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NUTRITIONAL FUN: CREATING HEALTHY HABITS FROM CHILDHOOD WITH ``A SENHORA RODA DOS ALIMENTOS``

Kelly Danelon

Early Childhood Education Teacher at:
``Universidade de São Paulo`` – USP

Rogéria Cancilieri

Early Childhood Education Teacher at:
``Universidade de São Paulo`` – USP

Rosebelly Nunes Marques

PhD Professor at the Department
of Economics, Administration and
Sociology (LES – ESALQ – USP)

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Abstract: The project presented aims to encourage the development of healthy eating habits among children aged 4 to 5, with a focus on early childhood education. Using the principles of the National Common Curricular Base (BNCC) as a basis, the project involves the active participation of children in all stages of the process. Through an interactionist approach, inspired by the theories of Lev Vygotsky and Jean Piaget, weekly educational activities are carried out that include stories, educational videos, works by visual artists, theater, music, games and activities in the garden. The construction of a food wheel is one of the highlights of the project, promoting children's interest in healthy foods and raising awareness about balanced consumption. Furthermore, the fundamental role of the teacher in implementing educational policies stands out, ensuring the effectiveness of pedagogical practices and the integral development of children.

Keywords: Eating Habits, Didactic Sequence, Educational Policies, Role of the Early Childhood Teacher, School and Community Interaction.

INTRODUCTION

Investing in early childhood education is crucial for the socio-emotional, cognitive and physical development of children, as well as being fundamental for building a more just and equitable society. Countries that prioritize early childhood education are investing in the future of their nations, as they recognize that it is at this stage that the foundations for lifelong learning are laid. Furthermore, early childhood education plays an essential role in promoting equal opportunities by providing an inclusive and welcoming educational environment from the first years of life.

By investing in the training of healthy, creative and critical children, countries are building a solid foundation for long-term

economic, social and cultural development. Thus, early childhood education is not just an investment in individuals, but also in communities and societies as a whole.

In Brazil, there have been significant advances in recent years in relation to investment in early childhood education. The country has sought to expand access and improve the quality of services offered to children in early childhood. Programs such as the National Program for Restructuring and Acquisition of Equipment for the Public-School Network for Early Childhood Education (*ProInfância*) have been implemented to build and equip new daycare centers and preschools, aiming to increase the supply of places and guarantee adequate spaces for the development of children.

Furthermore, Brazil has invested in the training of early childhood education professionals, promoting training courses and valuing the work of educators who work in this area. The implementation of the National Curricular Guidelines for Early Childhood Education has also contributed to guiding pedagogical practices and ensuring quality education from the first years of life.

Another important initiative are income transfer programs, such as: *Bolsa Família*, which contribute to improving the living conditions of families in situations of social vulnerability, helping to guarantee children's access to education and other essential services.

Despite advances, there are still challenges to face, such as expanding access in more remote regions and improving the quality of services offered, especially with regard to professional training and the infrastructure of institutions. However, Brazil has taken important steps in the right direction, recognizing the strategic importance of early childhood education for the integral development of children and the country's future.

The Early Childhood Education Project (Creche) of the “Ermelinda Ottoni de Souza Queiroz” Children’s Community Center – CCIIn, was born after numerous studies carried out in the years 1982 to 1985, among teaching and non-teaching employees, of the Association of Employees of ESALQ (School College of Agriculture “Luiz de Queiróz” – USP, Campus Piracicaba) and began on March 10, 1986.

The CCIIn, at the same time as it emerges as a response to the needs of working mothers, imposes itself on the social scene as an alternative form for the socialization and education of young children. In its child care program, the need for the work carried out within it to not only have a welfare character, but also an educational one, is relevant. Thus, in addition to guaranteeing nutritional, health, education and safety services, the importance of certain operating conditions and, therefore, of material and human resources is recognized in order to promote child development.

The mission of the CCI, therefore, is to serve the children of teaching and non-teaching employees and graduation and post-graduation students at the “Luiz de Queiróz” Campus, promoting education and socialization through the optimization of pedagogical and administrative processes, with the objective of contributing significantly to improving the quality of life of children, families, employees and society, developing work with responsibility, openness and trust, valuing individuality, organization, safety and creativity, maintaining an environment of respect and collaboration

Regarding the organization of the curriculum, in 2019 the daycare center began to be guided by the BNCC (National Common Curricular Base) proposal, respecting the democratic character of education, highlighting contextualization and interdisciplinarity for the articulation

and strengthening of knowledge for the apprehension and intervention in reality through cooperation.

The National Common Curricular Base (BNCC) plays a fundamental role in promoting advances in early childhood education and public educational policies in Brazil. By establishing clear and objective guidelines for what must be taught in schools, BNCC contributes to ensuring the quality and equity of education offered to children from the first years of life. Through the BNCC, the essential knowledge, skills and abilities that children must develop throughout Early Childhood Education are defined, providing a common reference to guide the work of educators and educational institutions. Furthermore, BNCC encourages coordination between different levels and modalities of teaching, promoting a more integrated and coherent education throughout the students’ school career. By establishing a common base of knowledge and skills, BNCC also contributes to reducing educational inequalities, ensuring that all children have access to quality education, regardless of their socioeconomic or geographic origin. Thus, the BNCC is an essential tool to boost advances in early childhood education and to promote more inclusive, democratic and quality education throughout Brazil.

Early Childhood Education, according to the BNCC, is the first stage of Basic Education and corresponds to the beginning and foundation of the educational process. With a conception that links education and care, the base establishes the objective of expanding the universe of experiences, knowledge and skills of these children, diversifying and consolidating new learning, acting in a complementary way to family education. (BNCC, 2018, p. 36) The structuring axes of pedagogical practices in this stage of Basic Education are in accordance with the National

Curricular Guidelines for Early Childhood Education (DCNEI) and address interactions and play and six learning and development rights: coexist, play, participate, explore, express oneself and get to know oneself.

The conception of a child as a being who observes, questions, raises hypotheses, assimilates values and builds knowledge, imposes the need to imprint educational intentionality and implies that the educator has the work of reflecting, selecting, organizing, planning, mediating and monitoring the set of practices and interactions (BNCC, 2018, p. 39) This way, the curricular organization of Early Childhood Education at BNCC is structured into five fields of experiences: The self, the other and the us; Body, gestures and movements; Traces, sounds, colors and shapes; Listening, speaking, thoughts and imagination; Spaces, times, quantities, relations and transformations.

CCIn is guided by the constructivist-interactionist theory, where there is the active participation of the child in their own development, with the aim of promoting the harmonious development of the child in their physical-motor, socio-emotional and intellectual aspects and ensuring parents a partner in guidance and education of children, thus constituting an essential element in the quality of life of families.

Coutinho (2002, p. 3) explains that “Children’s manifestations come from a culture specific to children. Their expressions, in different languages, result from the relationship with the culture that surrounds them, that is, with the cultural goods that society makes available to them”. Therefore, it is important to value and welcome the knowledge and experiences brought by children so that they can express themselves, create, imagine, fantasize, construct and interact, building and rebuilding their childhood culture.

Piaget proposed the active method as an ideal of education. There is a combination of individual and team work; there is an education in self-discipline and voluntary effort. Active methods are more difficult to employ, as they require the teacher to perform differentiated and more active work, with more knowledge of psychology so that he or she can understand the students’ spontaneous behaviors.

Stories assist in these active methods by entering the world of imagination, in addition to contributing to the formation of a taste for reading. Storytelling can be used as a resource to stimulate the psychological and moral development necessary to maintain the child’s mental health. Through stories it is possible to enrich children’s vocabulary and expand the world of ideas and knowledge, educating and stimulating attention, imagination, observation, memory, reflection, language and thought. (MACHADO, 2004).

Educational theory and practice received important contributions from Jean Piaget in his research on the development of intelligence in children. His theories are based on an interactionist approach, that is, knowledge as a result of the subject’s interactions with the object. With this in mind, the process of building knowledge takes place through learning acquired through actions and interactions with the environment. (AZEVEDO, Giselle AN; RHEINGANTZ, Paulo A. & BASTOS, Leopoldo EG, 2004)

For Piaget (1984), a child’s cognitive structures are gradually built from biological structures and the environment in which they are inserted so that schemes are created and existing ones are adapted according to their cognitive development.

Regarding Vygotsky, his contributions to education enter into a Historical-Cultural theory of knowledge construction. From this perspective, development would be

the result of the environment in which the individual is inserted in conjunction with their experiences, habits, attitudes and values acquired through the child's interaction in their family group and coexistence, building from this, their world view. (AZEVEDO, Giselle AN; RHEINGANTZ, Paulo A. & BASTOS, Leopoldo EG, 2004)

In other words;

(...) learning awakens several internal developmental processes, which are capable of operating only when the child interacts with people in his environment and when in cooperation with his peers. Once internalized, these processes become part of children's independent development acquisitions (Vygotsky, 1984, p. 101).

All the work carried out at the nursery is part of a good conversation, or a good story.

Stories are excellent tools to help children with observation, reflection and memory. It is through play that children develop creativity and critical sense.

This way, the objective was established to present a didactic intervention proposal to stimulate the development of healthy eating habits so that the child is a protagonist in the construction of their learning, considering the principles proposed by the Common Curricular Base of Early Childhood Education (BNCC - EI) and the mission of CCIIn.

METHODOLOGY

During the 2nd semester of 2022, concepts relating to the formation of healthy habits were developed, taking as a precedent the valorization of agricultural work, consistent with the profession of Agricultural Engineer; to the respective parents of the children at the "Ermelinda Ottoni de Souza Queiroz" Children's Community Center (CCIIn) at ESALQ/USP.

The children brought from their homes materials that characterized the tools of their parents' work, such as samples of different types of soil, seeds, plant seedlings, books, a model of the rural area, among others, with the purpose of sharing knowledge regarding origin of food.

With respect to the children's prior knowledge and the reality in which they live, these activities were organized in order to enable the development of the learning objectives and skills provided for in the BNCC (National Common Curricular Base) through interactions and games.

The result of these stimuli allowed the development of a Didactic Sequence (SD), supported by an interactionist methodology, where the children acted as protagonists, that is, they went from being listeners to active participants. It is important to highlight that the SD was chosen to systematize educational practice by offering teachers a way to chain and articulate different activities throughout a teaching unit. SD is defined by ZABALA (1998, p. 18) as "a set of ordered, structured and articulated activities for the achievement of certain educational objectives, which have a beginning and an end known to both teachers and students". This way, it can be classified as a methodological instrument to facilitate the teaching-learning process.

This way, the schedule (table 1) was organized and developed weekly by the daycare teachers together with graduation students at Escola Superior de Agricultura Luiz de Queiros - ESALQ/USP with the participation of children aged 4 to 5 enrolled at CCIIn.

Then, each stage was narrated and discussed according to the events, expected results and spontaneous facts.

Duration	Activity
1 day	Conversation circle: importance of trees
1 day	Educational music videos such as: “The fruit is too good” (Mônica’s class) by Maurício Araújo and “Pomar” (sung word) by Paulo Tatit and Sandra Peres.
1 day	Fruit Picnic
1 day	Reading of the works: “ <i>Macieira em flor</i> ” and “ <i>Macieira perto de Vétheuil</i> ” by Claude Monet and “ <i>O vendedor de frutas</i> ” by artist Tarsila do Amaral.
Daily	The narratives of the stories: “Greenery? No!” – Learning about nutrition; the collection: “ <i>No reino da Frutolândia</i> ”; “Boris’ body”; “Planting chives”; “Tarsila do Amaral and the parrot Juvenal”; “ <i>Cesta da Dona Maricota</i> ”; “ <i>O Grande Rabanete</i> ”
5 days	The story: “ <i>A Senhora Roda dos Alimentos</i> ”, by Raquel Martins and Construction of the food wheel
1 day	Planting in the vegetable garden
1 day	Musical activity with wooden spoons: “Soup” (Sung Word) and cuisine: Soup and Vegetable Pie
1 day	Organic waste destined for composting (partnership with graduation students)
3 days	Theater performed by children: “ <i>O Grande Rabanete</i> ”

Table 1: SD activity schedule

Source: own

RESULTS AND DISCUSSION

The world can produce more food and can ensure it is used more efficiently and equitably, but it all depends on education. A multifaceted and interconnected global strategy is needed to ensure sustainable and equitable food. According to BNCC (2018) it is necessary collective proposals for more conscious consumption and create technological solutions for the appropriate disposal and reuse or recycling of materials consumed at school and/or in everyday life will be a pertinent part of the school curriculum, starting from basic education.

With the aim of cooperative work, we had the participation of the family, collaborating with materials related to the topic, providing children with meaningful experiences that stimulated thinking, imagination and curiosity. The teaching resources used in the activities were intended to contribute to the diversification of learning strategies in promoting healthy values and habits. The participation and interest of the children contributed to the development of the work in a pleasant way and in line with their realities.

To create good communication, you need to start a good conversation. In early childhood

education it is no different. Every day, the children participate in the conversation circle and to compose this SD, the topic of the conversation circle was trees and their importance. We believe that by interacting and playing, children develop their role in searching for answers to their questions and curiosities, favoring the construction of knowledge and the formation of values and healthy habits. After the conversation, they walked around the CCIIn park (we have approximately 1000 m² of wooded area) observing and talking about the importance of trees in the lives of living beings.

In order to highlight the importance of maintaining good nutritional habits, a fruit picnic was held, brought by children from their homes. At this stage we contemplate one of the child’s learning rights, which is to know themselves, as when tasting the fruits, it was possible to discover differences in taste and associate them with the fact of “throwing them away” if they don’t like them. Awareness is an important factor, the habit of trying things out first and finding out if you like them or not, is a first step towards reducing waste, as well as being a fertile field for developing healthy habits and values.

According to Joaquim Dolz (p.2, 2023) DS has some important characteristics. The first seeks to start work through a project, anticipating to students what will be worked on, giving meaning to the teaching of written/oral production. In this case, the resource used for this anticipation were the stories told daily throughout the development of the project.

We emphasize the story “A *Senhora Roda dos Alimentos*”, by Raquel Martins, as it was the basis for the construction of the food wheel. Firstly, the story was told through the characterization of the character “Lady” by the teacher, in which she used toy food to convey the proposed message in a playful way, as shown in figure 1.



Figure 1: Dramatization of the story: “A *Senhora Roda dos Alimentos*”
Source: teacher’s personal file

Then, the children handled the materials used in the theater, classifying them according to the story’s narration. Based on this content, the food wheel was created with the children, using pictures of foods of vegetable, animal and mineral origin, brought from their homes and research carried out in magazines in the classroom. The food wheel was divided into larger and smaller groups according to the appropriate proportion that we must consume.

Foods considered unhealthy (industrialized/ultra-processed) were placed inside the “Lady’s bag” outside the food wheel, symbolizing that their consumption must not

be done daily and when consumed, preferably in minimal quantities.

The children spontaneously told the story to the family, and some parents reported that they were charged by their children for offering them unhealthy food, saying: “This food is not in ‘A *Senhora Roda dos Alimentos*’, it is in the lady’s bag, so it’s not healthy”.

Following the activities, the children participated in planting the garden, together with the school cook (figure 2). Vegetable seedlings were planted, such as: chives, basil, parsley, lemon balm and mint. The children also observed the difference between raw and cooked foods and the possibility of reusing food to prepare recipes.



Figure 2: Planting the vegetable garden
Source: teacher’s personal file

The story: “*Cesta da Dona Maricota*” was told, which shows healthy foods of plant origin, and that the character uses fruits to make compotes and vegetables to prepare a soup. After reading, the children tasted the vegetables and it was also offered in the lunch salad and dinner soup. At the time of the meal, when the children were eating the vegetable soup, they commented that the food is healthy, to keep them strong and healthy

and that vegetables are on ``A Senhora Roda dos Alimentos``. The children used wooden spoons, with the song "Soup" from sung word.

Based on the story Tarsila do Amaral and the parrot Juvenal, the children brought fruits from their homes and observed the sizes, shapes, colors, smelling and tasting them. On another day, the children assembled fruit skewers to be enjoyed after lunch and commented that fruits have a lot of vitamins for the body and must be consumed daily and that they belong to ``A Senhora Roda dos Alimentos``.

During the conversation, it was said that we cannot waste food and we agreed that vegetable peels, not suitable for consumption, would be sent to the school's compost bin (CCIn). At CCIn, the project Composting at daycare: an experience for the whole family, is an Environmental Education Intervention and is developed with the participation of graduation scholarship students from ESALQ/USP, in partnership with the USP Recycling Program and incoming students of the Agricultural Engineering graduation course at ESALQ/USP linked to the University and Citizenship Discipline. The compost bin is used weekly by children and staff, where organic waste generated from the CCIN kitchen (vegetable peels, coffee grounds, egg shells) is mixed and covered with leaves from the park, consisting of the aerobic degradation of waste. transforming them into organic fertilizers to be used in the CCIn garden and pots. We count on family participation in this educational process, including organic waste brought from their homes, in returnable plastic buckets, for the weekly compost bin activity.

The participation of the University through graduation students from the Esalq/USP campus was carried out in the composting activity (figure 3), highlighting the importance of recognizing the appropriate destination of

organic waste, and the compost production process and the way in which its use in vegetable gardens and gardens.



Figure 3: graduation students and CCIn students in the compost bin

Source: teacher's personal file

The children commented that we need to use all the food, and that if there is any leftover food, we need to put it in the compost bin and not throw it in the trash. They also commented that we can make recipes with fruit peels, and the foods used in the recipe will not need to go into the compost bin. A recipe for a "Vegetable Magdalene" pie was created to introduce children to the possibility of reusing food. This recipe used leaf stalks and vegetables, made by the mother of a student in the class.

An increasing interaction between children and graduation students at the University was observed, in addition to the compost bin, other environmental education activities were developed, such as: making the birdseed head doll, planting arugula seedlings, recreational games (separation of recyclable materials), collecting seeds and leaves from the park and pasting them on posters, collecting recyclables

in the CCIn park to clean the environment and creating a memory game about the children's favorite fruits.

Some reports from children during their stay at the daycare center drew attention. Some children at snack time questioned why the cornstarch biscuit was being offered to them, given that this food was not on ``A Senhora Roda dos Alimentos`` but kept in the woman's bag (as it was not healthy – industrialized). It was explained that this food is not offered every day, but what happened was important for proposing to the daycare management a review of the menu with the guidance of the campus nutritionist.

On another day, a student questioned his father who offered him a stuffed cookie at the classroom door: “Teacher, is this cookie on ``A Senhora Roda dos Alimentos``? It is not!” - answering himself to his father and who had the support of the teacher.

During free play, children used plastic toys with Velcro made of fruits, vegetables, and processed and industrialized foods. They classified the foods, talking to each other about whether they would take the healthy foods and put them in the shopping cart and leave the unhealthy ones in the supermarket basket.

At another point, playing house, they pretended to be the family cooking, and one child made chocolate cake. At that moment, another child said that he is not in the food circle. Another responded that if you don't eat it every day and in small quantities you won't have any problems. And therefore, the game continued....

The end of the SD was with the staging of the story “*O Grande Rabanete*” by the children, which culminated in the theme of the closing party of the year 2022, with the same theater staged by the children's parents during the integrative activities of the CCIn Festival in December 2022.

The project also emphasizes the importance of raising children's awareness about healthy eating habits as an integral part of educational policy. It is recognized that the formation of good eating habits from childhood is crucial to promoting health and well-being throughout life. By addressing issues related to nutrition and balanced eating, the project highlights the role of the school and the educational community in promoting healthy food choices and preventing health problems associated with inadequate diets. The importance of providing practical experiences is also highlighted, such as growing food in the school garden, preparing healthy meals and raising awareness about the impact of food on the body and the environment. By integrating food education into the pedagogical proposal, the project seeks not only to provide knowledge, but also to develop skills and attitudes that promote a positive relationship with food and encourage healthy food choices throughout life.

Finally, we believe that with creativity and innovation the future can be redesigned. With knowledge, cunning and wisdom, environmental impacts can be reduced. With the practice of dialogue and tolerance of plural cultures, future generations will be protected. With playfulness and interdisciplinarity, children will learn to take care of our planet.

FINAL CONSIDERATIONS

The intervention project carried out at the “Ermelinda Ottoni de Souza Queiroz” Children's Community Center (CCIn) represented an important step in promoting healthy eating habits and environmental awareness among children aged 4 to 5 years. However, it is necessary to recognize that there were some negative aspects and areas that can be adjusted to improve future similar interventions.

It is essential to recognize the central role of the teacher in the effective implementation of public policies aimed at early childhood education. Teachers play a crucial role as mediators of the educational process, being responsible for translating policy guidelines and objectives into meaningful pedagogical practices appropriate to the context of their classrooms. They have the power to positively influence children's development, both in the cognitive and socio-emotional aspects, through their interactions, planning activities and encouraging learning.

Therefore, investing in the training and development of teachers is essential for the success of educational policies, as they are the ones who, through their committed and qualified performance, can guarantee that children have access to quality education and that the goals established are achieved.

Another point to be considered is the need for a more inclusive approach to dealing with the different realities and needs of children, taking into consideration, issues such as cultural diversity, dietary restrictions and unequal access to healthy foods. This requires greater sensitivity on the part of educators and

an adaptation of activities to ensure the full participation of all students.

Furthermore, assessing the project's long-term impact on children's food choices and behaviors can be challenging, as it requires ongoing monitoring and cooperation from parents and guardians. It would be important to develop more robust monitoring and evaluation strategies to measure project impact and identify areas for improvement.

Finally, it is essential to ensure the long-term sustainability of the project, ensuring that the educational practices adopted are consistently integrated into the school curriculum and that there is a continuous commitment on the part of the institution, educators and the community in general.

In conclusion, although the project has achieved positive results in terms of children's awareness and engagement, there is room for improvement in terms of access to resources, inclusion and impact assessment. By addressing these areas of concern and making necessary adjustments, we can further strengthen educational work aimed at promoting healthy and sustainable eating habits from childhood.

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