



BUILDING HEALTHY EATING HABITS WITH CHILDREN: PRESENTING A RESEARCH AND INTERVENTION PROJECT

CONSTRUIR HÁBITOS ALIMENTARES SAUDÁVEIS COM AS CRIANÇAS: APRESENTAÇÃO DE UM PROJETO DE INVESTIGAÇÃO E INTERVENÇÃO PEDAGÓGICA

CONSTRUYENDO HÁBITOS ALIMENTARIOS SALUDABLES CON NIÑOS: PRESENTACIÓN DE UN PROYECTO DE INVESTIGACIÓN E INTERVENCIÓN

Beatriz CRUZINHA ¹
Teresa SARMENTO²

ABSTRACT: The eating habits adopted by children have become a topic of great importance and, currently, there is a great concern to promote a correct attitude regarding the type of food to adopt. However, in practice, in some educational contexts, children do not adopt healthy eating habits in their daily lives. This article results from the analysis of two pedagogical intervention projects, developed within the scope of the Internship of the Master's Degree in Pre-School Education and Teaching of the 1st Cycle of Basic Education, at the University of Minho, which focused on promoting learning inherent to habits healthy food. In the course of the project, we analyzed concepts and ideas related to healthy eating, with a view to developing skills in terms of adopting healthy eating habits. To this end, we promote, through a holistic perspective of knowledge and learning, practical, creative and meaningful activities, promoting collaborative work between children and between them and adults, in order to achieve the intended intervention and pedagogical research objectives.

KEYWORDS: Healthy eating. Practical activities. Holistic development. Interdisciplinarity.

RESUMO: *Os hábitos alimentares adotados pelas crianças têm se tornado uma temática de grande relevo e, atualmente, existe uma grande preocupação em fomentar uma atitude correta no que respeita ao tipo de alimentação a adotar. Porém, na prática, verifica-se, em alguns contextos educativos, que as crianças não adotam hábitos alimentares saudáveis no seu cotidiano. O presente artigo resulta da análise de dois projetos de intervenção pedagógica, desenvolvidos no âmbito do Estágio do Mestrado em Educação Pré-Escolar e Ensino do 1.º Ciclo do Ensino Básico, da Universidade do Minho, que tiveram como foco promover aprendizagens inerentes a hábitos alimentares saudáveis. No desenrolar do projeto, analisamos conceitos e ideias relativas à alimentação saudável, perspectivando o desenvolvimento de competências ao nível da adoção de hábitos alimentares saudáveis. Para tal, promovemos, através duma perspectiva holística do saber e da aprendizagem, atividades*

¹ University of Minho (UMINHO), Braga – Portugal. Childhood Educator and Teacher of 1st Cycle of Basic Education. Master in Pre-School Education and Teaching the 1st Cycle of Basic Education (UMINHO). ORCID: <https://orcid.org/0000-0002-3430-039X>. E-mail: beatrizcruzinha10@hotmail.com

² University of Minho (UMINHO), Braga – Portugal. Assistant Professor. Department of Social Sciences of Education, Institute of Education. PhD in Children's Studies (UMINHO). ORCID: <https://orcid.org/0000-0002-2371-399X>. E-mail: tsarmento@ie.uminho.pt



práticas, criativas e significativas, propiciando o trabalho colaborativo entre crianças e entre estas e adultos, de modo a alcançar os objetivos de intervenção e de investigação pedagógica perspectivados.

PALAVRAS-CHAVE: *Alimentação saudável. Atividades práticas. Desenvolvimento holístico. Interdisciplinaridade.*

RESUMEM: *Los hábitos alimentarios que adoptan los niños se han convertido en un tema de gran importancia y, en la actualidad, existe una gran preocupación por promover una actitud correcta respecto al tipo de alimentación a adoptar. Sin embargo, en la práctica, en algunos contextos educativos, los niños no adoptan hábitos alimentarios saludables en su día a día. Este artículo resulta del análisis de dos proyectos de intervención pedagógica, desarrollados en el ámbito del Internado de la Maestría en Educación Preescolar y Enseñanza del 1er Ciclo de Educación Básica, en la Universidad de Minho, que se centró en promover aprendizajes inherentes a los hábitos de alimentación saludable. En el transcurso del proyecto, analizamos conceptos e ideas relacionadas con la alimentación saludable, con miras a desarrollar habilidades en cuanto a la adopción de hábitos alimentarios saludables. Para ello, promovemos, a través de una perspectiva holística de conocimiento y aprendizaje, actividades prácticas, creativas y significativas, fomentando el trabajo colaborativo entre los niños y entre estos y los adultos, con el fin de alcanzar los objetivos de intervención e investigación pedagógica pretendidos.*

PALABRAS-CLAVE: *Alimentación saludable. Actividades prácticas. Desarrollo holístico. Interdisciplinariedad.*

Introduction

This text results from the research developed in the internship scope, integrated in the study plan of the Master's degree in Pre-School Education and Teaching of the 1st Cycle of Basic Education, of the Institute of Education of the University of Minho, having been carried out in two moments: the first in kindergarten, with a group of children aged between 3 and 6 years, and the second in a room of the 1st year of the 1st Cycle, with students aged between 6 and 7 years. This article is based on a project that houses two fundamental dimensions, articulated among themselves, research and pedagogical intervention. Thus, it is intended to analyze the implementation of pedagogical strategies used in order to enhance healthy eating habits in children, based on their participation in the entire educational process.

The development of the project was supported by a constant critical and reflective thinking, allowing us to become conscious professionals, with an attentive posture and with a sensitive look in view of the complexity of the educational reality and the problems associated



with it, enabling the transformation and change of the environment and educational practices, as well as the promotion of significant teaching-learning moments, through a pedagogical practice focused on socio-constructivist ideals.

Thus, it seeks to understand, through research and constant reflection, the potentialities of the activities that have been implemented, related to healthy eating, to the integral development of the child and to the achievement of useful skills for life at the level of health and well-being, since "the experiences of bonding in childhood and the education that is received in the first years of life until adolescence are determinant in the adoption of attitudes and behaviors related to health" (LOUREIRO, 2004, p. 44, our translation).

The motivation for the implementation of this project and the realization of this research was essentially related to the observation made during the first weeks of internship, in which we sought to understand the interests and needs of the children. During this time of participant observation, the gaps in the children's feeding were notorious, although in the children of the 1st Cycle, these gaps were less evident. The development of the projects was based on a holistic perspective of knowledge and learning, involving children in the planning, execution and evaluation of activities, always with an educational intention.

From the above, we feel compelled to explore the theme of food, because we understand that in this way, we could help to sensitize children and even adults, to the importance of a correct diet for our health and well-being. We would like to be able to help in this regard by seeking to contribute to the improvement of the eating habits of these children, since "for the little ones, strategies that include exposure to food in a positive social context, with parents and adults as reference models, as well as the appropriate use of incentives are particularly important" (LOUREIRO, 2004, p. 44, our translation).

Thus, through the action research project, entitled *Let's Eat Well! - An educational project for the adoption of healthy eating habits*, the objective was the integration of healthy habits in children's daily lives, in a more structured and supported context, in order to favor their learning, as well as their daily health and well-being.



Characteristic of the context and definition of the intervention-research

In order to characterize the pedagogical context, we start mainly from the observation, the interactions created with the actors of the educational action and the analysis of the institutional documents made available.

In this sense, the Grouping of Schools concerned is presented, which belongs to the district of Braga and consists of ten establishments, which cover teaching from Pre-School Education to Secondary Education. In addition, it is considered a reference grouping for bilingual education of deaf students, providing several support technicians. Its educational project defines as a priority objective to ensure a stable learning, framed in the programs of disciplines and curricular areas, contributing to the improvement of society through the training of critical, creative and responsible citizens.

The Preschool Education group with which we implemented the project consisted of twenty-four children (n=24), aged between three and six years. This group had a great cultural diversity, integrating children of different nationalities, most of them Brazilian. The children were participative and interested, and we respected their rhythms and used strategies appropriate to the group, thus promoting their learning, since the child has "the right to be heard in decisions related to their learning and to participate in the development of the curriculum" (SILVA *et al.*, 2016, p. 31, our translation).

The 1st year class of the 1st Cycle, with which we had the opportunity to intern, consisted of nineteen students (n=19), aged between six and seven years. Moreover, the class presented a great cultural diversity, integrating children of Brazilian, Spanish, Portuguese and Turkish nationality, assuming, from the beginning, that diversity should be "seen as a privileged means to enrich the experiences and learning opportunities of each child" (SILVA *et al.*, 2016, p. 10, our translation).

The students were communicative and committed. However, the difficulty they had in working collaboratively was visible; this being one of the parameters in focus, worked persistently, using relevant strategies in which children could experience new activities, explore spaces and experience new experiences.

Finally, we stress that knowledge of the educational context is vital for carrying out activities that are effectively meaningful and appropriate to the reality presented, as well as to the needs and characteristics of each child, so we must take into account their individuality, their cognitive and emotional development and their socio-economic and cultural situation.



Theoretical framework

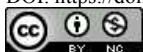
This topic will present the theoretical support that, in our perspective, will help to understand the importance of promoting healthy eating habits in the initial education of children. We affirm the participation of the child as a fundamental principle in the teaching-learning process, in order to make it more consistent, meaningful and of quality. Moreover, for this to be possible, it is crucial to address the role of the School and the Educator/Teacher in promoting healthy eating habits, also understanding the changes necessary to think about the school in the current context.

Importance of healthy eating for health and well-being

Feeding is a complex process, not restricted to biological need; that is, to eat food to sustain the vital needs of each individual, but we also use it as a way to obtain pleasure, to live with other people, to control various anxieties, among many other factors. It is clear that food transposes biological conditions, and is also influenced by religious, cultural, affective, social or geographical aspects (ZANCUL, 2017). Food is lived in a different way by each person and by each people, since it presents a disparate meaning for each one, thus being seen as a "trait of identity" (LOUREIRO, 2004, p. 43, our translation).

The food is very important, it is a vast theme and explored by several professionals. Within the theme, the promotion of healthy eating habits should be an aspect to highlight, since it is an essential and determining factor of the health and quality of life of each person (ZANCUL, 2017). Having said that, the abundance of factors that hinder the promotion of healthy eating habits in individuals is irrefutable, some of them: "sociocultural values, body image, physiological needs and individual health, preferences, social coexistence (family and friends' habits), family financial situation, access to food outside the home and semi-prepared foods, influence exercised by the media" (LOPES; DAVI, 2016, p. 106-107, our translation).

The lifestyle we have observed over the last few years leads to sedentary lifestyle and this comes from the scarce nutritional orientation, which will lead to an increase in the obesity rate, thus compromising the physical and mental health of people who go through this situation (SOARES; OLIVEIRA, 2004). Thus, it should be noted that poor eating habits combined with lack of physical exercise can cause a high number of diseases. Consequently, it is central to proceed quickly, through appropriate actions and measures, in order to prevent these diseases and improve the quality of life of individuals (LOPES; DAVID, 2016).





With the pandemic that plagues the country, obesity has become a more active and more difficult reality to control. During this period, it was necessary to make important decisions that were impacting not only on the education of children and young people, but also on their diet. With the passage from a face-to-face teaching to an online teaching, some children no longer have access to the school meal that is considered a "safe and balanced source of food, being, in some cases, the only meal with these characteristics accessible to several students" (SOUSA *et al.*, 2020, p. 6, our translation). In addition to this obstacle to the adoption of healthy eating habits, the economic situation of some families was also compromised, making it difficult to access nutritious foods. On the other hand, physical activity, which is also an essential element for combating obesity, was also compromised with confinement, since children began to spend more time in front of the computer, leaving aside the physical activity they developed at school. Thus, it is evident that, if in Portugal the problem of childhood obesity has increasing and worrying values, with the pandemic and consequent confinement, these values tend to worsen, thus being crucial a cohesive and significant intervention in the area of physical and food education, in order to instill healthy eating habits that will prevail throughout life.

In order to create healthy eating habits, we must take into account the quality of food, but also the quantity (ME, 2006). It is important to note that the quantity and quality of food has been changing over time. Currently, it is "more common to intake processed foods, frozen, high in sodium, sugars and saturated fats - foods of high energy value and low nutritional value" (LOPES; DAVI, 2016, p. 106, our translation), thus having a "substantial increase in caloric intake" (ME, 2006, p. 31), and the human being is not physiologically capable of this instability, which translates into an unbalanced and low-quality diet (*ibid.*). In addition, it is emphasized that the lack or excess of nutrients can lead to a fragility in health, causing several diseases that influence a "low school performance and little stimulus in learning" (SOARES; OLIVEIRA, 2004, p. 2, our translation); thus, it is central to promote healthy eating habits in children and young people, so that their school and future professional performance is productive and significant, increasing their self-esteem and willingness to learn more and better.

It is emphasized that "in the general food context there is no prohibited food, but rather, there are those that should be consumed moderately" (SOARES; OLIVEIRA, 2004, p. 10, our translation). The intake of fruits and vegetables, combined with the practice of physical exercise, is truly important for people's health (LOUREIRO, 2004); it is equally important that the diet is varied, balanced and complete, that is, that includes all foods, taking into account the most appropriate servings of each of them. Contact with other people at mealtimes is fundamental because it reinforces affective bonds and interpersonal relationships. The



preparation of dinners with family or friends, in which everyone is seated at the table friendly and in which a healthy diet prevails, constitutes a pleasant and productive conviviality, since it allows the promotion of healthy eating habits, the creation of meaningful relationships and the construction of a rich personality.

In this way, it is undeniable that the behaviors and the aptitude to make healthy choices stems from the will of each one and the skills he has achieved. The way each person eats says a lot about himself, it reflects the way he interacts, the magnitude that he gives to food, his economic situation, his culture, the way he treats himself (LOUREIRO, 2004).

Food says a lot about each of us and influences our health and our life, so it is really crucial to act quickly at early ages, in the family and school environment, with the help of family members and the entire educational community, in order to reduce the problems associated with the scarcity of healthy eating habits. Therefore, as Soares and Oliveira (2004, p. 4) state, "throughout life, human beings will experience conditions of disease or health, depending on their eating habits and general conditions of well-being".

The participation of the child as a fundamental principle in the teaching-learning process

"Compulsory schooling is for and for all, promoting equity and democracy" (GOMES *et al.*, 2017, p. 13, our translation). The school integrates a great diversity of children/students, regardless of their socio-economic and cultural conditions, but also regardless of the cognitive and motivational conditions of each one/a. Thus, it is worth emphasizing that all children/students should have the right to access and participation in all educational contexts (GOMES *et al.*, 2017).

Having said that, it is undeniable that the education of children and young people should be effectively meaningful, creative, stimulating and truly enriching, and the entire educational community should be governed by rich values and concepts for the construction of responsible, fair, respectful and supportive citizens, since, as shown in the document *Profile of students leaving compulsory schooling*, "in the face of others and the diversity of the world, change and uncertainty, it is important to create a balance between knowledge, understanding, creativity and critical sense. It is about forming autonomous and responsible people and active citizens" (GOMES *et al.*, 2017, p. 5, our translation). Thus, it is essential that the educational action is flexible and coherent to ensure that children/pupils have access to learning and participation (GOMES *et al.*, 2017).



The child has the right to be free, share ideas, propose activities or games, plan with the teacher, experiment, explore and reflect on what he has developed, so as to understand what went well and what went less well, but also what could change for the activity to run better, allowing the construction of his learning, in a dynamic, different and conscious way. The development and learning of the child occur in a context of social interaction, in which the child plays a dynamic role. Since birth, the child has a huge energy potential, a natural curiosity to understand and give meaning to the world around her, being competent in relationships and interactions with others and open to what is new and different (SILVA *et al.*, 2016, p. 9).

For teaching and learning to be truly rich and of quality, it is first crucial to recognize the child's ability to build their development and learning. Thus, the educator/teacher as well as the entire educational community should recognize the child as being a "subject and agent of the educational process", that is, to know their experiences and experiences, admire their learning and competencies, which are unique and distinct from child to child, and rethink them in order to promote the development of all their potentialities. Thus, the child has an active role in their learning, since they have the "opportunity to be heard and participate in decisions related to the educational process, demonstrating confidence in their ability to guide their learning and contribute to the learning of others" (SILVA *et al.*, 2016, p. 9, our translation). Therefore, it should be emphasized that one should always rely on the abilities of children, because they are capable beings, unique and competent, since, as Barbosa e Silva (2013, p. 129, our translation), "when entering school, the child is not a shallow tactile that can be shaped by the teacher according to the way he prefers. She is equipped, has her own cultural skills."

In addition to recognizing the child as a competent and capable being, it is important that there be collaborative work between them and their peers, as well as with educators/teachers, in order to make teaching and learning more fruitful and rich, "learning to know, learning to do, learning to live together and to live with others and learning to be are elements that must be seen in their various relationships and implications" (GOMES *et al.*, 2017, p. 5, our translation), given that "the interactions that the child establishes with adults and other children, as well as the experiences provided to him by the social and physical contexts in which he/she lives, constitute learning opportunities, which will contribute to their development" (SILVA *et al.*, 2016, p. 8, our translation). Moreover, the way children create their relationships and interactions with the world and with others enables the development of attitudes and values that integrate the foundation of quality and successful learning, not only throughout their school education, but also throughout their life, promoting an autonomic citizenship, conscious and supportive (SILVA *et al.*, 2016).





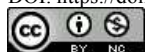
In addition to the child being seen as a competent and capable local being, it must also have a voice and turn, and the collaborative work and the relationships and interactions it establishes allow its development. Thus, the child is participative and co-constructed of his teaching and learning process, because, as Sarmiento states (2018, p. 62, our translation):

The recognition of children's right to play an active and creative role in their own life, in a pedagogical process in which learning is built, a co-construction between children and adults, no longer only as an effort-response of the adaptation of the former in the face of the expectations of the others, but as a result of multiple processes of intergenerational socialization that enable the affirmation of various citizenships in which one and others influence each other because they live interactively long lifetimes.

In addition, it is clear that the child has the opportunity to participate and cooperate in the management of the daily routine and in the organization of the educational space, since it should share their ideas and opinions, exposing their interests and motivations, in order to make the educational space captivating and interesting for the development of activities, providing quality teaching-learning. Regarding the daily routine, it should be thought of by the adult, but built with the child, so that the child knows the succession of events, organizing and becoming increasingly autonomous and independent (OLIVEIRA-FORMOSINHO, 2013), since, when the daily routine is "sequential, stable, predictable [*sic*], gives the child a feeling that they have some control over what will happen next" (HOHMANN; WEIKART, 2003, p. 235, our translation).

Finally, it is evident that the child is capable, unique, competent and rich in experiences and experiences that promote new learning. In this way, it has the central role of being co-builder of its own teaching and learning process, intervening at all times of its daily routine, sharing its interests, exposing its ideas and organizing the space and daily routine in collaboration with colleagues and adults, but also planning and reflecting on the activities developed, enrich and promote truly meaningful, creative and stimulating learning.

In a result, all children have a set of experiences and knowledge that have accumulated throughout their lives, in contact with the environment around them. It is up to the school, educators/teachers and the entire educational community to value, strengthen, expand and initiate the systematization of these experiences and knowledge, in order to allow children/students to carry out more complex further learning (ME/DEB, 2004).





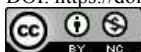
Benefits of promoting healthy eating habits in early education of children

The admission of healthy lifestyles by individuals is crucial, because it enables the protection of health and the prevention of diseases, since, however competent and higher quality health services, they cannot prevent people's health without health services and people themselves not working in as a supporting "actor". Having said that, we emphasize that healthy lifestyles "are above all the result of combating risky behaviors and acquiring knowledge and skills necessary for the adoption of healthy habits and routines" (ME, 2006, p. 5, our translation). Thus, in order to acquire knowledge and competencies that are effectively crucial for the adoption of healthy habits and routines, it is essential to intervene early. Because of this, it is during childhood that the child is more willing to retain and grasp knowledge, since it is at this stage of life that the building of values, care, social rules, affectivity, among others, will be taken by the child throughout the course of his life is promoted. Therefore, it is undeniable that childhood is an indispensable phase for the development of the human being (RAMBO; ROESLER, 2019).

Consequently, the school, as it has the fundamental function of promoting values, knowledge and ways of life, should provide opportunities for moments that highlight the relevance of health, providing learning related to the importance of enjoying healthy eating habits, for the benefit of the subject and society in general (SOARES; OLIVEIRA, 2004). The school should then promote healthy eating habits through a holistic perspective of knowledge, linking several contents, so that the child can understand the importance of eating in a pleasant and beneficial way for his/her health (LOPES; DAVID, 2016). Thus, we emphasize that among the objectives "of Food Education is to prepare individuals for healthy and conscious food choices" (ZANCUL, 2017, p. 15, our translation). Therefore, it is central that their models guide their daily routine based on a healthy diet, because the child tends to guide their choices taking into account the actions of their models and not their testimonies. As Vinha (1999, p. 22, our translation) reinforces, stating that,

for the child to learn respect, he has to live in an environment of respect. To learn to speak low, you have to talk to her low. If children wear uniform, teachers have to wear too. [...] The model has to be exemplary and this is fundamental. The child will not follow the messages passed verbally, orally. She's going to follow the behavior. That's why the posture has to be very exemplary.

Having said that, it is possible that if we want a child to learn and guide their life in the light of healthy eating habits, it is crucial that their models also review their diet based on





healthy eating habits, since the child reproduces the actions of the models and not the information, they transmit to them (LOPES; DAVID, 2016). Consequently, the school has a fundamental role, which is in this space that children and young people spend most of their day, and in the initial ages are created the most opportune moments for the structuring of appropriate dietary decisions, being these determinants in the admission of important actions and practices for the health of children (LOPES; DAVID, 2016; LAUREL, 2004). For these moments of learning to become enriching, it is important that there is the intervention of an adult who dominates the concepts related to food and physical activity, in order to enable the construction of healthy relationships, since they are important for health promotion (SOARES; OLIVEIRA, 2004).

Although these eating habits are formed in childhood, due to the influence of several models, having repercussions on their future behaviors in adults, they may undergo changes over time, taking into account the environment in which they live (LOPES; DAVID, 2016; LOUREIRO, 2004) and the greater or lesser service to the knowledge that is being produced about this area. Given that there is a facility in obtaining "processed and nutrient-poor foods" (SOARES; OLIVEIRA, 2004, p. 3, our translation), children and young people find it difficult to understand which foods are effectively healthy, eventually interfering in the eating habits that the child prioritizes. Therefore, this theme becomes indispensable in the classroom, a place where the child questions, reflects, dialogues and learns more about food and health, expanding knowledge (SOARES; OLIVEIRA, 2004). In line with these learning moments, it is crucial that they provide children with "a food supply in which the main caloric source is based on complex carbohydrates, such as cereals or potatoes, and the possibility of achieving an energy balance between the calories provided by food intake and spending on physical activity" (LOUREIRO, 2004, p. 49, our translation).

Finally, the development of eating habits is part of the building of the personality of every human being (SOARES; OLIVEIRA, 2004). It is important to intervene at early ages, working this theme throughout children's lives in a continuous and coherent way, through dynamic and meaningful activities, promoting healthy eating habits, putting health at first instance.



The role of the School and the Educator/Teacher

Food choices take into account several factors, namely: "economic, social, family and environmental" (LOUREIRO, 2004, p. 53, our translation), thus being central to the mobilization of the whole community, so that this situation is improved, allowing the stabilization of healthy eating habits. Thus, it is evident the importance of collaborative work among parents, educators/teachers, educational community, government and society, in favor of the goal of a healthier society, promoting healthy habits in younger generations.

As the educator/teacher, the family and the school have an essential role in the education of children and these are as a mirror for them, it is essential that actions and activities aimed at food education, as well as for the promotion of physical activity at school, as this is the context in which children spend more time, in order to promote their quality of life (LOPES; DAVID, 2016).

With regard to the school, it should think in such a way as to "educate to eat well" (LOUREIRO, 2004, p. 45, our translation), developing the "physical and social environment" (LOUREIRO, 2004, p. 45, our translation), so that the child acquires skills and knowledge, in order to make healthy decisions more easily. Thus, the School of Health Sees the child as a healthy and capable human being. It aims to address several themes simultaneously and in a comprehensive way, such as "food, physical activity, smoking behaviors and the relationship with others and with the environment" (LOUREIRO, 2004, p. 45, our translation), in order to integrate learning and skills.

The school should then provide activities and create scenarios that value healthy eating, through various curricular areas, but also the food supply they present to children/students, in order to make them able to make the right decisions. Together with these aspects, it is essential that educators/teachers are able to work holistically on the various contents, having the essential knowledge regarding healthy eating habits (ME, 2006; PEREIRA, NUNES; MOREIRA, 2020). It is essential to improve food interventions in order to modify and improve food practice in the long term, always keeping in mind the knowledge and importance of food for health (PEREIRA; NUNES; MOREIRA, 2020, p. 6, our translation):

the provision of healthy eating, the implementation and maintenance of pedagogical school gardens, the interpretation of the food pyramid, the realization of experimental cooking workshops with students, the insertion of the theme in the school curriculum and classroom approach by educators, oral exhibitions, group dynamics, directed reading, use of videos, films and staging, formation of the school community, as well as the development of





social technologies that benefit it, with a view to preserving and recovering food culture.

Moreover, it is essential that the child has the possibility to actively work in the preparation and execution of the implemented activities, promoting the construction of new learning, the creation of healthy eating habits, through the exploitation and consumption of various foods, and the autonomy of the child (LOPES; DAVID, 2016). The child has "the possibility of making choices and making decisions, progressively assuming responsibilities for their safety and well-being [...], gradually demonstrating awareness of the dangers they may run and the importance of healthy habits" (SILVA *et al.*, 2016, p. 36, our translation). Because of the relevance of this issue, the school's food offerings are at the heart of "the concerns of both the World Health Organization and the European Union and the Council of Europe. These concerns relate to the regulation and guidance of the type of food offerings" (ME, 2006, p. 12, our translation).

The school has a duty to offer the child "healthy, balanced and safe meals that help to fill the nutritional needs of young people" (ME, 2006, p. 24), but which, at the same time, are tasty and flashy, pleasing them and improving their eating habits. Having said that, it is clear that access to foods that favor the onset of diseases should be made difficult and the obstacles that hinder access to healthy foods should be reduced (LOUREIRO, 2004; ME, 2006). The place where the child eats, should be welcoming and have a harmonious environment, since during meals the child lives with peers and educators / teachers, strengthening emotional bonds (ME, 2006).

Finally, if healthy eating is a dynamic, creative and meaningfully developed theme in the school context, they will be sensitized about the importance of governing themselves for a life guided by healthy eating habits, thus preventing diseases (SOARES; OLIVEIRA, 2004).

With regard to the educator/teacher, as this is very close to the child, it is essential that you attend courses to enrich their training, in order to understand the most relevant and significant aspects related to food, developing in line with children activities promoting healthy eating habits, always taking into account their age socio-economic and cultural situation (LOPES; DAVID, 2016; ZANCUL, 2017). It is essential that there are "changes in school materials in order to deepen the discussion and understanding that Food Education extrapolates biological issues and is deeply related to emotional, social, economic, cultural and behavioral aspects" (ZANCUL, 2017, p. 20, our translation).

In addition to educators/teachers, parents/guardians play a fundamental role in children's food education, as they are seen as an example and have a stronger interaction with them, and



it is also in the family environment that the child begins to feed, and, therefore, it is in this context that he begins his learning (PEREIRA; NUNES; MOREIRA, 2020). In this way, the school should make sure that the family is integrated, strengthening the learnings learned by children, in relation to the importance of food for our health and well-being (SOARES; OLIVEIRA, 2004). However, parents/guardians should, at home, reinforce the knowledge built in the school, through the importance they give and the way they organize meal time, providing healthy food and in adequate quantities, assisting children in their food options (LOUREIRO, 2004; PEREIRA, NUNES; MOREIRA, 2020). Thus, as stated by the Ministry of Education (2006, p. 28, the author's griffin, our translation),

Parents and guardians play a key role in *the Food Education* of their children/learners. From an early age they have the role of transmitting knowledge, revealing eating behaviors that help the subsequent modeling of healthy behaviors of their children/students. [...] Thus, schools and families must cooperate towards an education for healthy eating. Parents/guardians may have a proactive attitude towards the school, requiring them to provide healthy food and meals.

In a way, educating for healthy eating is the responsibility of society. Thus, it is not only parents and educators/teachers who have this burden, but also the neighbors, the owners of the food trade, friends and all citizens, in order to create a new food orientation that values healthy eating practices and is reflected in the future, favoring the health of all citizens (LOUREIRO, 2004). After this, it is essential that the school's food supply, the concepts related to food present in the curriculum and the actions practiced by the children's model people are concordant and cohesive, so that the knowledge seized is really significant. Therefore, this knowledge will accompany the child throughout his life, providing him/her with a healthy life, in which health and well-being will be present (ME, 2006). Finally, as Lopes and David (2016, p. 125) point out, "only by joining forces will we achieve a more conscious, healthy and happy population.

Goals

Based on the knowledge previously constructed and in accordance with the principles set out above, the objectives of this investigation were:

- a. Identify children's initial ideas/conceptions on the subject of healthy eating for health and well-being;
- b. To analyze the benefits of children's participation in awareness-raising activities for the construction of healthy eating habits;



- c. Seek strategies to involve the family in the care of healthy eating, health and well-being, in the day-to-day of the child.

Methodology

As the project was guided through an investigative character, the action-investigation methodology was adopted, since it is a "research methodology, essentially practical and applied, which is governed by the need to solve real problems" (COUTINHO *et al.*, 2009, p. 362, our translation), but also because it is an added value in the process of training and learning of the educator/teacher, since it requires a critical and reflective positioning related to his intervention. Moreover, in the action-investigation methodology there are several phases that are continuously expressed: planning, action, observation and reflection. Therefore, they foster reflexive experiences, assuming themselves as a deeply adequate methodological option, because they are in correlation with the reflexive, participative and collaborative dimension underlying the socio-constructivist view that guided the practice.

This methodology allows adjustments to be adjusted in view of the reflections made and the ideas that arise from children and adults, because research and practice must be associated, revealing the need for a "committed collaboration and reflexive, critical and systematic evaluation" on the practice, with the main purpose of improving the action (MÁXIMO-ESTEVEES, 2008, p. 20, our translation), allowing the child to be co-builder of their learning process, always valuing their participation and allowing an improvement in educational quality in view of the specificity of the contexts.

Data Collection Tools

The teacher should collect information about his intervention, in order to be able to analyze his practice, always taking into account the reality in which he is inserted.

In this sense, throughout the intervention, we selected the techniques and instruments that best suited the groups. Therefore, in order to understand the impact of the activities provided and to understand the relationships and interactions established between children and adults, we carried out systematic and participatory observations, documentary analysis and the performance of audiovisual records. In order to complete these data collection instruments, we dialogued with the children and the educator/teacher, the realization of field notes, the analysis of the children's records and the elaboration of weekly reflections, constructed with the aim of



reflecting on each week of internship, since, in this way, nothing is lost of what was spoken and carried out by the children. For the construction of these reflections, the data collected through the other techniques used were always taken into account, in order to improve the implementation of the project, improving our practice.

Intervention plan in Pre-School Education

The activities provided in the context of EPE were intentionally supported by the holistic integration of the Content Areas provided for in the Curriculum Guidelines for Preschool Education (SILVA *et al.*, 2016). In order to implement a versatile and significant project, we respect the ideas and opinions of the child, as well as their individuality, the characteristics of the educational context, considering the cycle "observe, plan, act, evaluate", supported by various forms of registration and documentation (SILVA *et al.*, 2016).

During the practice of supervised teaching I, we began with a time of participant observation, in which we had the opportunity to know the practices of the educational context; observe the interactions between children and with the elements of the educational community; know the needs and interests of children; develop activities in line with the Educator; talk, creating a closer relationship with everyone. After this period of participant observation, the implementation of the project took place, in which the children were co-builders of their learning. We emphasize that these two periods are interconnected, since the former allowed continuity and coherence in the implementation of the project. Finally, the ten activities provided allowed the argumentation, dialogue, articulation of knowledge, development of learning, collaborative work, the promotion of fundamental values for the building of responsible, autonomous and respectful citizens, among many other aspects.

Table 1 - Project activities carried out in Pre-School Education

Name	How it came about	Description	Promoted content area
What to put on the plate!	It arose from the need to understand children's eating habits.	<ol style="list-style-type: none"> 1. We begin with a moment of conversation, in which I asked the group several questions to understand their views on food; 2. We divide the group into three, taking into account their ages, and put a plate on each table; 3. Search for the preferred food, in magazines, and feed them; 4. We observed each dish and reflected whether the selected foods were healthy or not and why. 	<ul style="list-style-type: none"> • World Knowledge Area • Mastery of Oral Language and Approach to Writing • Personal and Social Training Area • Mastery of Artistic Education (sub-mastery of visual arts)





<p>Let's do a puzzle!</p>	<p>The activity arose from a conversation with a child.</p>	<ol style="list-style-type: none"> 1. We read the work "The boy who did not like soup" and analyzed it, taking into account the theme of food. 2. We made the syllabic division of some words and identified sets of words that rhymed; 3. Then the children chose one of the food drawings and painted them freely; 4. After painting, they glued the drawing on cardboard and cut them into pieces, which were laminated; 5. The kids put together the puzzles and kept them. 	<ul style="list-style-type: none"> • World Knowledge Area • Mastery of Oral Language and Approach to Writing • Personal and Social Training Area • Mastery of Artistic Education (sub-mastery of visual arts) • Mastery of Mathematics
<p>Food traffic light!</p>	<p>To understand whether children knew how to distinguish healthy foods from less healthy foods.</p>	<ol style="list-style-type: none"> 1. Visualization of a video on the importance of various foods and dialogue analysis of it; 2. We built the traffic light, addressing the importance of it for road safety; 3. The children cut food from magazines; 4. In a large group, each child was keeping the food in the traffic light in the corresponding color, taking into account that in green were the healthy foods, in yellow the intermediate and in red the unhealthy ones; 5. We analyze the traffic light and conclude which foods we should avoid and what to eat. 	<ul style="list-style-type: none"> • World Knowledge Area • Mastery of Oral Language and Approach to Writing • Personal and Social Training Area • Mastery of Artistic Education (sub-mastery of visual arts) • Mastery of Mathematics
<p>The "our" food wheel!</p>	<p>One child said we'd have to do the food wheel.</p>	<ol style="list-style-type: none"> 1. We learn a song about the food wheel and dialogue on the subject; 2. We built the food wheel in a large group; 3. We fill the wheel with food represented through drawings, collages, food packages; 4. We write the designation of each part and attach the wheel to a wall of the room; 5. Finally, we analyze it and reflect on the distribution and division of our food wheel. 	<ul style="list-style-type: none"> • World Knowledge Area • Mastery of Oral Language and Approach to Writing • Personal and Social Training Area • Mastery of Artistic Education (sub-domains of visual arts and music) • Mastery of Mathematics
<p>Our history!</p>	<p>The idea occurred to two children while talking after the activity of the food wheel.</p>	<ol style="list-style-type: none"> 1. Singing the song of the previous activity and the child who had the idea of the construction of the book explained it to the group; 2. We elaborate a story about food and build its cover, back cover and illustrate it; 3. We order the pages; we plasticize each one of them and bind the work done; 4. We reread the story and the children build props to identify the characters; 5. Finally, the children, in turn, dramatized the story. 	<ul style="list-style-type: none"> • World Knowledge Area • Mastery of Oral Language and Approach to Writing • Personal and Social Training Area • Mastery of Artistic Education (subdomains of visual arts, music and dramatic play/theatre)

<p>On the hunt for food!</p>	<p>The children needed to develop activities in the outer space and learn through this environment.</p>	<ol style="list-style-type: none"> 1. Dialogue about the activities we perform, reflecting on the learning we have acquired; 2. Outside, the children searched for cards representing various foods and headed to the center of the camp, where they overcame obstacles; 3. At the end of the obstacles, they placed the card in the most correct meal taking into account the food represented; 4. At the end of the placement of the cards we observed the food in each meal and reflected whether they were suitable, taking into account whether they are healthy or not. 	<ul style="list-style-type: none"> • World Knowledge Area • Mastery of Oral Language and Approach to Writing • Personal and Social Training Area • Physical Education Domain
<p>Our beanstalk!</p>	<p>Observe plant growth, realizing that we can obtain healthy foods.</p>	<ol style="list-style-type: none"> 1. Reading "The John and the beanstalk" and later dialogue; 2. As in the work, each child planted his bean, taking into account the appropriate procedures for germination to occur successfully; 3. Each child illustrated his castle and placed it next to his bean, watching and caring for it over the days, so as to see if his beanstalk would grow to the castle, as in the story heard. 	<ul style="list-style-type: none"> • World Knowledge Area • Mastery of Oral Language and Approach to Writing • Personal and Social Training Area • Mastery of Artistic Education (sub-mastery of visual arts) • Mastery of Mathematics
<p>The vegetable garden in room 2!</p>	<p>The idea of the activity arose during the previous one, in a large group conversation.</p>	<ol style="list-style-type: none"> 1. Observe a "carpet" that shows the places from which the food that comes to us originates; 2. We focus on the vegetable garden and analyze the part of the wheel to which the food from it belongs; 3. We observe the plants, build the vegetable garden (exterior); 4. Finally, we develop identification plates of the plants and stick them next to the respective plant. 	<ul style="list-style-type: none"> • World Knowledge Area • Mastery of Oral Language and Approach to Writing • Personal and Social Training Area • Mastery of Artistic Education (sub-mastery of visual arts) • Physical Education Domain
<p>The food data!</p>	<p>Greater family involvement in the learning process of children, promoting healthy eating habits within the family.</p>	<ol style="list-style-type: none"> 1. Dialogue about the activities we develop and the knowledge and learning they have acquired; 2. In order to make learning even more fun, we decided to elaborate the game of the data; 3. We observed a game data and each child built his own, and on each side, a healthy task was designed that the child has to perform. 4. Then the planning was glued together, we played and the children were left with a task to fulfill; 5. The data was taken home so that the children could play the game with their family, providing the adoption of healthy eating habits. 	<ul style="list-style-type: none"> • World Knowledge Area • Mastery of Oral Language and Approach to Writing • Personal and Social Training Area • Mastery of Artistic Education (sub-mastery of visual arts) • Physical Education Domain



<p>Our Christmas presents!</p>	<p>This activity came about because the children asked to take home some of the elaborate work.</p>	<ol style="list-style-type: none"> 1. We approach Christmas and typical food at this time; 2. We decided that they should take home the games they built to play as a family; 3. Each child decorated his Christmas bag the way he wanted, using the materials he wanted, later placing his work inside; 4. On the bag's wings we put a note on food, in order to sensitize parents to the relevance of promoting healthy eating habits, most notably in children, accustoming them from a young school to be careful with the foods they eat. 	<ul style="list-style-type: none"> ● World Knowledge Area ● Mastery of Oral Language and Approach to Writing ● Personal and Social Training Area ● Mastery of Artistic Education (sub-mastery of visual arts) ● Domain of Mathematics
---------------------------------------	---	--	--

Source: Portfolio of internship in Preschool Education of the first author

Intervention plan in the 1st Cycle of Basic Education

The activities promoted in the educational context of the 1st Cycle of Basic Education were based on several organizing and fundamental documents for the curriculum, namely in the Curriculum and Curricular Goals for the Teaching of the 1st Cycle of Basic Education, essential learning and the *Profile of Students on The Way Out of Compulsory Schooling*. These documents were carefully examined as they were essential in the planning of activities, and we took into account other crucial documents. In the preparation of the activities, we considered the various areas of learning, having interconnected the contents, in a cohesive and significant way, so that knowledge and learning were progressively expanded.

During the practice of supervised teaching II, we spent a time of participant observation, in which we had the opportunity to know and observe the educational context, as well as teach in an online context, talk with the children, creating a closer proximity and dialogue with the Official Teacher, in order to know the relevant documentation and discuss strategies to overcome the difficulties imposed by the reality that we go through. Therefore, during the period of participant observation, in distance learning, it was difficult to perceive the needs and difficulties of the group, as well as to create a closer relationship with each child. Over time and the return to face-to-face teaching, we realized that the class presented the same difficulty as the group of children from the first context (EPE), that is, they did not have healthy eating habits.

During the implementation of the project, the children were always aware of it, having contributed to its realization, enriching their teaching-learning process as co-builders. Finally, the eleven activities provided allowed the participation, dialogue, collaboration and construction of rich relationships between children and the educational community, allowing the building of relevant and unique knowledge and learning. In addition, activities were





promoted that articulated the two educational contexts, since these interactions enhance significant and healthy moments.

Table 2 - Project activities carried out in the 1st Cycle

Activity name	How it came about	Activity description	Content area / Programmatic content
The segmented fruits!	Need to understand children's eating habits.	<ol style="list-style-type: none"> 1. We begin with reading the work "The girl who did not like fruit" and explore words that rhyme; 2. We talked about healthy eating; 3. We draw a fruit and draw several segments of line, decorating each space with various materials; 4. We wrote a sentence on the subject of food. 	<ul style="list-style-type: none"> • Portuguese: Orality; Reading and Writing; Initiation to Literary Education • Study of the Medium: To the Discovery of Yourself • Mathematics: Geometry and Measurement • Artistic Education: Visual Arts
The fruit dance!	A lot of children want to work dance and music.	<ol style="list-style-type: none"> 1. We share images of the work elaborated above; 2. We listened to a song about the fruits, sang it and created, together, a choreography for it; 3. The children danced with their families. 	<ul style="list-style-type: none"> • Portuguese: Orality • Study of the Medium: To the Discovery of Yourself • Artistic Education: Music; Dance
The food wheel of the 1st A!	Need to create a guiding thread for the project, and we took into account the children's ideas.	<ol style="list-style-type: none"> 1. We started with the fruit dance, since we returned to face-to-face teaching; 2. We explored the part of the food wheel worked in the two previous activities; 3. We build the food wheel, exploring the geometric figures; 4. We post, in the fruit part, the work elaborated earlier. 	<ul style="list-style-type: none"> • Portuguese: Orality; Reading and Writing • Study of the Medium: To the Discovery of Yourself • Artistic Education: Music; Dance; Visual arts • Mathematics: Geometry and Measurement
The milk-based products and their figures and geometric solids!	Request of the children, since they wanted to start by working the milk-based products.	<ol style="list-style-type: none"> 1. We explore, with the aid of PowerPoint and packages of milk-based products, the figures and geometric solids; 2. We played an online game in order to understand if the students perceived the contents taught; 3. The children were divided into threesomes and decorated the previously explored packages; 4. We post the decorated packages on the food wheel. 	<ul style="list-style-type: none"> • Portuguese: Orality; Reading and Writing • Study of the Medium: To the Discovery of Yourself • Artistic Education: Visual Arts • Mathematics: Geometry and Measurement



<p>The storybook!</p>	<p>Children's request, to explain to them why water is so important.</p>	<ol style="list-style-type: none"> 1. We listened to the story "The little girl who drops water" and, with the help of PowerPoint, we talk about the water cycle and how indispensable it is for Planet Earth; 2. We built "our" book, with cover, back cover and elaborated a story about water; 3. We compile the stories elaborated within the family; 4. We put the water bottle on the food wheel. 	<ul style="list-style-type: none"> • Portuguese: Orality; Reading and Writing; Initiation to Literary Education • Study of the medium: Society • /Nature/Technology • Artistic Education: Visual Arts
<p>The syllabic data of fats!</p>	<p>We felt that the children needed to develop experimental activities.</p>	<ol style="list-style-type: none"> 1. We elaborate the experience of dissolve / does not dissolve, introducing the part of fats; 2. We build, in pairs, syllabic data and play, building words requested with these elements; 3. We form the name of the various fats with the data and put it in the correct part of the food wheel. 	<ul style="list-style-type: none"> • Portuguese: Orality; Reading and Writing • Study of the medium: Society • /Nature/Technology • Artistic Education: Visual Arts • Citizenship and Development: Sustainable development
<p>The finger theater!</p>	<p>This activity arose due to the children's desire to develop a theater.</p>	<ol style="list-style-type: none"> 1. We dialogue about the learning acquired; 2. We explored the length measurements and compared them, through practical examples of food images of the wheel part of meat, fish and eggs; 3. We create a story; we build the finger toys; 4. We recorded the theater of history for Mother's Day. 	<ul style="list-style-type: none"> • Portuguese: Orality; Writing • Study of the medium: Society • /Nature/Technology • Mathematics: Geometry and Measurement • Artistic Education: Visual Arts; Dramatic Expression/Theatre
<p>The 1st A garden!</p>	<p>This activity arose from the children's idea, because they wanted to have a vegetable garden like preschool.</p>	<ol style="list-style-type: none"> 1. We exploit the plants, the parts that constitute it and the essential elements for their survival; 2. The preschool children explained how they made the garden and helped in its elaboration; 3. We made rotating groups: in the vegetable garden and plant in glasses; 4. We fixed the glasses on the wheel and painted the drum; 5. We made identification plates of the planted foods and placed them next to it; 6. Execution of the bean experiment, placing each without an essential element for its survival (water, air, earth, light) and subsequent analysis. 	<ul style="list-style-type: none"> • Portuguese: Orality; Reading and Writing • Study of the medium: Society • /Nature/Technology • Artistic Education: Visual Arts

<p>The numerical quantities of legumes!</p>	<p>This activity arose from the need for children to explore the outer space.</p>	<ol style="list-style-type: none"> 1. We teach the numerical quantities, more specifically the hundred, through the exploitation of legumes; 2. They painted several drawings of legumes; 3. We play elaborate play in outer space, working elasticity; 4. We put on the wheel several bags of legumes with different numerical amounts. 	<ul style="list-style-type: none"> • Portuguese: Orality; Reading and Writing • Study of the medium: Society • /Nature/Technology • Mathematics: Numbers and Operations; Data organization and processing • Artistic Education: Visual Arts • Physical Education: Displacement and Balance
<p>The cereals scattered all over the world!</p>	<p>This activity arose from the need to work multiculturalism.</p>	<ol style="list-style-type: none"> 1. We explore the earthly globe and the world map (oceans and continents); 2. Dialogue on the typical dishes of children's countries; 3. We researched the origin of various cereals and put their image on the map, in the correct country; 4. With pasta, we did operations of addition and subtraction and glued them to the wheel, next to the bags with the cereals. 	<ul style="list-style-type: none"> • Portuguese: Orality; Reading and Writing • Study of the medium: Society • /Nature/Technology • Artistic Education: Visual Arts • Citizenship and Development: Interculturality • Mathematics: Addition and Subtraction
<p>The video - "Discovering Healthy Eating!"</p>	<p>Need to understand the learning acquired during the project.</p>	<ol style="list-style-type: none"> 1. We dialogue about what was essential in the course of activities, creating speeches; 2. We recorded and elaborated the video; 3. We view the video; 4. The children took a souvenir of the project to see and explore with their parents, never forgetting the importance of having a healthy diet. 	<ul style="list-style-type: none"> • Portuguese: Orality; Writing • Study of the medium: Society/Nature/Technology • Citizenship and Development

Source: Stage portfolio in 1st Cycle of the first author

Overview of results in Pre-School Education

In the implementation of the project in the context of supervised teaching I, significant, creative and dynamic activities were planned and carried out in collaboration with the children, based on various aspects, including the intervention objectives, interest, opinion and abilities of each child, as well as the individuality of each child. We work all areas of knowledge and explore the outer space and the natural elements that the environment offers us. That said, we present one of the ten activities provided, during the implementation of the project, in the context of Pre-School Education.



Activity 9 - The food data!

This activity was very important, since, in addition to promoting healthy eating in a dynamic, creative and interactive way, through a game, it also allowed the intervention of parents in the learning process of children, promoting their development. In addition, families, in addition to being informed about what is happening in kindergarten, also have the right to "make contributions that enrich the planning and evaluation of educational practice" (SILVA *et al.*, 2016, p. 16, our translation).

If the child plays the game of the data, daily, with the parents, healthy eating habits will be promoted, since the parents will have to take into account the task that will have to be performed during the day, having to make a meal that puts it into practice. Thus, in addition to the collaboration of parents in the child's learning process, healthy eating habits will also be fostered in a fun way in the child and in his/her family.

The activity began with a conversation and sharing of ideas with the children, on the theme of the activities we were developing, as well as the importance of them, in order to understand whether they provided dynamic, fun and creative moments, capable of promoting meaningful learning. Having put this survey of ideas, we question the children about what a game is, whether it has goals and rules. This moment was important to understand what conceptions the children presented about gambling and data, which are crucial aspects for the development of the activity. In order to make these concepts even more clarified, we chose to show the children a data previously built by us, letting them explore and handle it freely, explaining how we played with it. When the children understood that we were going to build a game for each one and that they would take it home and play with their parents and siblings, they were very enthusiastic and motivated to build the data.

Next, we show the children two plans, one with the indications for parents to understand the game and with drawings that represent these same indications, so that the children understand each of the tasks they will have to perform; the other only with the indications for the parents, and the children who stayed with these plans had to draw and paint the drawings they elaborated. The task represented on each of the faces of the cube was explored with the children, in order to understand whether they assimilated the task they will have to perform when the game was performed. Later, we explained that the data had written words and we asked them why they were there if they could not read them. At the same moment, the children stated:

"The words are there for our parents to know what it is to do, we already know".





"These are instructions for our parents".

After these statements, we understand that the children realized the purpose of the words and, therefore, we continued the activity. The younger children painted the planning drawings because it was easier for them. The older children, on the other hand, elaborated, with our help and supervision, the data that did not present drawings, and the indications were previously covered, so that the children would not be confused. We chose to make planning in this way, since the children who would elaborate it would be few and we would be able to accompany them in the preparation, thus working on other crucial aspects that need to be promoted.

As we advanced in the illustrations, we were questioning what they should draw in each of the squares, in the bottom, in the top, in the middle, on the side that has only one square and in the side that has two squares, in order to promote nodes related to laterality, and they were always asked to make these movements with the body step to the right, front...) before they draw the food in the correct place. This aspect is central, since it allows the child to be "aware of the various segments of the body, its possibilities and limitations, facilitating the progressive internalization of the body scheme and also the awareness of the body in relation to the outer space – left, right, up, below" (SILVA *et al.*, 2016, p. 45, our translation).

At the end of this procedure, the older ones began to paste their data, with our help, since they already have the most developed fine motricity, having managed to finish the activity more quickly. With the cubes finished, we took one of them and each child threw the data, observing the task he would have to perform during the day itself. This moment of play and exploration of an already elaborate data made it possible for children to better understand how to play, motivating them to perform the game, later, in family moments. In addition, it allowed an enriching dialogue to take place:

- "In the data only have healthy tasks." (JR)
- "For only, because our activities are to learn how to eat well." (MH)
- "Yes, we have to eat well every day." (I)
- "The give will help a lot." (JF)
- "I'm going to teach my parents how to eat well at home." (V)
- "Yes, my sister also needs to play my data, she does not eat very well." (RM)
- "And here in the data only has healthy foods." (SI)

The next day, we asked them whether or not they performed the task that had left them the day before. At this point, the children were very interested and eager to be able to talk about their task. As they talked about the task they had to perform and put it into practice, we felt that the activity was very important, since the children were excited to have performed it. Many



children didn't even realize that they were putting in practice healthy eating habits, showing that the execution of the game was fun, captivating and dynamic. Thus, it is evident the importance and benefits of this activity for the sensitization of children to the acquisition of healthy eating habits, being evident the achievement of this great pedagogical objective.

When put into practice with the family, it will be even more interesting and enriching, since adults should participate in the activities, since when the adult enters the activities and games of the child is "supporting the learning process by action and [promoting] the spontaneous desire of the child to learn" (HOHMANN; WEIKART, 2003, p. 88, our translation).

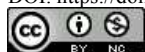
Finally, we emphasize that, despite the pandemic that plagues the country and consequent impediment of direct contact with the parents and families of the children, we seek strategies to involve the family in the care of healthy eating and health, in the day-to-day of the child. Thus, the implementation of the project became even more challenging and stimulating, always struggling to achieve all the objectives of research and pedagogical intervention defined, even though the pandemic has made it difficult.

Global synthesis of the results in the Teaching of the 1st Cycle of Elementary School

In the implementation of the project in the context of supervised teaching II, as in the context of EPE, significant, creative and dynamic activities were planned and implemented in collaboration with the pupils, based on several aspects, including the intervention objectives and the interest, opinion and capacities of each of them. We work in all areas of content, explore the outer space and the natural elements that the environment offers us, we work multiculturalism, we develop activities in an online and face-to-face context and promote activities that articulate the two educational contexts. That said, we present one of the eleven activities provided, during the implementation of the project, in the context of the 1st Cycle of Basic Education.

Activity 8 - The 1st A vegetable garden!

We started the activity addressing the theme of the plants, using as an example the plants that we bring to the preparation of the vegetable garden. We talk about the parts that constitute them (root, stem/trunk, leaf, flower, fruit and also the seed) and the essential elements for their life (air, water, light, earth), as well as the possibility that we have to plant and take care of





foods that we can eat, explaining the possibility of elaborating the garden of the class. During the course of this dialogue, the students stated:

– "We can eat these vegetables and because they are natural, they are healthy, but we have to wash very well."

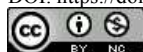
– "We can plant and take care of the foods we can eat, what a cool thing. And so, our food is better."

After the dialogue and while the children went to observe and explore the plants we took, taking into account the parts that constitute it, we went to the EPE room and asked the children if they wanted to go to the first-grade room to talk about the activity we had developed to prepare the garden, and three children were interested.

This type of joint activities allows children to familiarize themselves with the classroom/school they will attend in the 1st cycle, and this joint work should be put into practice more often. A better knowledge and familiarity with the school of the 1st cycle implies a more continuous action and a joint work between educators and teachers and between children of the two levels of education: presentation of projects, exchange of work, visits together, etc., which will include not only the children who will transit, but all the children of the group (SILVA *et al.*, 2016, p. 102). It should also be noted that these interactions and relationships between pre-school and 1st cycle children should exist and be recurrent, since it is essential to familiarize children from both contexts with each other. Thus, the joint work between educators and teachers can be encouraged and foreseen at the level of the educational establishment (SILVA *et al.*, 2016).

The children of Preschool Education explained how they made their garden, why they watered it and the importance it has for them. The pleasure with which they spoke was visible, showing that they still remembered all the procedures performed and the importance of the sun, land, water and air for the survival of plants. In our view, these moments of sharing ideas, opinions and interests among children from different educational contexts and even from the same educational context are enriching because they not only foster communication, but also the creation of stimulating and meaningful relationships and interactions. After this moment of initial conversation, we divided the class, allowing the children to work collaboratively with different colleagues. Thus, some began to elaborate the vegetable garden and others planted in glasses, and this process was rotating.

Throughout the construction of the vegetable garden, the hustle and bustle and joy with which the children were developing it was notorious. Childhood, as discussed, is of vital importance for the role it plays in the formation of the individual, through the construction of





values, social rules of conviviality, care and affection that will accompany it throughout its life, making it more open to absorb teachings (RAMBO; ROESLER, 2019, p. 128)

After all the children planted both in the glass and in the vegetable garden, we watered it, cleaned the room and the outside space and the children of Preschool Education went to their room, in which they told their experience to the other children and the Educator, enthusing them to also elaborate their garden. The fact that children see food produced in their vegetable garden shows that, after all, if we wait, we have patience and take care of our vegetable garden, it gives us natural and healthy food. Then, the students designed the various plants we planted and wrote their names, so that, after being laminated, they would be placed next to their plant.

We developed the bean experiment, having placed in a glass a bean with earth, water, air and light, and the remaining four beans, were placed each in its cup, without one of the essential elements for its survival. Before we kept the glasses, we created a small moment of dialogue in which the children expressed their previous conceptions about what could happen to each bean, and it was unanimous that the bean that presents all the basic elements for their survival would develop more quickly and healthily. The following week we observed the beans, so that we understand the importance of these elements for the life of plants. It should be noted that the practical observation of this activity facilitated the understanding of the children.

Moreover, this activity was developed with natural materials and abroad, an aspect that we could not fail to refer to, since it is essential for a quality development of children. Thus, "the activities that are usually carried out in the room can also take place in the outer space, this has characteristics and potentialities that allow an enrichment and diversification of educational opportunities" (SILVA *et al.*, 2016, p. 27, our translation), since, abroad, children "have the possibility of developing various forms of social interaction and contact and exploitation of natural materials", and this is "a space in which children have the opportunity to develop physical activities in an outdoor environment".

To finish the activity, we completed the wheel of food destined for vegetables/vegetables with the cups of plants planted on land and the root cups of plants in water. In addition, the children suggested that we paint the drum; in this way we created a moment of debate in which the children talked about what they should draw and illustrate in the drum. After this moment of sharing, reflection and decision-making, they went to the vegetable garden in an orderly manner. Thus, on the front, they illustrated the four fundamental elements for the survival of the plants, on one side they designed and wrote the parts that make up the plants and the other side was intended for the signature of all those who assisted in the preparation of the garden. This part of the activity was suggested by the children, and it is





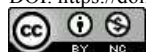
important that they have the opportunity to express and put into practice their ideas and interests, being co-builders of their teaching and learning process. The child's activity is understood as collaboration in the context of educational daily life. The teacher's role is to organize the environment and observe and listen to the child to understand and respond to them. The learning process is thought of as a shared space between the child and the adult (OLIVEIRA-FORMOSINHO, 2013, p. 28). We find it interesting that, in the decoration of the drum, the children choose to decorate it with the various knowledge they have acquired and that they are programmatic content, showing that these were seized and understood in a dynamic, fun and different way.

In addition, we emphasize that this activity is continuous, since the children have to take care of the garden regularly, watering it and removing the herbs that surround the plants, and during the weeks, it was visible the delivery of the students to the project developed, since it was constant the sharing of learning and ideas with the class.

Final considerations

Following participant observation and systematic reflection in contexts, we collect data during all stage moments. The analysis of these data allowed verifying the development of children's skills and learning about the importance of adopting healthy eating habits. In this sense, it is proven the pertinence of creating moments of contact with food, in a creative, dynamic and different way, in conjunction with other areas of knowledge, allowing the child to have an active voice and participate in the construction of their knowledge, thus enabling the evolution of the children's creative, expressive, cognitive, personal and social abilities.

In short, we think it is fundamental to explain that all the activities promoted, both in the context of Pre-school Education and in the context of Teaching of the 1st Cycle of Basic Education, were crucial for the promotion of new learning and experiences both on the part of children and on the part of teachers, because children learn a lot from us, but we learn much more from them. Therefore, for learning and experiences to be meaningful, creative and stimulating, it is essential that the professional of the educational action is competent, empathetic, flexible, with an open mind and a professional capable of constructing knowledge with children and adapting their action to them and the contexts where it fits. The teacher is a "trainer" of citizens, who should help in the construction of active and conscious children. Thus, to be a teacher is to give voice to the child in the construction of his own knowledge and to be curious and provoke the curiosity of the child. In this way, we tried to make sure that, in the



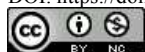


promotion of the activities developed, these aspects were in great plan, because only then could we provide a very driving project.

Concluding, from the above, this pedagogical intervention was oriented in a holistic perspective of knowledge and learning, involving children in the decisions and planning of the activities developed. These were designed to promote the interaction of children in large groups, small groups and self-employed work, always based on their needs. The ideas and suggestions that these were expressed throughout the intervention were used and implemented in a dynamic, creative and captivating way. In addition, we tried, during the implementation of the project, to promote rich and stimulating learning that covered all areas of knowledge/content areas, in order to enrich the teaching and learning process of each child, never decorating the theme of the project, promoting healthy eating habits, in order to sensitize children and adults to the importance of a correct diet for our health and well-being.

REFERENCES

- BARBOSA, E.; SILVA, J. Aprendizagem versus Ensino: Falsa oposição ou uma nova didática pré-escolar?. **Póiesis Pedagógica**, Catalão, v. 11, n. 2, p. 114-132, 2013. Available: <https://revistas.ufg.br/poiesis/article/view/29583>. Access: 19 Oct. 2021.
- COUTINHO, C. P. *et al.* "Investigação-ação metodologia preferencial nas práticas educativas". **Revista Psicologia, Educação e Cultura**, v. 13, n. 2, p. 355-379, dez. 2009. Available: <https://repositorium.sdum.uminho.pt/handle/1822/10148>. Access: 28 Oct. 2021.
- GOMES, C. *et al.* **Perfil do aluno à saída da escolaridade obrigatória**. Lisboa: Ministério da Educação, 2017.
- HOHMANN, M.; WEIKART, D. **Educar a criança**. Lisboa: Fundação Calouste Gulbenkian, 2003.
- LOPES, F.; DAVI, T. Inclusão de Hábitos Alimentares Saudáveis na Educação. **Cadernos da Fucamp**, v. 15, n. 24, p. 105-126, 2016. Available: <https://revistas.fucamp.edu.br/index.php/cadernos/article/view/932>. Access: 11 Jan. 2022.
- LOUREIRO, I. A importância da educação alimentar: O papel das escolas promotoras de saúde. **Educação alimentar**. v. 22, n. 2, p. 43-55, jul./dez. 2004. Available: <https://run.unl.pt/handle/10362/16986>. Access: 15 July 2021.
- MÁXIMO-ESTEVES, L. **Visão Panorâmica da Investigação-Ação**. Porto: Porto Editora, 2008.
- ME. Ministério da Educação. **Educação Alimentar em Meio Escolar: Referencial para uma oferta alimentar saudável**. Lisboa: Direcção-Geral de Inovação e de Desenvolvimento Curricular, 2006. Available:





https://www.dge.mec.pt/sites/default/files/Esaude/educacao_alimentar_em_meio_escolar.pdf.
Access: 23 Mar. 2021.

OLIVEIRA-FORMOSINHO, J. (org.). **Modelos Curriculares para a Educação de Infância**: Construindo uma práxis de participação. Porto: Porto Editora, 2013.

PEREIRA, T.; NUNES, R.; MOREIRA, B. A importância da educação alimentar e nutricional para alunos de séries iniciais. **Lynx**, v. 1, n. 1, maio 2020. Available: <https://periodicos.ufjf.br/index.php/lynx/article/view/25591>. Access: 10 Oct. 2021.

RAMBO, G.; ROESLER, M. Vivência com a Natureza no Ambiente Escolar na primeira infância e sua relevância para construção do respeito e cuidados com o Meio Ambiente. **Revista Brasileira de Educação Ambiental**, São Paulo, v. 14, n. 1, p. 111-131, 2019. Available: <https://periodicos.unifesp.br/index.php/revbea/article/view/2698>. Access: 09 Nov. 2021.

SARMENTO, T. A criança entre-lugares: Na família e na escola. In: FILHO, A.; DORNELLES, L. **Lugar da criança na escola e na família**: A participação e o protagonismo infantil. Porto Alegre: Editora Mediação, 2018.

SILVA, I. *et al.* **Orientações Curriculares para a Educação Pré-Escolar (OCEPE)**. Lisboa: Ministério da Educação; Direção-Geral da Educação, 2016.

SOARES, V.; OLIVEIRA, G. O Papel da Escola na Construção de uma Alimentação Saudável. **Revista Científica Multidisciplinar Núcleo do Conhecimento**, v. 1, n. 4, p. 176-186, 2004. Available: https://www.researchgate.net/publication/341686810_O_papel_da_escola_na_construcao_de_uma_alimentacao_saudavel. Access: 16 Oct. 2021.

SOUSA, G. *et al.* A pandemia de COVID-19 e suas repercussões na epidemia da obesidade de crianças e adolescentes. **Revista Eletrônica Acervo Saúde**, v. 12, n. 12, p. 1-8, 2020. Available: <https://acervomais.com.br/index.php/saude/article/view/4743>. Access: 10 aug. 2022.

VINHA, T. O educador e a moralidade infantil numa perspectiva construtivista. **Revista do Cogeime**, v. 8, n. 14, p. 15-38, 1999. Available: <https://www.metodista.br/revistas/revistas-cogeime/index.php/COGEIME/article/view/506>. Access: 06 Oct. 2021.

ZANCUL, M. Educação Alimentar na Escola: Para além da Abordagem Biológica. **Temas em Educação e Saúde**, v. 13, n. 1, p. 14-23, jan./jun. 2017. Available: <https://periodicos.fclar.unesp.br/tes/article/view/9490>. Access: 23 May 2021.



How to reference this article

CRUZINHA, B.; SARMENTO, T. Building healthy eating habits with children: Presenting a research and intervention project. **Revista @mbienteeducação**, São Paulo, v. 15, n. 00, e022009, 2022. e-ISSN: 1982-8632. DOI: <https://doi.org/10.26843/ae.v15i00.1148>

Submitted: 16/03/2022

Revisions required: 13/04/2022

Approved: 17/05/2022

Published: 01/06/2022

Processing and publication by the Editora Ibero-Americana de Educação.

Correction, formatting, standardization and translation

