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## **Food and nutrition in childhood education beyond a transversal theme: outline of a practical theory**

### **Educação alimentar e nutricional nas infâncias para além de um tema transversal: esboço de uma teoria da prática**

#### Abstract

For nutritionists, Food and Nutritional Education (FNE) constitutes an important formative field of knowledge and practices, being strategic for the promotion of adequate, healthy, and sustainable eating. Childhood is a phase of life involving significant learning and development - sensory-motor, emotional, cognitive, and social - that will influence the formation of children's habits. Based on the interconnection between FNE and childhood, the objective of this essay is to develop a reflective theorization of our teaching and university extension practices, performed by undergraduate students of Nutrition and children from an application school, both linked to a federal university in northeastern Brazil. For this purpose, we elaborated the principles of our experience performed continuously and permanently since 2018, aiming to highlight issues concerning FNE in the school environment. The results indicate that integration of FNE into the curriculum requires dialoged and participative construction, integrating the school community. FNE cannot simply be reduced to a transversal or cross-cutting theme but must be part of the teaching and learning process. It should be properly referenced as a method and integrated into the curriculum and become significant among the educational subjects. The principles of our practices also pose challenges: FNE needs to be clearly situated with its agents/promoters; the teaching-learning process is driven by the awakening of passions in those involved; playfulness which guides educational actions; and the centrality of the individual, in this case, children in their childhood, sociocultural context, and learning process. It is hoped that our reflections contribute both to the principles that sustain FNE when focused on childhood, and to the field of Nutrition.

**Keywords:** Food and Nutritional Education. Transversal Theme. Teaching and Learning Process. Playfulness. Childhood.

#### Resumo

A Educação Alimentar e Nutricional (EAN) se constitui como importante campo formativo de saberes e práticas para nutricionistas, sendo estratégica para a promoção da alimentação adequada, saudável e sustentável. Já a infância é uma fase da vida com importantes aprendizados e desenvolvimentos – sensorio-motores, emocionais, cognitivos e sociais – que influenciarão na formação de hábitos da criança. Partindo desta imbricação, entre EAN e infâncias, objetiva-se neste ensaio elaborar uma teorização refletida de nossas práticas de ensino e de extensão universitárias, realizadas com graduandos de Nutrição e com crianças de um colégio de aplicação, ambos vinculados a uma universidade federal nordestina. Para isso, elaboramos os princípios de nossa experiência realizada de modo contínuo e permanente desde

2018, visando colocar em relevo questões da EAN no espaço escolar. Os resultados indicam que a curricularização da EAN passa pela construção dialogada e participativa, integrando a comunidade escolar. A EAN não se reduz a um tema transversal, mas coloca-se como parte do processo de ensino e aprendizagem, devendo, portanto, estar devidamente referenciada enquanto método e inserida no currículo, para se tornar significativa entre os sujeitos da educação. Os princípios de nossas práticas também se colocam como desafios: a EAN precisa estar claramente situada entre seus agentes/promotores; o processo que sustenta o ensino-aprendizagem se dá como despertar de paixões entre os envolvidos; o lúdico pauta as ações educativas; e a centralidade da pessoa, no caso, as crianças e suas infâncias, incluindo o contexto sociocultural e o processo de aprendizagem. Espera-se que essas reflexões contribuam tanto com os princípios que sustentam uma EAN voltada às infâncias, quanto ao campo científico da Nutrição.

**Palavras-chave:** Educação Alimentar e Nutricional. Tema Transversal. Processo de Ensino e Aprendizagem. Lúdico. Infâncias.

## INTRODUCTION

Nutritional and Food Education (FNE) was incorporated into the regulation of the nutritionist profession through Law No. 8,234, of September 1991.<sup>1</sup> It constitutes an important formative field of knowledge and practices for nutrition professionals whether in their initial or continuing education processes. It can be affirmed that, in the current context of food and nutritional insecurity, in which malnutrition, overweight, eating disorders, and harms resulting from the context of coexisting pandemics, qualification of FNE actions is necessary, since it is a fundamental strategy in promoting adequate, healthy, and sustainable nutrition.

In the historical and political process of FNE in the country, we have seen series of advances. Being once considered a separated activity of nutritionists, in the context of harms or nutritional diseases in individuals or groups,<sup>2</sup> currently FNE has come to be identified as a needed to be promoted by many agents, from planning to evaluation.

This integrative, multiprofessional, and transdisciplinary vision has been firmly established in the field of FNE since the launch of the official Brazilian document, "Reference Framework for Food and Nutritional Education for Public Policies."<sup>3</sup> This Framework is the heart of policy advances in Food and Nutrition, Food and Nutritional Security, and the Human Right to Adequate Nutrition, which celebrated 10 years since its publication in 2022.

In its presentation, the auspices of its purpose hovered:

[...] qualify the agenda of food and nutrition [...] among the most diverse actors and agents promoting educational activity in the field of food and nutrition in the country, as well as adopting it within the process of planning programs and actions and providing for its development.<sup>3</sup>

However, the same publication still problematized the fact that despite the promising outlook, the field of FNE activity was not clearly defined because "there is a great diversity of approaches and practices, little visibility of successful experiences, planning process weaknesses, and insufficient presence in public programs."<sup>3</sup> To some extent, the text reproduced the "supposed paradox" of FNE, announced years earlier by one of the thinkers in the field: "Nutritional and food education is everywhere and, at the same time, it is nowhere."<sup>4</sup> This means that the gap arises insomuch as, despite the aforementioned publication indicating concepts, principles, and guidelines to contribute to the construction of the referenced practices, poorly grounded theoretical and methodological conceptions existing in the field of Education persist, with its resulting actions supported, and coupled to its generally low visibility educational experiences.<sup>5-7</sup> Therefore, FNE must be discussed more completely.

This work is positioned within this context, as an essay aimed at developing a reflective theorization of our university teaching and extension practices, being performed by Nutrition undergraduates and children from early childhood education and elementary school at an affiliated laboratory school, both linked to a federal university in northeastern Brazil. To achieve this, we have elaborated the principles and challenges of our experience as developed continuously and permanently beginning in 2018. All of this with the aim of highlighting FNE issues in the school setting.

## DEVELOPMENT

Schools are a privileged space for fostering educational activities and potentially, can construct food as a pedagogical resource, by integrating these activities into the teaching-learning process. What may seem obvious needs to be brought to light. Based on this, we pose the following question: why are school

environments important settings for the development of educational actions that regard food and nutrition as pedagogical elements?

Because, According to the current concept of Food and Nutrition Education,<sup>3</sup> the school is positioned as a space of excellence for continuous and ongoing actions involving various members of the school community (administrators, teachers, school cooks, students, and parents/guardians), and thus, it is well established as a privileged scenario for developing, practicing, evaluating, correcting, and improving educational activities. Therefore, the school is the place to both inform and train in food and nutrition education.

The provision of school meals to students is an activity that occupies both space and time in the daily life of schools.<sup>8</sup> Mealtime at school can be considered pedagogical, since it encourages "the voluntary adoption of healthy eating practices and choices that contribute to the student's learning, school health status, and the individual's quality of life".<sup>9</sup>

However, the mere provision of meals does not guarantee incorporation of food into the school curriculum. In the extremely complex and challenging space that is the school, promotion of FNE practices is enriched by planned and integrated actions involving theory and practice, and by the participation of both the acting agents and subjects of the learning community.

Furthermore, though Federal Law No. 13,666/2018, FNE became officially established as a transversal theme of the curricula of basic education in Law No. 9,394/1996 – the Law of Guidelines and Bases of National Education (LDB),<sup>10</sup> it is worth questioning the relevance of the terminology, namely, what does a transversal theme of FNE entail?

Recently, the National Fund for the Development of Education published Resolution No. 06, dated May 8, 2020, clarifying the concept of FNE and its transversality (emphasis added):

"FNE in the teaching and learning process, which permeates the school curriculum in a transversal manner, addressing the theme of food and nutrition and the development of practices and skills that promote healthy lifestyles from the perspective of food and nutritional security.

§ 2º In terms of **curricular transversality** and transdisciplinarity, FNE actions can draw on differing understandings and themes related to food, in the fields of culture, history, and geography, among others, so that food and nutrition become specific learning contents and also a resource for learning about other topics. Thus, FNE actions when appropriate,<sup>11</sup> should use food, school meals, and/or school gardens as pedagogical tools."

Indeed, the publication of this Resolution contributes to agents in the field of FNE to assume in their practice, that the complexity of food and nutrition as a process of teaching and learning in the school curriculum is not limited to a specific field of knowledge, much less a discipline. A curriculum is not a set of contents arranged summarily, like a list, to be taught.<sup>12-14</sup>

At its core, teaching can be understood as the set of activities that transform the curriculum into practice, producing learning. However, it is worth noting that the curriculum involves notions of how school knowledge, theories, methods or strategies, and forms of assessment that underpin it are developed. Curriculum is not merely a demand of society. Curriculum is a constituted relationship, and never neutral. It

therefore, results from selection, denotes identity, and the relationship between knowledge and power, it involves culture, politics, and society.

Silva, an important theorist in the field of curriculum,<sup>14</sup> highlights that **traditional theories** emphasize the following dimensions: teaching; learning; assessment; methodology; didactics; organization; planning; efficiency; and objectives. **Critical theories**, on the other hand, emphasize and question ideology; cultural and social reproduction; social class; capitalism; relations of production; conscientization; emancipation; hidden curriculum; and resistance. In addition to these, there are **post-critical theories**, which emphasize identities; alterity; differences; subjectivity; meaning; discourse; knowledge and power; representation; culture; gender; race; ethnicity; sexuality; and multiculturalism.

If traditional curriculum theories take on notions of a neutral, scientific, and disinterested curriculum, we can place so-called transversal themes in the category of post-critical curriculum theories. To this, we could justify the incorporation of FNE as a transversal theme. After all, more than thinking about a fixed reality, the processes in which FNE develops should allow learners to feel, think, speak, and express themselves through other languages (drawing, music, dance, body), which encompass learning about eating, food, and nourishment, in a continuous process of reconstruction, through the existing dialogical relationship between learners and educators.

In this sense, we need to delve into what are known as Transversal, or Contemporary Transversal Themes (CTT), a terminology suggested by the Ministry of Education, and presented in the document "Contemporary Transversal Themes in the BNCC - historical context and pedagogical assumptions".<sup>15</sup> CTTs highlight the relevance and timeliness of specific topics in Basic Education, which should be addressed "through an approach that integrates and aggregates, remaining in the condition of not being exclusive to any knowledge area, but being addressed by all of them in an integrated and complementary manner".<sup>15</sup>

CTTs emerged with the homologation of the National Common Curricular Base (NCCB), which currently encompasses, in addition to **Food and Nutritional Education**, Science and Technology, Children's and Adolescent's Rights; Cultural Diversity, Environmental Education; Education for the appreciation of multiculturalism in Brazilian historical and cultural matrices; Human Rights Education; Financial Education; Fiscal Education; Education for consumption; Education for traffic; the Aging process, respect and valorization of the elderly; Health; Work and family, and social life.<sup>16</sup>

First, we highlight the following reflection: if schools already have a relatively heavy load of content worked on in the teaching-learning process, how will they manage to include another 15 themes in their curriculum in a transversal manner?

Having said that, and without the intention of addressing other CTTs, we need to problematize **FNE as a transversal theme**. If we argue that FNE should be incorporated into the curriculum, we need to reflect on how. It is a fact that food and nutrition teaching should not be reduced to the hegemonic notion of transmitting scientific messages in a clear and coherent manner, as typified in the traditional curriculum. Furthermore, FNE constitutes a field of knowledge and practices, has different historical phases, and, above all, non-consensual views, and therefore cannot be treated as just another contemporary transversal theme.

Thus, it is worth reconsidering the question: **what kind of FNE do we advocate in the school context?**<sup>a</sup> Traditionally, Education in the Health Field involves appropriating a certain concept and developing

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<sup>a</sup> The reflection on our conception of FNE has already been the subject of a previous publication,<sup>17</sup> and is taken up again in this text, in favor of the theorization of our practices.

competencies and skills to transmit it. Therefore, adequate transmission would suffice to become a good educator in health, and thus, in Nutrition.<sup>17</sup>

According to Boog,<sup>18</sup> this view harks back to the origins of initiatives to disseminate nutritional knowledge, and linked to the hygienic and eugenic precepts of the early decades of the 20th century, where information transmission occurred through "books and pamphlets, written in a normative, prescriptive, and authoritarian tone", as well as the still prevailing idea, that practicing FNE is limited to the transmission of accumulated and updated knowledge, "in a way that mastery of the technical and scientific knowledge inherent to the field of Nutrition would already be sufficient to qualify the educator".

However, this view, besides being partial and incomplete for the FNE we advocate, keeps alive the imaginary that dates back to the beginning of the field, **that ignorance would be the only obstacle to the practice of correct and rational eating**. As we do not uphold this myth of ignorance, usually associated with minority groups and those who are socioeconomically more vulnerable, we resort to the current concept of FNE, presented more than ten years ago by Framework.<sup>3</sup>

In this sense, pedagogical practice should be permeated by an approach and the use of educational resources that are problematizing and active, thus producing the necessary autonomy for the construction of healthy and sustainable eating habits among the subjects of its process, which is no small feat. If education is a lifelong process, and food is present from gestation in the individual's life, the construction of this autonomy focused on food can and should be fostered in the school environment.<sup>17</sup>

That being said, and returning to the question at hand, in our view, the risk of naturalizing FNE as a contemporary transversal theme would imply the maintenance of its own condition of existence: in school, **if FNE is everyone's responsibility, no one assumes it**.

Therefore, knowing that the BNCC presents itself as "a normative document that defines" organically and progressively the "**essential understandings**" that all students must develop throughout [...] Basic Education, to have their learning and development rights ensured", (p. 7, author emphasis),<sup>16</sup> we need to look for FNE within the BNCC.

The BNCC was a text constructed in three versions, between 2015 and 2017, in which the final version mentions FNE only once, precisely to frame it as one of the TTC (Transversal Thematic Contents); shortly thereafter, and in parentheses, Law No. 11,947/2009 is mentioned (p. 19).<sup>16</sup> This legislation seems to serve as a justification for FNE in the school context, which is correct, as one of the important inflections of this Law was precisely to explicitly indicate FNE as one of the guidelines for school feeding, and from then, it should be included "in the teaching-learning process, which permeates through the school curriculum".<sup>19</sup>

But what would justify the inclusion of FNE as one of the TTC in the BNCC? According to critical authors, the BNCC document is still subject to conflicts and debates, whose process took place in a contradictory context, in which different groups claim mobilization, construction, and finally, its implementation.<sup>b,20</sup> Of interest to us, in the final version, there is a perspective of universalizing education through the acquisition of competencies and skills "necessary for life and for the job market" (p. 4),<sup>21</sup> "aligning with neoliberal educational policies in which education is reduced to minimum learning rights" (p. 798),<sup>22</sup> bringing the final BNCC document closer to perspectives of curriculum theories that are products of neoliberalism, such as

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<sup>b</sup> For further clarification, we recommend reading the dossier "National Common Curricular Base: challenges of implementation", published by Revista Texturas in 2020 (v. 22 n. 50, Apr/Jun), in particular, the organizers' presentation text, which establishes the processes fraught with tension in construction and the challenges for implementing the BNCC.

competency-based pedagogy, multiculturalism, which are focal points of studies from the post-critical curriculum perspective. (p. 799)".<sup>22</sup>

These analyses clash with progressive views of education, such as those of Paulo Freire and Popular Education (dialogical, problematizing the boundary situations of social life), which are even embraced in the Framework. However, we indeed have the neoliberal perspective of education in which the Transversal Thematic Contents (TTC) are justified in the final version of the BNCC, carrying FNE and other educational themes, such as Environmental Education - which needs to be revisited.

Equipped with a critical perspective, we need to reflect that **how** FNE can "permeate the school curriculum"<sup>19</sup> is only possible with the publication of the Framework. Here we are paraphrasing one of the authors in the field, as it was with the arrival of the Framework that we could orient ourselves like a compass (p. 596).<sup>23</sup> There is a plea **for the defense that the BNCC be updated, through new public consultations, in order to broaden the debate so that other actors, such as nutritionists, may point out the importance of including the Framework as a reference for FNE in the school space.** It promises for future processes that can break with the instrumentalist and neoliberal vision of education, and reciprocally open spaces for more agents to reach the Framework and thus be guided to the rightful place of FNE in schools.

Continuing on these considerations, treating FNE as a theme can dilute what makes it so unique. Let's explain. If it is true that one of the singularities of practicing FNE consists of "teaching to enjoy", developing a certain attitude towards "the sensation that food provokes in us", then continuous and permanent pedagogical work involving sensations, perceptions, representations, evoking memories, and the entire network of meanings from eating, feeding, and nourishing becomes necessary.<sup>24</sup> The foundations of an educational practice must be emphasized.

FNE is not a theme, and like mathematics, Portuguese, and history are not considered just themes, but rather contents and methods tied to curricula and the teaching-learning process. FNE should not separate itself from the planning of its activities by expressing its learning contents, as in the classical typology of the field of Education - conceptual, procedural, and attitudinal.<sup>25</sup>

For the proper curricularization of FNE, food-related knowledge and practices must be thought of in a contextualized and critical way to the reality in which one intends to work, in order to be inserted as properly referenced contents as to method. The different stages of Basic Education, must be considered in a continuous dialogue involving the scientific field of Nutrition Science and the objectives and skills expected in the field of Pedagogy, notably expressed in the BNCC<sup>26</sup> - and mainly in accordance with the dynamics of the curricula of local spaces.

Otherwise, we will fall into the authoritarian figure of the educator in Nutrition - which is challenging and complex, but necessary for the development of a properly anchored FNE in the school reality. In the next section, we will address our reflected upon practice.

## SKETCH OF A THEORY OF PRACTICE

We repeat: the curriculum is not neutral. We insert ourselves into the current Political Project of the Undergraduate Nutrition Course at a northeastern federal university, which selects FNE as one of its transversal themes in education, which should serve as the basis for discussion, contextualization, and reflections on nutritionist practice.<sup>27</sup> It is worth reflection: given that FNE is transversal and knowing that it should be integrated throughout the entire education, would it not be necessary to ensure specific spaces?



In this context, enter the Laboratory of Food and Nutritional Education (LFNE), whose purpose is to serve as a space for the development of activities in the fields of teaching, research, and extension in the undergraduate Nutrition program of this university.

In LFNE, we followed the thinking of Paulo Freire,<sup>28-30</sup> by **assuming an education not of those who know for those who do not know**, but a practice of freedom exercised with love and a continuous openness to dialogue and problematization, contextualized and meaningful to the subjects of the pedagogical relationship, with the aim of producing knowledge in the collective space, and contributing to the exercise and promotion of food autonomy.

For undergraduate students, the LFNE seeks to provide experiences through educational activities, which in the present case refers to the school environment. There is an understanding of expansion of the repertoire of knowledge derived from experience, contributing to the development of skills and competencies of the future nutritionist, with emphasis on the role of the educator. As Boog highlights,<sup>31</sup> education in Nutrition always involves a worldview, a view of society, and the relationship between people.

Even if nutritionists (in training or graduates) are not aware of it, every action has a communicative intentionality. Therefore, it is necessary that content be worked with during undergraduate studies to broaden the understanding of pedagogical theories to support educational action in food and nutrition. With this in mind, one of the theoretical classes in LFNE, preceding practice in schools, aims to present and explore views that interpret the role of education in society,<sup>32</sup> and the pedagogical trends that underpin educational acts,<sup>33,34</sup> related to Food and Nutritional Education.<sup>35</sup> We understand it is essential to comprehend the pedagogical theories that will support educational practices in Nutrition.

However, competence and skill to become an educator in Nutrition are not taught. According to Perrenoud,<sup>36</sup> what happens, from the students' point of view, is a mental mobilization starting from resources, skills, and knowledge in the face of demand (needs in new or unforeseen situations). Demands derived from praxis in an educational institution that will contribute to the development of the educator nutritionist.

The pedagogical work at the LFNE aims to develop theory and practice of FNE in an articulated manner, inseparable from the practice of teaching, research, and extension. Thus, since 2018, FNE practices have been performed as part of the curricular components offered to undergraduate students in Nutrition. In the school context, focused on in this essay, we dedicate one mandatory and one elective component, a total mandatory workload of 60 hours, and 45 hours for the elective, exclusively dedicated to school activities, being approximately 50%.

Offering various practice moments, articulated with theory, is only possible through previously established partnerships with school managers and the Nutrition sector of the affiliated application school, and linked to the same Northeastern federal university. Here we have our **first principle**: although transversal, FNE needs to be clearly situated, involving its agents/promoters.

In the present case, the planning team of LFNE, composed of faculty, enrolled students, and monitors - undergraduates who have previously experienced FNE practice in LFNE and wished to be part of the Laboratory's team, actively participate.

Additionally, and no less important, members of the school community, including teachers, assistants, nutritionists, nutrition scholarship holders, and school cooks, also act as promoters of FNE.

**Our second principle**, integrated into the educational vision of practicing FNE by the Laboratory and its teaching and extension projects, is encompassed in the idea that "educating is a generous love, it is talking about something we love," and thus "educating is nothing more, nothing less than speaking about something



with so much passion to someone, that this person also wants to fall in love".<sup>37</sup> After all, according to one of the pioneers in the field of FNE, "we cannot shy away from this challenging and passionate role of educators" (p. 15).<sup>31</sup>

How to ignite a passion for Nutrition? Years ago, there was already reflection on the importance of looking at school nutrition in favor of the ludic experience using play to reverse the logic that privileges nutritional content as to its transmission.<sup>38</sup> The defense of playful eating challenges the disciplinary and normalizing education that still guides the Nutrition Science. Here is our **third principle**: praise of the ludic, as positioned below.

Paraphrasing Mário Quintana, "children don't play at playing. They play for real". (p. 15)<sup>39</sup> We therefore embrace the ludic, which broadly serves as a mode of communication and action,<sup>c40</sup> to become part of a liberating strategy, aimed at educating and igniting passion for nutrition and food.

Thus, in LFNE, we also adopt the socio-interactionist conception of Lev Semenovich Vygotsky, for whom learning precedes human development, and individuals develop through social interactions.<sup>41</sup> In this interactionist perspective, the social aspect is relevant in the formation of thought, memory, emotion, perception, and imagination, etc., with games and play standing out as interactive activities. Play is the means by which individuals, from a young age, develop and grasp the world.<sup>42</sup> Furthermore, for further exploration of the ludic, games, and play, LFNE relies on other references in the field.<sup>40-46</sup>

According to Huizinga (p. 33):<sup>46</sup>

[...] The game is a voluntary activity or occupation, performed within certain and determined limits of time and space, according to rules freely agreed upon, but absolutely obligatory, endowed with an end in itself, accompanied by a feeling of tension and joy, and a consciousness of being different from everyday life.

In summary, here are the characteristics of the **ludic factor**: 1. **Voluntary activity**; 2. It is a **make-believe**; 3. Tends to be **disinterested** and has an **autonomous purpose**; 4. Is **played until the end**; 5. **The ludic factor creates order and is order**; 6. **The game produces tension**; and the more competitive element is present, the more captivating the ludic effect becomes; 7. The **mystery** of the *homo ludens*: the ability to become another (p. 10-33).<sup>46</sup>

Therefore, we understand the power of games and play, which captivate and awaken joy, and contain the mystery that we will never emerge the same after the playful activity. It is a zone of proximal development<sup>d</sup> in which learning results from the learner's own pedagogical interaction with so many others (educators, learners, cultures, and languages), in turn promoting their (cognitive, emotional, social) development. It is an open space for the formation and resignification of practices and knowledge involving food, including both taste and palate.

<sup>c</sup> Here we follow the ideas of Brian Sutton-Smith, who in his book "The Ambiguity of Play" understands play to be "both a type of communication (mode)" and "also a type of action" (p. 58).<sup>40</sup>

<sup>d</sup> According to Vygotsky, there are two levels of development. The first, called the level of actual or effective development, comprises the child's mental functions resulting from certain completed developmental cycles. This level consists of the set of information that the child possesses. The second level is the potential development level, defined by the problems that the child can solve with the help of more experienced individuals. Thus, the zone of proximal development refers to the distance between the level of actual development – determined by solving problems independently of others' help – and the level of potential development – determined based on solving problems under the guidance of adults or more capable peers. The zone of proximal development is constituted, then, by functions that are not yet mature but in the process of maturation.

In light of this, the LFNE in its teaching and extension projects, assumes **playfulness as a strategy to educate and ignite passion for nutrition and food**, "in search of the pleasure of learning to feed oneself, from a young age," and to lead educators in food and nutrition to "become aware of the alimentary process as a determining factor in self-construction".<sup>47</sup>

This culminates, based on the three principles, in a food and nutrition education as a practice of freedom that **awakens passions for learning and teaching**, which is **playful, contextualized, and meaningful** to the subjects of the pedagogical relationship, aiming to produce knowledge in the collective space. It contributes, through learning and development, to food autonomy, from the earliest age. But the essential link is missing: **the person (the subject of education)**.

**Here is our fourth and final principle:** centrality in children and their childhoods. Yes, in the plural, because they are many, different, and unique. Otherwise, we would regress to the oppressive adult-centric view of the potential of these subjects, who must be considered in their entirety. We need to revisit our previous writings, because:

[...] it would be somewhat problematic for a food and nutrition education that uses strategies such as "offering healthy food in schools," "pedagogical school gardens," and "experimental cooking workshops" [...], and intends to include them in the curriculum as a form of teaching-learning [...] solely in the logic of adults. An adult-centric logic that infantilizes, renders voiceless, and therefore makes autonomy impossible [...] in the

school context. It is the child who determines the toy. The power of play that can turn everything into a toy. Magic, because it is the imaginary and symbolic content in the child's play that determines their playful activity, not the toys in their material dimension (p. 28).<sup>38</sup>

Every action of FNE should be referenced to the centrality of the individual (individuals, groups, and communities), their social and cultural context, their life history, and past trajectory. In the case of our reflection, children and their childhoods should be considered as subjects of education, including their sociocultural context, immediate reality, with aspects directly linked to the learning process.<sup>48</sup>

Further, children are historical and rights-bearing subjects; they learn by manipulating objects from their culture, imitating behaviors observed in their play; they also learn in relationships between peers and adults. Children learn by questioning, observing natural phenomena, animals, and human behaviors. They also learn by relating what they observe to their personal and imaginary experiences.

Thus, children, "in the interactions, relationships, and daily practices they experience, construct their personal and collective identities, play, imagine, fantasize, desire, learn, observe, experiment, narrate, question, and construct meaning about nature and society, producing culture" (p. 37).<sup>16</sup>

We therefore assume that innovative FNE actions involve the proper appropriation of playfulness as a strategy and language of pedagogical practices aimed at promoting learning for the formation of taste and the re-signification of food-related knowledge and practices.<sup>6</sup>

With the **four principles of the theory of our practice** exposed, we understand that the educational experiences stemming from the pedagogical proposal of the curricular components of LFNE become

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<sup>e</sup> In the year 2022, we gained national recognition. Our experience of FNE in childhood was selected to be part of the Laboratory of Innovation in Food and Nutritional Education, whose publication presenting this and other experiences was released at the end of 2023 (p. 37-40).

significant experiences for undergraduates, as they mobilize the affections and ideas produced and incorporated as learning from the educator-student relationship. An awakening of passions in *teaching and learning Nutrition with children*.

Future nutrition educators, from their initial encounters in the practice setting, when they are introduced to the routines of early childhood education and the early years of elementary school, are invited to engage in intense pedagogical experiences. They observe the practices of teachers in the classrooms, the characteristics of the children, and then, in the following weeks, after dialogue with classroom teachers, the school nutritionist, and nutrition faculty, they construct lesson plans containing objectives, content, strategy/timeline, and evaluation. These plans should incorporate food and nutrition into teaching moments, with materials and methods oriented towards play and interactions. This is how our undergraduates, with the support of monitors, undergo the radical experience of being educators alongside children.

Through the numerous dialogic moments provided in the school environment – teachers, nutritionists, children, school community; in the academic setting, inside or outside the classroom, nutrition undergraduates are challenged to experience the adventure that knowledge is constructed between certainties and uncertainties, exercising and engaging in the task of becoming educators in Food and Nutrition.

Over the years, we have accumulated practices of FNE in childhood. We populate the school and its spaces with various pedagogical moments, confirming through practice that FNE develops and strengthens with others. Or rather, the knots that strengthen FNE only occur in the continuous and permanent construction with others. Flooding school spaces with plenty of FNE – sports fields, school and community gardens, experimental kitchens, science laboratories, arts, music, dance, theater, playrooms, libraries, and, of course, traditional classrooms. We understand, therefore, not to overload education agents with another demand to be addressed in the classroom. All involved become agents of food and nutritional education. Actions that over time, continuously and permanently, become part of the school curriculum.

In this sense, the importance of FNE in school is reflected, which, beyond being a transversal theme, should be properly based on the territoriality of curricula, knowledge, and school practices. Referenced as a method and integrated into the curriculum, to become significant among educational subjects.

Thus, it is inferred that playing with food (culinary workshops, games, videos, theater, and storytelling) is an act of imagination, a power that determines in the players (children, undergraduates, and adults who play) a creative, sensory, and aesthetic process. It arouses passions. Meanwhile, through mediation, it produces learning and the development of thought, memory, emotion, perception, imagination. *Shall we play at eating and learning?*

## CONCLUSIONS

Throughout this essay, we have sought a theoretical outline of our practice. According to our principles: (1st) for its integration into the curriculum, FNE must be clearly situated, involving its agents/promoters; (2nd) the process that underpins Nutrition teaching and learning occurs with the awakening of passions among the actors involved; (3rd) playfulness as a method and language should guide educational activities; (4th) every FNE action should be referenced to the centrality of the individual (individuals, groups, communities), and in the case under study, children and their childhoods should be considered as subjects of education, including their sociocultural context and aspects directly linked to the learning process. All principles pose challenges for the development and improvement of our FNE practices in childhood. We love challenges.

However, we draw attention to the risk of treating FNE as just another transversal theme to be addressed in basic education – in our view, this undervalues the educational possibilities of food and nutrition in the school environment.

Far from advocating for a specific school subject, FNE should be positioned as a field of non-consensual practices and knowledge, requiring the involvement of various agents – managers, nutritionists, teachers from basic and higher education, as well as undergraduate students and the entire school community, including school cooks, in a virtuous, elliptical movement that produces such a volume of activities, that it floods the school space.

In our view, the integration of FNE into the curriculum is not limited to a transversal theme but should be positioned as part of the teaching and learning process, and therefore should be properly referenced as a method, and integrated into the curriculum to become significant to the educational subjects. This is only possible through the establishment of institutional partnerships, fostering social ties and responsibility, rather than leaving the actions of FNE in the school environment solely to individuals. Further, considering scenarios where there is no direct relationship with the university, we advocate for the importance of stimulating local establishment of a team responsible for promoting and coordinating FNE actions. After all, the school is a privileged setting for informing and educating about food and nutritional education.

Returning to the question posed by Pinto et al.: "Is it from childhood that we learn?"<sup>50</sup> The inevitable response we find in the theoretical outline of our reflective practice is: yes, it is in childhood that teaching-and-learning takes place as a reciprocal relationship between all subjects in the act of education.<sup>44</sup>

Here are some of the lessons learned. Like the concept of FNE itself, as outlined in the Framework, these are ideas that are open and in a constant state of (re)development. We are aware of the need for critical reflection on our work, we seek through further learning, research and exchange to understand both our obstacles and weaknesses, as well as our strengths, and the challenges of the future.

It is hoped that this essay will contribute both to the principles that support Food and Nutritional Education focused on childhood, and to the field of Nutrition.

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