

The research showed that teaching respect and responsibility towards iguanas and their environment promotes harmonious coexistence with local wildlife and contributes to SDGs 4 and 15, which promote inclusive education and biodiversity protection. It was observed that negative attitudes in the environment generate reckless behavior through vicarious learning (Flores; Ortiz-Espinoza, 2023), highlighting the importance of fostering models that promote tolerance and respect. In addition, students demonstrated collaborative work by organizing tasks to care for the habitat and developed active listening skills, respecting diverse opinions during field activities. Work carried out at ITEY, Yopal-Casanare, Colombia.



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INTRODUCTION

Children entering the transition grade at the Instituto Técnico Empresarial El Yopal- ITEY (ITEY) have a range of knowledge acquired through their personal experiences, interactions with others, and cultural experiences, as noted by the Colombian Ministry of Education- MEN (Ministerio de Educación Nacional, 2017). For this reason, the presence of animals from the region in the institution, especially iguanas, arouses curiosity in children, evidenced by the interest they show when they see them roaming the preschool facilities. Due to their desire to explore, their lack of knowledge, and their fear of iguanas, children engage in behaviors that affect the animals' integrity by throwing stones and objects at them, causing them harm.

With a view to addressing this issue and promoting not only the care of iguanas but also meaningful learning, the project "The World of Iguanas" was established. It sought to strengthen social skills (empathy, collaborative work, and listening) in children in the transition grade B at ITEY through the exploration of these animals. It was then identified that meaningful learning is that which occurs in the same environment where the subject develops, linking, modifying, and accommodating prior knowledge and new knowledge, facilitating personal and social changes and changes in values, thus generating new forms of interaction with the child's thoughts and the social and real world. Thus, Ausubel (Ausubel, 1976) established that learning is truly meaningful when it is related to pre-existing concepts and is retained in long-term memory. The student actively participates in their own learning and in the process of assimilating new ideas. According to this author, the cognitive structure and the knowledge acquired are consistent with each other, which allows learning to develop in accordance with their previous structures. These situations were addressed during the development of the activities, contributing to the strengthening of social skills.

In this regard, it is important to recognize that preschool child development (ages 4 to 6) moves between the uniqueness of their experiences, their different rhythms and styles, and the transformations that are part of common processes. It is important to note that this stage of child development fosters social and cognitive skills that become the basis for their intellectual and social growth (Osorio; Puentes, 2023), thus establishing it as the learning period in which children acquire the basic skills to interact in the world in which they live. In response to the mistreatment that children show towards iguanas, the aim was to enhance social skills such as empathy, understood as understanding the emotions and needs of oneself, one's peers, adults, and animals; respect for the differences between people and animals, promoting in children the care and conservation of regional fauna through active listening, understood as "a conscious, voluntary act, whose purpose is to understand the other" (Torralba, 2009), constituting an essential component for effective communication.

BACKGROUND AND FRAME OF REFERENCE

In this commitment to learning through conservation and species care, the project focused on green iguanas, of which Coborn (Coborn, 2004, p. 57) notes that "With increased human pressure, thousands of hectares of their habitat were destroyed." It is therefore recognized that these "saurians" (a generic species of iguanas and other reptiles) have been forced to occupy urban spaces for the conservation of the species, which leads to an interrelationship between humans and these species in an environment that, due to the climate of the city of Yopal and the environmental conditions of the educational institution, has facilitated their development. Ramos and Rodríguez (Ramos Roca; Rodríguez Castañeda, 2019) acknowledge that, although this species is not threatened, it is being overexploited in some regions of the country. As a result, the iguana has not been declared at risk in species conservation lists, but significant declines in population size have been reported in some areas.

Due to this need for coexistence between species and preservation of fauna and flora, the strengthening of children's cognitive skills was enhanced, understood as the process by which they learn to reason, classify objects, solve simple problems, and understand cause-and-effect relationships, as proposed by Herrera Clavero (2003, p. 3). Creativity and curiosity were strengthened, since at this stage it is essential for students to explore their environment, ask questions, and show interest in learning and in the conservation of native species, confirming

the proposal of the MEN (Ministerio de Educacion Nacional, 2017, p. 93) when it states that in transition grade children “their interest in the natural and animal world intensifies, which is why they are concerned about how to act and care for these living beings,” thus proposing an opportunity to promote ecological awareness and establish knowledge and learning based on the students’ own curiosity and stage of development.

In this regard, Piaget, J. and Inhelder (Piaget; Inhelder, 2016, p. 25) state that “Child psychology cannot, therefore, be limited to biological maturation factors, since the factors to be considered also depend on practice or acquired experience, as well as on social life in general.” Thus, through interaction with the environment and particularly with iguanas, cognitive development is structured and allows not only for knowledge through experimentation but also for creativity. In this regard, Trillas (Trillas, 2018, p. 21) states that “The importance of creativity is not new. It has been the driving force that has led societies toward material, artistic, and intellectual progress.” Seen in this light, creativity and curiosity are not only cornerstones in the development of other skills in children, but they must also be provided with environments that allow them to explore, enrich their observations, and give them space to express their experience in the creative development of their own ideas, imaginations, and representations of the world.

Alongside psychological and intellectual development, social skills are also observed, which Caballo (1997, p. 17) defines as:

[...] a set of behaviors exhibited by an individual in an interpersonal context, expressing their feelings, attitudes, desires, opinions, or rights in a manner appropriate to the situation, respecting those behaviors in others, and generally resolving the immediate problems of the situation while minimizing the likelihood of future problems.

Therefore, their development is encouraged from early childhood education onwards, as they facilitate interpersonal relationships, increase self-esteem and self-concept, thus establishing patterns for interpreting the world and, consequently, for interacting with peers and the environment, becoming the pillars of peaceful conflict resolution, the development of communication in different languages and forms of expression, and the intrinsic factors that influence human and school coexistence, as proposed by the MEN (Ministerio de Educacion Nacional, 2014f) for monitoring the comprehensive development of children in early education. Therefore, social skills foster empathy, the development of social awareness, teamwork, and respect, both for differences and for the recognition of nature and culture as aspects intrinsic to human beings and, therefore, developable in the various learning processes proposed in early childhood education.

From this point of view, skills that are learned can also be improved, according to Escales and Pujantell (Pujantell Obiols; Escales Sánchez, 2024, p. 17) “Specific training can be planned for the skill or skills that need improvement.” Therefore, it is feasible to develop activities that allow for the identification, recognition, management, and evaluation of the components of social skills: physiological, behavioral, and cognitive, correlating the development of skills and the components of learning.

In this sense, the physiological components identified in the social skills of children in transition correspond to the identification of physical signs of responses to thoughts that arise in situations, such as increased heart rate, sweating, and “goosebumps” in response to events involving expectation, curiosity, or anxiety. The stage of recognizing these components through observation also involves determining what the students themselves identify as stimulating for them, particularly encountering iguanas in the hallways and courtyards of the transition area. In this sense, it should be noted that observation is “a way of accompanying children. Observing does not only mean “seeing from a distance,” but also involves knowing how to participate in the different moments of the day” (Ministerio de Educacion Nacional, 2014f, p. 25).

This is how we move from the physiological component to the behavioral component, which includes nonverbal communication, paralinguistic communication, and verbal communication. These components, evident in gestures, eye contact, posture, voice volume, speech rhythm, clarity, turn-taking, fluency, and formality, among other signs, reveal the degree of self-confidence, autonomy, and security that the child has in relation to themselves, their peers, and those around them (Caballo, 1997). The identification of patterns and the recognition of phenomena, in the specific case of interaction with iguanas, facilitate the modulation of bodily

signs and, at the same time, the identification of modifiable signs in oneself, for example, recognizing that when shouting in front of iguanas, they become agitated and move their tails, a situation that also makes children feel uneasy, fearful, and curious.

The other component of social skills is cognitive, which identifies perceptions about the communication environment and the individual's psychological variables. In this regard, recognition of the educational act, turns of speech, the form of interaction with the teacher, the quality of interaction in the peer group, classroom interactions, speaking distances, and, at the individual level, prior linguistic knowledge, idea coding, values, respect, and the way of organizing ideas to express them (Caballo, 1997) become important and give rise to learning processes, from the concrete physiological and behavioral components to the cognitive internal representation in the subject of the environment and interaction as such.

Se This reaffirms what Piaget and Inhelder (Piaget; Inhelder, 2016, p. 29) stated: "the subject's organizing activity must be considered equally important as the connections due to external stimuli, because the subject only becomes sensitive to these to the extent that they are assimilable to already constructed structures." With this, the development and strengthening of social skills is an intrinsic part of learning, since it generates a chain of accommodation and assimilation of knowledge from the concrete and physiological to the cognitive modification of the representation that establishes the imprint of what has been learned. Gresham and Elliot (1990, cited in Parra Espitia, 2021) establish that the learning of social skills occurs in five groups: cooperation, as helping others; affirmation, which are behaviors indicated by others to fit into the group; responsibility, established as the ability to maintain and defend one's own ideas and communicate them while assuming the consequences; empathy, understood as the ability to understand and put oneself in another's place; and self-control, understood as the ability to respond appropriately in times of conflict. Therefore, in the project "The World of Iguanas," empathy, teamwork, and active listening were identified as skills to be strengthened.

Dentro Among the skills addressed are scientific skills, which include learning through interaction with peers, family, and the environment. Thus, "if there is childlike thinking, there is childlike scientific thinking" (Tonucci, 1995, p. 37). Curiosity, observation, capacity for wonder, and experimentation are thus recognized, allowing children to learn about their world and generate in their minds the prior knowledge that will lead to the assimilation of new concepts, enabling them to weave together new knowledge. In this way, curiosity, as the primary action of knowledge, experimentation, and then the consolidation of the idea, are the basic steps for generating learning and, at the same time, are steps in scientific skills, understood as the abilities to use cognitive functions to know, understand, and explain natural and social phenomena, as established by the MEN (Ministerio de Educacion Nacional, 2010, p. 31) and, specifically for the transition grade, is an invitation to think, promoting "knowledge and rigorous thinking".

In this regard, it is important to highlight that all educational activities in Colombia are governed by Article 67 of the Constitution, which establishes education as a human right and a public service, with a view to advancing knowledge, science, culture, and other values. From this perspective, the various laws aim to promote comprehensive, dignified lifelong learning (Law 115/1994, Congress of the Republic of Colombia, 1994) in terms of duties and rights and scientific knowledge, recognizing children as the focus of education and adults as guarantors of holistic, systemic, and comprehensive education, that is, maintaining the rights to play, leisure, recreational activities, opportunities to learn, cultural life, equity, and inclusion (Law 12 of 1999 (Council of Santa Fe de Bogotá, 1999), Decree 1411/2022 (Colombia, 2022).

En To this extent, education in Colombia is parameterized in grades that correspond to the neurotypical development times of children (according to the National System of Educational Indicators for preschool, elementary, and middle school levels in Colombia (Ministerio de Educacion Nacional, 2013), establishing an organized line of action to facilitate age groups and access to teaching and learning strategies appropriate to their ages, learning rhythms, and levels of immersion in the sociocultural environment, seeking to foster curiosity, observation, exploration of the natural and social environment, and explanation of the phenomena surrounding human beings (Law 1098/2006, Congress of the Republic of Colombia, 2006). Therefore, education focuses on the comprehensive development of children and young people in particular, and specific actions are

framed from early childhood in preschool, which is divided into three grades: pre-kindergarten, kindergarten, and transition (Congress of the Republic of Colombia, 1994, pp. Art. 15-18).

According to the general education law, the transition grade is compulsory, focusing on strategies for welcoming, accompanying, caring for, and encouraging children to discover their environment and interact with their peers, making education the greatest adventure for children. Among the activities proposed to establish the right to education are technical references, which are “the provisions that guide the planning, implementation, monitoring, and management of actions aimed at promoting quality early education.” (Decree 1411 (Presidency of the Republic of Colombia, 2022), establishing guiding activities as strategies to accompany educational trajectories that reduce gaps in inequality, injustice, and access to knowledge as a human right.

From this perspective, access to knowledge is interactive, in that students propose and promote their own approach to it; interdisciplinary, because different disciplines of knowledge converge, allowing them to respond to problems and phenomena in different contexts; cultural, because it recognizes diversity of expression as an inexhaustible source of knowledge, creation, and innovation; scientific, as it allows phenomena to be explained and systematic and rigorous processes to be carried out in accessing knowledge; and cutting-edge, as it aims at technical, technological, and STEAM development for the application of what has been learned in real life. To this end, the research was implemented through the Ondas program, which “aims to promote interest in research among children and adolescents, as well as the development of attitudes and skills that allow them to actively engage in a culture of science, technology, and innovation (CTel)” (Colciencias), (Colombia, 2012), confirming the objectives of education as a right and a strategy for advancement as individuals, a community, and a country.

Interest in research into the development of social and cognitive skills and wildlife conservation has always been present in education, especially in Latin American countries, which share similar climates and cultures. In the search for references and experiences with work in the development of social skills, it was found that in the same educational institution, Salamanca (Salamanca, 2023) carried out a work proposal with elementary school students where he sought to contribute theoretically on school aggression as a phenomenon in basic education in Colombia. and identified that aggressive behavioral patterns can be observed from an early age, which, if not addressed from early childhood, tend to increase and persist. It is therefore imperative to use teaching and learning strategies that promote social and communication skills, which are essential not only for improving learning but also for coexistence in general.

Similarly, at the national level, Corzo (Corzo Orozco, 2020) in Bucaramanga sought to theorize through the implementation of a proposal to strengthen social skills in transition grade, with the aim of addressing the development of emotional intelligence from early childhood. Among his conclusions, he highlights that children’s behaviors are the result of what they experience in their environment, especially in their homes. Therefore, teaching and learning processes should not only be carried out with children but also with their families and with the adults with whom they interact at school.

On the other hand, in La Guajira, Martínez (2011, p. 46), took an interest in the conservation of iguanas based on perceptions and uses of this species in the municipality of Fonseca, and found that among the difficulties of environmental conservation, and particularly of the green iguana as a species, is the culture where the co-dependence between humans and other animals, which help in the conservation and preservation of flora, is not recognized; as well as awareness of resource use and population growth, the occupation of rural spaces, and their transformation into cities. Thus, “a population study of the green iguana in Colombia is urgently needed to determine the status of the species’ populations in order to implement conservation strategies based on more data,” since, as it is such an abundant animal in the region, it has rarely aroused interest in its study and conservation.

In the international context, in Peru, Montalvo-Suárez (Montalvo, 2019, p. 64) sought to determine the levels of social skills development in early childhood education children at the San Juan de Lurigancho Educational Institution, identifying that it is essential to “promote and encourage emotional education with a greater emphasis on the expression of emotions. Establishing daily routines in the classroom that lead to conversations about their emotional states and using strategies to express emotions through representations, dramatization, etc.”

Likewise, teachers and parents should be trained to develop social skills in themselves, as adults, and thus reinforce the learning process of children by example.

This research background reflects not only the theoretical development that has taken place around social skills, emotional intelligence, environmental conservation, and species with whom we share urban spaces, but also of the constant interest in improving meaningful learning, ongoing classroom research, and strategies for providing children with cognitive development and skills that truly facilitate a more respectful and gentle coexistence, positioning them as individuals responsible for themselves, their thoughts, actions, and environment.

METHODOLOGY

This research was approached from a qualitative perspective which, according to Rojas-Gutiérrez (Rojas-Gutiérrez, 2022, p. 81), is “used to observe, describe, explore, and understand the experiences, ways of thinking, and feelings of other people and oneself.” It allows us to understand and recognize the phenomenon, particularly the educational aspect, with a view to identifying how to improve it in the given context.

Desde From this perspective, the essential action of qualitative analysis, according to Hernández-Sampieri and Mendoza Torres (Hernández-Sampieri; Mendoza Torres, 2023, p. 487), “consists of receiving unstructured data, to which we provide a structure. The data is very varied, but in essence, remember that it consists of the researcher’s observations and the participants’ narratives.” In this sense, research is understood not only as the systematization of data but also as the combination of methods and techniques that give richness, variety, and reliability to the information obtained, which is the hallmark of triangulation that all research possesses. In this regard, Sánchez et al. (Sánchez Bracho et al., 2021) point out that the triangulation of techniques focuses on contrasting visions or approaches, giving the study rigor, depth, and complexity, lending consistency to the findings and reducing biases, facilitating a more holistic understanding of the phenomenon. In this way, research is the path of continuous dialogue between the data obtained through techniques, the theories in light of which they are viewed, and the perceived realities.

In this vein, we worked using the Participatory Action Research (PAR) method, which Fals Borda (Fals Borda, 1999, p. 10) defines as: “a necessary experience for progressing in democracy, as a complex of attitudes and values, and as a working method that gives meaning to praxis in the field.” This generates a vision of the phenomenon from the researcher’s perspective, in connection with the problems and the search for solutions among all: the group and the researcher, arguing that these activities have in common the identification of action strategies that are implemented and later subjected to observation, planning, reflection, and change, seen as the management and mastery that the teacher must propose from the classroom in terms of their curriculum design and that leads through their methodologies towards meaningful learning that provides feedback on the quality of the educational system in general.

In the stages of methodological design, guided by the IAP, we worked in accordance with Martí (Martí, 2000) by establishing four stages of our own: First: Diagnosis, which includes observations, active participation of those involved, and offers a holistic and systematic view of the community and its problems. This was carried out in the research through four sessions in which behaviors with iguanas were identified, actions were established, and participants socialized.

La segunda The second stage involves drawing up an action plan that prioritizes and proposes alternative solutions and responsibilities for the actors involved. This is carried out by planning educational activities to raise awareness of the school environment and iguanas, and organizing the curriculum around these activities. The third stage is the implementation of the action plan. Activities were carried out taking into account the flexibility of time and space with the aim of solving each of the problems detected. Twenty participatory fieldwork sessions were carried out, guided by curricular approaches related to the world of iguanas.

The fourth stage is the evaluation and interpretation of the action plan, a reflective exercise on the actions and solutions provided, briefly describing the problem, detailing the activities, and reviewing the results. It also identifies new problems or changes the hierarchies proposed

in the development of the action plan. This was carried out through ten sessions in which the information was refined, organized, categorized, analyzed, and discussed by the research group, and five sessions to evaluate the process with direct observation and feedback to the participants, turning the research into a cyclical process of diagnosis, action, reflection, and constant evaluation.

The study population consisted of 305 children, their parents, and 12 teachers from the transition grade at I.E. ITEY. Participants were selected using purposive sampling, as proposed by Otzen and Manterola (Otzen; Manterola, 2017, p. 230), which "allows characteristic cases from a population to be selected, limiting the sample to only these cases." The group of twenty-five students and their transition grade B teacher was deliberately chosen because this group has specific characteristics related to the problem of aggression among peers and with iguanas that are of interest to the research. This type of sampling allows the study to focus on a particular group which, although not statistically representative of the entire population, facilitates the collection of relevant and in-depth data on the usual behavior and dynamics of the classroom. Participants, as defined by Hernández-Sampieri (Hernández-Sampieri; Mendoza Torres, 2023, p. 447), "are the group or set of people, events, occurrences, communities, etc., on which data will be collected, without necessarily being statistically representative of the universe or population being studied".

In the educational context, research is ongoing; however, data collection is complex since "it occurs in the natural and everyday environments of the participants or sampling units. In the case of people, in their daily lives: how they speak, what they believe, what they feel, how they think, how they interact, etc.," as established by Hernández-Sampieri (Hernández-Sampieri; Mendoza Torres, 2023, p. 463). Specifically for IAP, the researcher, even though immersed in the group, must have the ability to lead, look back retrospectively, analyze critically, think abstractly, flexibly, and constructively, develop sensitivity to the words and actions of the group with which they share, and have a sense of absorption and devotion to the work, the information, and the community (Piza Burgos; Amaquema Márquez; Beltrán Baquerizo, 2019).

In view of this, the research was led by the tenured professor of this degree program, and direct observation was used in the four stages of IAP, systematizing it in logs, which Hernández-Sampieri (Hernández-Sampieri; Mendoza Torres, 2023, p. 489) states "whose function is to document the analytical process step by step," as these allow for the recording of behaviors at the moment they occur, as well as reactions before, during, and after work sessions, providing information on behavioral changes that account for the solutions to the problems and actions of the children themselves, thus facilitating the systematization of data relevant to the research.

Indirect observation, that is, from outside the participating group, was carried out by two researchers with the aim of obtaining a record of behavior to triangulate the information, in order to understand the processes of verifying the solution to the problem posed and the relevant curricular adjustments. .

Likewise, interviews were used, based on the perspective of Galarza Ramírez, et al. (2024, p. 98), who state that "The interview is a technique for gathering information through professional conversation, which, in addition to acquiring information about what is being researched, is important from an educational point of view." It was applied to the parents of the participating children in order to identify behavioral changes and perceptions about the process of the world of iguanas. It was based on a semi-structured script applied randomly in the different sessions of the proposed activities, thus constituting a dialogue beyond the everyday and coded under the parameter Interview = E.

Within this process, the review and verification of documents, together with the systematized information, was carried out through an exhaustive exploration of texts on the development of social skills (empathy, teamwork, active listening), scientific skills, child development, and iguanas, as well as teaching and learning strategies in transition, using the information source registration matrix tool. This allowed for a deeper understanding of the subject and similar research with a view to solving the problems of aggression and environmental conservation, as shown in Table 1. Information source registration.

Table 1. Example of a record of information sources.

Record of information sources	
Reference	Document reference, adjusted to APA Standard
Description of the topic and/or document	Summary or description of the main topic and supporting topics
Keywords	Keywords are descriptors that define the idea or content of the text
Textual quotation and interpretation	Textual quotation with APA standards that supports, impacts, or debates the research with its respective interpretation.

Source: Authors adhering to the guidelines of the ONDAS Early Childhood program.

RESULTS AND DISCUSIÓN

It is important to recognize that not only are the results of the research process relevant, but also, considering that this is participatory action research, the experiential and academic development and organization of the information obtained for data analysis is vital, since “... what is discussed in PAR is a continuous process of action-reflection-action,” as stated by Rocha (Rocha, 2016), pointing out that actions are as important as reflection and collective reflexivity. In accordance with the above, and in order to organize the information, the logs were coded and categorized by: session, activity, and observed behaviors; Likewise, for confidentiality and ease of data handling, as indicated by Hernández-Sampieri (Hernández-Sampieri; Mendoza Torres, 2023, p. 490), the interviews with parents and the indirect observation of the researchers were coded, which allowed the units of analysis and their respective categories to be established, as shown in Table 2. Example of data collection coding.

Table 2. Example of data collection coding.

Coding Logs, Interviews, and Observation – Examples	
B1 S1: Space: tree house	B2S2. Space: Library
The children chased, scared, and ran around. Iguanas: hit and ate.	The children: talked, expressed fears, and read The iguanas: Not applicable
Community: complaints	The community: Not applicable
OD1: Space: tree house	OD2. Space: Classroom
The children: disorderly, crowded together, shouting, chasing, scaring, running around	The children were presenting their drawings
Iguanas: waving their tails, running, and climbing trees	of iguanas: there are many different kinds, the “caporos” (a type of iguana), they eat almost everything, and, like empanadas (children speak in turn), autotomy (loss of the tail). Iguanas: an iguana sleeping on the window; “iguanas don’t like it in the morning or when it rains.” Community: They did not express any complaints, nor did they mention anything when the children were talking in the classroom, since the noise was minimized. Parents accompanied the students to see the iguanas at dismissal time.
Community: complaints about shouting, complaints about behavior	

Source: Our elaboration.

The working sessions with the students allowed us to identify particular patterns at the beginning of the research, where the negative attitudes they experience in their context drive children to act recklessly towards iguanas, repeating the inappropriate behaviors they observe in adults, as stated by Flores and Ortiz-Espinoza (Flores; Ortiz-Espinoza, 2023), who state that vicarious learning “allows the processing of information about the acquisition of

behaviors that a person has observed in their immediate environment. These behaviors are assimilated beforehand and, through symbolic imitation, become a kind of guide at different times and in different spaces" (p.2), thus reaffirming that primary learning, also called vicarious learning, should be enhanced through examples and behaviors that promote tolerance, respect, and community life.

In light of the research objectives, and with a view to facilitating an environment of exploration and care for natural environments, especially iguanas and their space in the institution, it was evident from direct observation, audiovisual recordings of iguana-student interactions, interviews, and analysis of logs that coexistence between iguanas and humans is possible when the value of respect is implemented. Teaching the responsibility to conserve and care for the contexts and animals with which we coexist. In this way, the fauna and flora of the region and the environment in general are recognized, preserved, and cared for, contributing, from the immediate context, to the achievement of Sustainable Development Goals (SDGs) 4 and 15 (United Nations, 2015, p. 27), which state "Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" and "Protect life on land and ecosystems to halt biodiversity loss," respectively. This underpins and facilitates reflective education that is conscious of the environment and of the moral duty of humans to care for the planet.

Frente With the intention of accompanying the exploration and learning process through innovative pedagogical strategies, during the research it was observed that the students became the protagonists of this process and showed an interest in formulating hypotheses, arguing, proposing, inquiring, systematizing, fostering curiosity, and organizing ideas, skills considered characteristic of scientific thinking. These skills emerged naturally, with the curiosity they showed at the beginning of the sessions. For example, in one session, the iguana was sleeping in the window, and one of the participants asked, "Teacher, what are iguanas' beds like? Do iguanas have pillows?" (B7S1), which sparked curiosity about the types of beds, homes, and spaces where iguanas rest when they are not active. In this way, the children asked questions they wanted to answer and expressed what they learned about iguanas, their behavior, and themselves in their own creations, such as stories, drawings, and verbal narratives, confirming what Carvajal-Sánchez et al. (2023, p. 13) propose:

This is how educating young children in the dyad of emotions and scientific thinking contributes to the development of assertive, critical, empathetic, self-regulated citizens who are also capable of questioning the world, making decisions, embracing new and different points of view, and thinking of new ways of doing things.

Otro Another aspect considered was the design, planning, and execution of intentional pedagogical strategies that contributed to the development of social skills such as empathy, demonstrated when students identified and expressed feelings, thoughts, and emotions about their own behavior, that of their peers, and that of the iguanas, as evidenced in classroom activities where they talked about their fears as children and said, "the iguana moves its tail when it is afraid so that no one will approach it." (B2S1). In this regard, Miller (2019, p. 13) points out that "an important step in learning to interact with others occurs when preschoolers use their expressive verbal language skills to share their ideas, needs, and feelings".

Collaborative work was identified when students agreed to bring food from home, organize spaces, support and establish tasks for collecting, distributing, and cleaning common areas in the sauros. Likewise, progress was observed in active listening strategies such as managing voice volume, taking turns, following instructions, among others. These skills were noted when observing that the children lowered their voices when the iguanas were nearby so as not to disturb them, as shown in Figure 1. In the classroom, they raised their hands and expressed their views on the life of the lizards. They also learned to respect the opinions of others, since when making field observations of the iguanas' area, everyone saw from different points in the area, so they did not observe the same thing. When sharing in the classroom, they referred to where they were and what they saw, thus understanding that everyone's opinions are valid.



Figure 1. Field observation of iguanas.

CONCLUSION

Through the implementation of this proposal, the children had the opportunity to interact with the iguanas, thanks to which they expanded their knowledge about this species, learned about its characteristics and preferences, and promoted its care and conservation. It also contributed to forming individuals who are more empathetic, communicative, and respectful of the world around them. Thus, this research confirms the findings of Martínez (2011) in his work in the Colombian Guajira, where he concluded that it is important to cement a culture of conservation of the species with which we share urban spaces, thereby contributing to the conservation of the environment.

This project allowed students to strengthen their listening skills, empathy, and respect. Each of the planned activities became a space for listening to each other, thinking about oneself and others, and collaborating and working with peers. This improved school life and strengthened bonds of friendship, becoming a space for developing social skills and openly expressing likes, fears, interests, and needs. thus confirming the need for “educational spaces to be free from acts of aggression” (Salamanca, 2023) and seeking, from the transition grade onwards, to contribute to changes in the way the environment is read and actions are taken accordingly, where individual behavior is sought based on new, more respectful social patterns.

Teaching practices were also revitalized by using structured materials available in the classroom and unstructured elements offered by the environment (sticks, seeds, trees) to strengthen teaching and learning processes.

Teaching practices guided by respect for children, seeking recognition of their rights and duties towards themselves, their peers, and their environment, are a daily task in the classroom. In this way, legislation is emphasized in reality and everyday life, but above all, the promotion of practical ethics from early childhood, identified in the experience of continuous respect.

The contextual setting for learning was found in everyday spaces, thus making it meaningful for children, while advancing access to knowledge, innovation, and technologies, without neglecting the immediate resources offered by the environment.

The research allowed teachers to rethink teaching-learning processes, intertwining different dimensions. Children focused their interests in such a way that meaningful learning was real and experiential. They tested it out and adapted to the dynamics by establishing spaces for

dialogue, play, and interaction with their peers. It also became a space for ongoing reflection for teachers and students, providing the ideal setting for asking the most unexpected questions, refuting them, contrasting them, agreeing on them, and disproving them, which is ideal for the construction of collective knowledge.

Implementing research processes in the classroom using the IAP approach promotes scientific thinking. Children ask questions, identify problems, generate hypotheses, argue, and build knowledge among peers. Students become protagonists in the teaching-learning process.

Involving families in this project was very interesting. The joint investigations and extracurricular activities, in which the children felt supported, accompanied, and cared for, contributed to their comprehensive education, since for them, their parents are the ultimate reference points for clearing up doubts.

El The exercise also made it possible to systematize the information that emerges from the complexity of the elements that are intertwined in the teaching-learning processes in the classroom, to rethink these factors, and to determine whether the proposals being developed can be reoriented to make them more meaningful.

The support of university teachers helped to guide the project when it strayed from its course. Peer work improves the research experiences that take place in schools.

REFERENCIAS

Ausubel, D. **Psicología educativa: una visión cognitiva**. Tradução M. A. García. Ciudad de México: Editorial Trillas, 1976.

Ávila, H.; González, M.; Liceas, S. La entrevista y la encuesta: ¿métodos o técnicas de indagación empírica? **Didascalia: didáctica y educación**, Las Tunas, v. 11, n. 3, p. 62-79, 2020. Acceso en: 9 Mayo 2025. Disponible en: <https://core.ac.uk/download/pdf/337317106.pdf>

Caballo, V. **Manual de evaluación y entrenamiento de las habilidades sociales**. 2. ed. Madrid, España: Siglo XXI de España Editores, 1997.

Carvajal-Sánchez, P. et al. Competencias científicas en niños y niñas de primera infancia. **Educare (San José)**, v. 27, n. 1, p. 1-17, 2023. <https://doi.org/10.15359/ree.27-1.14402>.

Chocontá, J.; Guzmán, R. J. **Desarrollo infantil y escritura: vínculos entre infancia, cultura y pensamiento**. Chía: Universidad de La Sabana, 2018. Disponible en: <https://elibro.net/es/ereader/usta/116721?page=24>. Acceso en: 9 Mayo 2025.

Cloninger, S. Teorías de la personalidad. México: Pearson Educación, 2003. Disponible en: <https://tuvntana.files.wordpress.com/2016/09/teorc3adas-de-la-personalidad.pdf>. Acceso en: 9 Mayo 2025.

Coborn, J. **Iguanas y otros iguanidos**. Manuales del Terrario. Barcelona, España: Hispano Europea, 2004.

COLOMBIA. **Constituição Política da Colômbia de 1991**. Bogotá: Congreso de la República de Colombia, 1991.

COLOMBIA. Ley 115 de 1994. Por la cual se expide la Ley General de Educación. **Diario Oficial**: n. 41.148, 1994.

COLOMBIA. Ley 1098 de 2006. Código de la Infancia y la Adolescencia. **Diario Oficial**: n. 46.446, 2006.

COLOMBIA. Departamento Administrativo de Ciencia. Decreto 2558 de Diciembre 10 de 2012. Por el cual se modifica la composición del Consejo Asesor de Ciencia, Tecnología e Innovación El Presidente de la República de Colombia, en ejercicio de sus facultades constitucionales y legales, en especial las. **Diario Oficial**: n. 48.634, 10 dic. 2012.

COLOMBIA. Decreto 1411 de 2022. Por medio del cual se subroga el Capítulo 2 del Título 3, Parte 3 del Libro 2 del Decreto 1075 de 2015 y se adiciona la Subsección 4 a este Capítulo, con lo cual se reglamenta la prestación del servicio de educación inicial en Colombia y se dictan otras. **Diario Oficial**: n. 52.106, 2022.

COUNCIL OF SANTA FE DE BOGOTÁ. **Acuerdo 12 de 1999**. Por el cual se adopta el diseño y promoción de políticas de formación de padres de familia dirigido a la comunidad en las instituciones educativas públicas y privadas del Distrito Capital. Bogotá: Registro Distrital, 1999.

Córdoba, N. D. **Desarrollo cognitivo, sensorial, motor y psicomotor en la infancia**. 2. ed. España: IC editorial, 2018.

Corzo Orozco, Y. **Fortalecimiento de las habilidades sociales en los niños de transición a través de una propuesta pedagógica en una institución pública de la ciudad de Bucaramanga**. Tesis (Maestría) – Universidad Autónoma de Bucaramanga, Bucaramanga, 2020.

DE CERO A SIEMPRE. **Atención integral a la primera infancia**: estrategia de atención. Calle: Consejería Presidencial para la Niñez y la Adolescencia, 2013. Disponible en: <http://www.deceroasiempre.gov.co/prensa/cdocumentaciondocs/fundamentos-politicos-tecnicos-gestion-de-cero-a-siempre.pdf>. Acceso en: 9 mayo 2025.

Espinoza Freire, E. E. Reflexiones sobre las estrategias de investigación acción participativa. **Revista Conrado**, v. 16, n. 76, p. 342-349, 2020.

Fals Borda, O. **Orígenes universales y retos actuales de la IAP**. Bogotá: Universidad Nacional de Colombia, 1999.

Flores, S.; Ortiz-Espinoza, M. Aprendizaje vicario y tipos de conductas en infantes de Educación Inicial. **Revista Alteridad**, v. 18, n. 2, 2023. <https://doi.org/10.17163/alt.v18n2.2023.09>.

GALARZA RAMÍREZ, C., SALTOS NEVÁREZ, L., GUIJARRO INTRIAGO, R., ALVARADO PAZMIÑO, E., MARCIAL CHANG, D.,; FIRMAT CHANG, J. **Metodología de la investigación educacional en el contexto de la enseñanza superior**. Texas: Editorial Tecnocientífica Americana, 2024.

GOLEMAN, D. **Inteligencia Emocional**. Piolín, 1985.

Hernández-Sampieri, R. **Metodología de la investigación**: las rutas cuantitativa, cualitativa y mixta. México: McGraw-Hill, 2018.

Hernández-Sampieri, R.; Mendoza Torres, H. **Metodología de la investigación Plus**. Ciudad de México: McGraw-Hill, 2023.

Herrera Clavero, F. **Habilidades cognitivas**. Granada: Universidad de Granada, 2003. Disponible en: <https://www.elmayorportaldegerencia.com/documentos/coaching/%5bpd%5d%20documentos%20-%20habilidades%20cognitivas.pdf>. Acceso en: 9 mayo 2025.

LATORRE, A. **La investigación acción**: conocer y cambiar la practica educativa. S.I.: Editorial Grao de IRIF, 2005.

Martí, J. **La investigación - acción participativa**: estructura y fases. Barcelona: El Viejo Topo, 2000.

Martínez, D. **Estrategias de conservación a partir de las percepciones y los usos de la especie Iguana iguana en el municipio de Fonseca, Guajira, Colombia**. Tesis (Pregrado) – Pontificia Universidad Javeriana, Bogotá, 2011.

Miller, S. **Desarrollo de las habilidades sociales en los más pequeños**. Madrid: Narcea Ediciones, 2019.

Ministerio de Educacion Nacional. **Aprendiendi juntos**: instrumento diagnóstico de competencias básicas en transición. Bogotá: MEN, 2010.

Ministerio de Educacion Nacional. **Guía para los grados 0° a 3°**. Bogotá: MEN, 2013. (Serie de guía, n. 43).

Ministerio de Educación Nacional. **El sentido de la Educación Inicial**. Bogotá: Panamericana Formas e Impresiones S.A., 2014a. (Documento n. 20).

Ministerio de Educación Nacional. **El arte en la Educación Inicial**. Bogotá: Panamericana Formas e Impresiones S.A., 2014b. (Documento n. 20).

Ministerio de Educación Nacional. **El juego en la Educación Inicial**. Bogotá: Panamericana Formas e Impresiones S.A., 2014c. (Documento n. 22).

Ministerio de Educación Nacional. **La literatura en la Educación Inicial**. Bogotá: Panamericana Formas e Impresiones S.A., 2014d. (Documento n. 23).

Ministerio de Educación Nacional. **La exploración del medio en la Educación Inicial**. Bogotá: Panamericana Formas e Impresiones S.A., 2014e. (Documento n. 24).

Ministerio de Educacion Nacional. **Seguimiento al desarrollo integral de las niñas y los niños en la Educación inicial**. Bogotá: MEN, 2014f. (Documento n. 25).

Ministerio de Educacion Nacional. **Bases curriculares para la educación inicial y preescolar**. Bogotá: MEN, 2017.

Monjas Casares, M. I. **Programa de enseñanza de habilidades de interacción social (PEHIS) para niños y niñas en edad escolar**. Valladolid: Universidad de Valladolid, 1995.

Montalvo, M. **Habilidades sociales en niños de cinco años de una institución educativa pública de san juan de Lurigancho**. Tesis (Maestría) – Universidad San Ignacio de Loyola. Lima, Perú: Repositorio Institucional USIL, 2019.

MOYOLA, L. **La empatía entenderla para entender a los demás**. Buenos Aires: Plataforma Editorial, 2014.

Osorio, M.; Puentes, D. **Aprender a aprender**: la V heurística como herramienta en el desarrollo de competencias infantiles. Colombia: Editorial UniNorte, 2023.

Otzen, T.; Manterola, C. **Técnicas de Muestreo sobre una Población a Estudio**. Temuco: Sociedad Chilena de Anatomía, 2017.. <https://doi.org/10.4067/S0717-95022017000100037>.

Parra Espitia, L. S. **Habilidades para la vida**: aproximaciones conceptuales. Medellín: Fondo Editorial Universidad Católica Luis Amigó, 2021.. <https://doi.org/10.21501/9789588943718>.

Piaget, J. **El nacimiento de la inteligencia en el niño**. Madrid, Ediciones Morata, 1977.

Piaget, J.; Inhelder, B. **Psicología del niño**. Madrid: Ediciones Morata, 2016.

Piza Burgos, N. D.; Amaiquema Marquez, F. A.; Beltrán Baquerizo, G. E. Métodos y técnicas en la investigación cualitativa: algunas precisiones necesarias. **Revista Conrado**, v. 15, n. 70, p. 455-459, 2019.

PUJANTELL OBIOLS, M.,; ESCALES SÁNCHEZ, R. **Habilidades sociales**. Madrid: Macmillan Iberia, S.A., 2024.

Quintanal Díaz, J.; Sánchez Huete, J. C. **Métodos y diseños de investigación en contextos socioeducativos**. Madrid: Editorial CCS, 2023.

Ramos Roca, E.; Rodríguez Castañeda, N. ¿Comer iguana verde? Antropología, arqueología, biología de la conservación y etnobiología: Distintas miradas a un mismo problema. **Revista Etnobiología**, v. 17, n. 2, p. 55-75, 2019.

Reyes, F.; Martínez, C. **Estrategias metodológicas en la educación infantil**. 3. ed. Buenos Aires: Paidós, 2021.

Rocha, C. **La investigación acción participativa: una apuesta por la comunicación y la transformación social**. Bogotá: Corporación Universitaria Minuto de Dios, 2016.

Rodríguez Salinas, M. E.; Salazar López, T. I.; García Herrera, A. P. El desarrollo de las habilidades científicas en el preescolar: una revisión sobre las investigaciones publicadas del 2009 al 2019. **Bio-grafía**, n. 2021, 2021. Disponible en: <https://revistas.upn.edu.co/index.php/bio-grafia/article/view/14762>. Acceso en: 9 Mayo 2025.

Rodríguez-Rey, R.; Cantero-García, M. Albert Bandura: Impacto en la educación de la teoría cognitiva social del aprendizaje. **Journal of Parents and Teachers**, v. 1, n. 384, p. 72-76, 2020. <https://doi.org/10.14422/pym.i384.y2020.011>.

Rojas Soriano, R. **La entrevista en investigación cualitativa**. México. Editorial Plaza y Valdés, 1996.

ROJAS-GUTIÉRREZ, W. La relevancia de la investigación cualitativa. **Revista Studium Veritatis**, v. 20, n. 26, pp. 79-97, 2022.

Salamanca, N. **Constructos teóricos sobre la agresividad y sus implicaciones formativas en contextos escolares de la educación primaria colombiana**. Tesis (Doctoral) – Universidad Pedagógica Experimental Libertador. Rubio, 2023.

SALAZAR, C; PÉREZ, J. La enseñanza de habilidades sociales en la educación primaria. **Revista Iberoamericana de Educación**, v. 12, n. 1, p. 45-58, 2022.

Sanches, W. ¡Más respeto!: el delicado equilibrio en las relaciones pedagógicas. (ed.). Buenos Aires: Editorial Claretiana, 2014. Disponible en: <https://elibro.net/es/ereader/usta/66537?page=11>. Acceso en: 9 Mayo 2025.

Sánchez Bracho, M.; Fernández, M.; Díaz, J. **Técnicas e instrumentos de recolección de información: análisis y procesamiento realizado por el investigador cualitativo**. Quito: Universidad Tecnológica israel, 2021.

Sánchez, J. **Psicología del desarrollo infantil**. 2. ed. Barcelona: Ariel, 2019.

Sandín, M. **Investigación cualitativa en educación: fundamentos y tradiciones**. Madrid: McGraw-Hill, 2003.

Santrock, J. **Psicología del desarrollo**. 12. ed. México: McGraw-Hill, 2011.

Silvestri, A. **Métodos de observación en la investigación social**. Buenos Aires: Siglo XXI Editores, 2015.

Tonucci, F. **Con ojos de maestro**. Buenos Aires: Troquel S.A., 1995.

Torralba, F. **El arte de saber escuchar**. Lleida: Editorial Milenio, 2009.

Trillas, E. **El desafío de la creatividad**. Santiago de Compostela: Publicaciones e Intercambio Científico = Servizo de Publicacións e Intercambio Científico, 2018.. <https://doi.org/10.15304/9788416954803>.

UNITED NATIONS. **Objetivos de desarrollo sostenible de la agenda 2030**. New York, Estados Unidos: UN, 2015.

Vigotsky, L. **El desarrollo de los procesos psicológicos superiores**. Barcelona: Crítica, 1979.

Vigotsky, L. S. **Pensamiento y lenguaje**. Buenos Aires: La Pléyade, 1987.

Winkel, R. **Introducción a la psicología infantil**. Madrid: Ediciones Pirámide, 2005.

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