

A proposal for food and nutrition education integrated into the preschool and elementary school curriculum

Proposta de educação alimentar e nutricional integrada ao currículo de Educação Infantil e Ensino Fundamental

Propuesta de educación alimentaria y nutricional integrada en el currículo de Educación Infantil y Enseñanza Fundamental

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Abstract

Materials were prepared for schoolteachers and healthcare workers to support permanent initiatives in food and nutrition education in schools, integrated into the curriculum. The article presents the matrix of food and nutrition topics that served as the basis for producing these materials (Matrix) and the convergence between the approach adopted in the activities in the Activity Manuals comprising the series of materials and food dimensions, the principles of the Framework for Food and Nutrition Education for Public Policies (Framework for Food and Nutrition Education), and the Brazilian National Curriculum Guidelines for basic education. The Matrix allowed designing educational activities that foster an expanded approach to food and nutrition which is simultaneously crosscutting and integrated into the curriculum. The activities allowed dialogue with various components of the curriculum and linkage between them. The activities' convergence with the Framework for Food and Nutrition Education was expressed in the contextualization of food practices in the schoolchildren's territories and realities; in the problematological approach, which encourages critical thinking and the promotion of autonomy, both for educators and schoolchildren; and inter-sector planning through topics and action strategies that encourage collaboration between healthcare professionals and teachers. The initiative presented in this article thus strengthens the actions by food and nutrition education in schools and can expand teachers' repertoire in food and nutrition and contribute to its crosscutting and routine inclusion in the curriculum.

Feeding Behavior; School Health Services; Teaching Materials

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Introduction

The search to guarantee health and food as basic human and civil rights, with an emphasis on the promotion of adequate and healthy food, has stimulated the formulation and implementation of public policies. In Brazil, the Brazilian National Food and Nutrition Policy ¹ is a milestone in this commitment and has backed the development of strategies and actions, including the following: the elaboration of dietary guidelines ^{2,3}, programs ⁴, orientation for the organization of services, and promotion of adequate and healthy food in various spaces ⁵. In several of these actions as well as other initiatives, food and nutrition education has been valued as a fundamental strategy for the promotion of adequate and healthy food, and schools have been identified as a prime space for health promotion, due to their potential for developing critical thinking and autonomy among all school community members ^{6,7,8}.

Historically, the health sector's work in schools has been based on different conceptions and strategies, varying from informative and normative actions centered on the individual and focused on students' behavior change to pedagogical practices consistent with the principles of health promotion, promoting critical thinking and autonomy. Importantly, these two forms of practices coexist in the actions performed today in Brazilian schools and are influenced by the conceptions of education and health that serve as the basis for the actions ^{9,10}.

Health at School Program (PSE) is the result of partnership between the health and education sectors. One of its purposes is the development of health education activities in schools ¹¹. The PSE provides an opportunity for the development of activities in the promotion of adequate and healthy food. However, one of the main challenges for the promotion of adequate and healthy food in schools is to break with the interventionist perspective ⁷ based on fragmented and isolated activities with no connection to the school curriculum.

In addition to the PSE, action in food and nutrition education has been promoted by various policies and strategies in school. For example, *Law n. 11,947/2009* ¹² values activities in food and nutrition education in school, recommending their linkage with the school's pedagogical proposal. Various actors have been identified for the development of such practices, including teachers, kitchen and dining hall staff, schoolchildren, nutritionists in the Brazilian National School Feeding Program (PNAE), and health workers from the primary healthcare teams ^{4,11,12,13}.

Aimed at supporting approaches to food and nutrition in the PSE, a series of support materials was produced for schoolteachers and healthcare workers for use in the school community. The initiative resulted from a partnership between the Institute of Nutrition, Rio de Janeiro State University (UERJ), the General-Coordination of Food and Nutrition (CGAN) of the Brazilian Ministry of Health, and the Pan American Health Organization (PAHO). The current article aims to present the Matrix of topics in food and nutrition in food dimensions according to the educational segment (Matrix), which served as the basis for producing these materials, besides presenting the convergence of the approach taken in the activities in the *Activity Manuals* (hereinafter *Manuals*) comprising the series of materials with the food dimensions, the principles in the *Framework for Food and Nutrition Education for Public Policies* ⁶ (Food and Nutrition Education Framework), and Brazilian national curriculum guidelines (DCN) for basic education.

Theoretical framework

The exclusively biological approach to food fails to incorporate other dimensions that are necessary for developing adequate responses to contemporary food issues. An expanded conception includes not only nutritional and health aspects (the biological dimension) but also the view of food as a universal human right that should be guaranteed along with other rights to ensure respect for a decent and full life, since such rights are indivisible, interrelated, and interdependent (the dimension of the human right to adequate food); symbolic and affective aspects of food and eating in their relationship to people and society (socio-psychocultural dimension); work relations and other issues that involve the sectors of production and distribution of foods in their dynamics with the economic market (economic dimension); in addition to the impact and environmental sustainability of the food systems' production, supply, and marketing processes (environmental dimension) ^{14,15}.

Thus, teaching practices and activities in food and nutrition education should consider the theme's crosscutting and dialogical nature, as well as subjective aspects related to food and eating. The history of public policies in Brazil shows that the 1990s marked a turning point in food and nutrition education as a strategy for the promotion of healthy eating practices, attuned with the new milestones in health promotion and health education, in line with critical, comprehensive, and emancipatory practices and moving away from initiatives aimed simply at disseminating information and behavior change ^{6,16}.

A key feature of this turning point was the elaboration of the Framework for Food and Nutrition Education ⁶, which involved different government sectors and institutions working in food and nutrition in Brazil. This aim was to support public policies in food and nutrition education as a powerful strategy for the promotion of adequate and healthy food, based on a broad concept and innovative principles for the framework's implementation. The Framework for Food and Nutrition Education became a basic reference for reflection and orientation on practices in food and nutrition education, highlighting its transdisciplinary, inter-sector, and interprofessional nature and its integration in the context of people's lives. For these purposes, the Framework points to the need for innovative, problematizing, and active pedagogical approaches ⁶.

Food and nutrition topics have many interfaces with other health topics already incorporated into the school curriculum and with various contents in all the curricular components. The development of actions linked to the curriculum aims to expand the understanding of this theme and correlate the school curriculum content with the multiplicity of factors associated with food practices.

Brazil's National Law on Guidelines and Foundations for Education ¹⁷ and National Common Curriculum ¹⁸, which orient the curricula in the country's overall educational system and pedagogical proposals for the school systems, underline the commitment to a comprehensive formative experience that considers individuals in the learning process in terms of their singularity, integrity, diversity, and otherness, aimed at overall human development. By implementing food and nutrition education, schools contribute to building knowledge and developing a critical approach to food, a structuring practice for social relations. These characteristics favor the promotion of adequate and healthy food in schools, based on the recognition of food as a human right.

Methodological approach

The elaboration of the series of materials in 2014 and 2015 included the stages we describe next. First, we conducted a search of Brazilian Ministry of Education documents in force at that time supporting the organization of curricula for preschool and elementary school (the latter defined for the purposes of this article as K-9, or primary school plus junior high) ^{19,20,21,22,23,24,25} and on the contents related to food and nutrition in textbooks aimed at the 5th to 9th grade of elementary school. Next, a workshop was held to identify windows of opportunity in the curriculum to work on food and nutrition topics. This activity helped identify demands for approaches to the promotion of adequate and healthy food in schools. It included representatives of the public health and education systems from various states, representing all five major geographic regions of Brazil, members of the CGAN and PAHO, and three pedagogical experts, one of whom specialized in preschool and the other in elementary school, who followed the entire project.

The result of this workshop was the construction of a chart by school segments (preschool, early elementary, and late elementary) with the following data: opportunities in the curriculum (contents according to curricular components), themes/contents in food and nutrition, possible teaching strategies, and suggested reading. These products were further improved using the literature search mentioned above, performed by the authors, with the support of the pedagogical experts. The result of this process is systematized in Boxes 1 and 2.

Box 1

Preschool curriculum contents in dialogue with food dimensions. Rio de Janeiro, Brazil, 2014.

WORK DIMENSIONS/AGE GROUP (YEARS)	CURRICULUM COMPONENT
Personal and social formative process	
≤ 3	Self-esteem
	Choice
	Make-believe
	Interaction
	Image
	Safety
	Care
	Security
4-5	Name
	Self-image
	Independence and autonomy
	Interaction
	Games and playing
	Respect for diversity
	Personal care
Knowledge of the world	
≤ 3	Skills – balance and coordination
	Speaking and listening
	Language
	Nature and society – organization of groups and their ways of being, living, and working; objects and processes of transformation; living beings
	Naming
	Math – counting; numbers and number systems
4-5	Skills – balance and coordination
	Art appreciation
	Language – speaking and listening; reading and writing; practice reading
	Nature and society – organization of groups and their ways of being, living, and working; objects and processes of transformation; living beings
	Naming and classification
	Mathematic – basic operations
	Geometry – sizes and measures

Note: result of workshop with specialists and search performed by the authors in documents from the Brazilian Ministry of Education on organization of the curriculum ^{19,20,21,22}.

Source: prepared by the authors (2020).

Box 2

Elementary school curriculum contents in dialogue with food dimensions. Rio de Janeiro, Brazil, 2014.

SUBJECT	GRADES			
	EARLY YEARS OF ELEMENTARY SCHOOL		FINAL YEARS OF ELEMENTARY SCHOOL	
	1ST CYCLE	2ND CYCLE	3RD CYCLE	4TH CYCLE
Portuguese	<ul style="list-style-type: none"> - Understanding, learning and use of codes: letters, words, numbers, signs - Text styles - Factors in textual coherence: introductory learning and practice reading, practice in production of texts, revision of texts, learning with texts, reading, spelling, punctuation, grammar 		<ul style="list-style-type: none"> - Underlying concepts and procedures in language practices: Practice listening to oral texts and reading written texts, Practice in the production of oral and written texts - Underlying values and attitudes in language practices (critical stance towards text, interest, initiative, and autonomy to read various texts; interest in reading as source of information, leisure-time learning and art) - Practice in the production of oral and written texts: production of oral texts, production of written texts 	
Math	<ul style="list-style-type: none"> - Natural numbers and decimal system - Operations with natural numbers - Space and shape - Sizes and measures - Treatment of information (tables and graphs) 		<ul style="list-style-type: none"> - Problems involving natural, whole, rational numbers involving different sizes, selecting measuring units and adequate utensils for the required precision, and based on them, expand and build new meanings in addition, subtraction, multiplication, division, powers, roots, algebraic interpretations as translation of problem situations; construction and interpretation of tables and graphs; proportions. 	<ul style="list-style-type: none"> - Different procedures in calculating natural, whole, rational, and irrational numbers; mathematical laws that express the dependence between variables; fundamentals of measures, calculation, and approximation of results according to desired degree of precision; problems involving relations with direct or inversely proportional magnitude; frequency tables and graphs with statistical data
History	<ul style="list-style-type: none"> - Identity (personal, family, and social) - Civics, solidarity, and respect - Commemorative dates 	<ul style="list-style-type: none"> - Identity (personal, family, and social) - Civics, solidarity, and respect - Family involvement 	<ul style="list-style-type: none"> - History of social relations, culture, and work: social relations, nature, and land - Labor relations 	<ul style="list-style-type: none"> - History of power representations and relations: nations, peoples, battles, wars, and revolutions; citizenship and culture in the contemporary world

(continues)

Box 2 (continued)

SUBJECT	GRADES			
	EARLY YEARS OF ELEMENTARY SCHOOL		FINAL YEARS OF ELEMENTARY SCHOOL	
	1ST CYCLE	2ND CYCLE	3RD CYCLE	4TH CYCLE
Geography	<ul style="list-style-type: none"> - Natural elements (water, air, soil) and cultural elements (transportation, housing, industry) - Ecosystem; - Water pollution and contamination, pesticides, herbicides, and insecticides 	<ul style="list-style-type: none"> - Agencies responsible for inspection/regulation (e.g.: ANVISA, INEA); government responsibility; - Ecosystem; - Water pollution and contamination, pesticides, herbicides, and insecticides 	<ul style="list-style-type: none"> - Construction of space: territories and places (society's time and nature's time); conquering place and conquering citizenship; a nature and socioenvironmental issues - Capitalist modernization and redefinition of relations between the countryside and city - Culture and consumption: a new interaction between countryside and city; maps as a possibility for understanding and comparative studies of different landscapes and places 	<ul style="list-style-type: none"> - Globalization and urban hierarchies - State, peoples, and nations, redrawing borders; landscapes and territorial diversity in Brazil; - Feeding the world: socioenvironmental dilemmas for food security. - Urban landscape, industry, and way of life; - Brazil and environmental issues; - Environmentalism: thinking and acting
Science	<ul style="list-style-type: none"> - Food chain (production, distribution, marketing, and consumption); - Environment: organic and inorganic composting, waste disposal 		<ul style="list-style-type: none"> - Land and universe - Life and environment - Human beings and health - Technology and society 	
Art	<ul style="list-style-type: none"> - Visual arts - Theater - Dance - Music 			
Physical Education	<ul style="list-style-type: none"> - Knowledge about the body - Sports, games, fights, and gymnastics - Rhythm and expression 			

ANVISA: Brazilian Health Regulatory Agency; INEA: State Institute of the Environment.

Note: result of workshop with specialists and search performed by the authors in documents from the Brazilian Ministry of Education on organization of the curriculum^{19,20,21,22}.

Source: prepared by the authors (2020).

After concluding the first version of the activities to produce the educational materials, a new workshop was held with participation by educators and researchers in food and nutrition education and professionals from the public healthcare system (nutritionists, physicians, nurses, and psychologists) and the school system (teachers and pedagogical coordinators from preschool to late elementary school). They were asked to give their opinions on the adequacy of the activities' language and content, as well as the activities' potential to foster dialogue between health and education. This new workshop's outputs backed the final stage, which included: conclusion of the elaboration of activities, the design and production of videos to support the Manuals, and the production of a booklet on promotion of adequate and healthy food in daycare centers, for health and education adminis-

trators. Box 3 describes the set of materials in this series. Both the dialogue with partners and the process of developing the materials featured the commitment to the feasibility of implementing the suggested activities.

Boxes 1 and 2 served as the basis for producing the Matrix of themes in food and nutrition according to food dimensions and school segments (preschool and elementary). The content will be discussed in the article's *Results and Discussion* section. This production was based on a reflexive process conducted by the authors on the intersections between central aspects of the food dimensions and contents planned in the school curriculum. The Matrix was used to orient the approach to food and nutrition in all the materials comprising the series, having oriented the work by the participants in the second expert workshop. After conducting the activities, we returned to the Matrix to be certain that all the themes in food and nutrition had been covered.

Box 3

Materials produced for the promotion of adequate and healthy food in the Health at School Program. Rio de Janeiro, Brazil, 2019.

MATERIAL	DESCRIPTION
Activities Manual for the Promotion of Adequate and Healthy Food: Preschool (92p). Activity Sections: The Child and His or Her Body; The Child and Foods; Living and Eating. Available at: http://189.28.128.100/dab/docs/portaldab/publicacoes/caderno_activities_educacao_infantil.pdf	Targeted to teachers and health professionals. Aims to value the crosscutting nature of food and nutrition in their different dimensions and their convergence with curriculum guidelines. Contains a brief theoretical approach, suggestions for activities with the identification of curriculum components, and complementary materials.
Activities Manual for the Promotion of Adequate and Healthy Food: Early Elementary School (127p). Activity Sections: The Child, Foods, and Eating Throughout Life; Eating as a Social Practice; Food System. Available at: http://189.28.128.100/dab/docs/portaldab/publicacoes/caderno_activities_ensino_fundamental_I.pdf	
Activities Manual for the Promotion of Adequate and Healthy Food: Late Elementary School (135p). Activity Sections: Eating in the Contemporary Context; Food System. Available at: http://bvsm.s.saude.gov.br/bvs/publicacoes/promocao_alimentacao_saudavel_ensino_fundamental_II.pdf	
AThe Daycare Center and Promotion of Breastfeeding and Adequate and Healthy Food: Booklet for Administrators (36p). Available at: http://189.28.128.100/dab/docs/portaldab/publicacoes/a_creche_promotora_amamentacao_livreto_gestores.pdf	Targeted to administrators in health and education. Aims at awareness-raising and orientation for the promotion of breastfeeding and adequate and healthy food in preschool.
Video: Paths to Food (16'23") Available at: https://www.youtube.com/watch?v=BYw0EVdQbV8	Targeted to teachers and health professionals. Addresses food dimensions and components of the food system; and values the school as a fundamental space for the promotion of adequate and healthy food, presenting materials in the series.
Video: Nico and Tubers (11'57") Available at: https://www.youtube.com/watch?v=biq3xE3O3Zc&t=71s	Targeted to Early Elementary School students (equivalent of primary school). Approaches food groups, regional foods, commensality, and cooking the story of Nico, a boy who discovers the values of his family's food culture through a school activity.
Video: No Canteen! (12'52") Available at: https://www.youtube.com/watch?v=4Ql6nOxbyKI&t=322s	Targeted to Late Elementary School students (equivalent of junior high school). Approaches ultra-processed foods, media, regulation of school canteens, and cooking through the story of two teenagers that conduct a survey after the school canteen is closed.

Source: prepared by the authors (2020).

To meet this article's first objective, we present the Matrix together with reflections on the expanded perspective of food that it adopts and its potential for organizing a crosscutting approach to food and nutrition from preschool through elementary school.

To meet the second objective, the contents, approaches, teaching strategies, and objectives of the activities in the Manuals were compared to the food dimensions, the DCN, and the principles in the Framework for Food and Nutrition Education. Given the principles' central importance for improving teaching practices, the latter comparison was complemented by systematizing the number of proposed activities per principle in the Framework for Food and Nutrition Education and with examples of how each principle was approached.

Details of these comparisons are provided in two supplementary materials: the first discusses the activities proposed in the Manuals (Supplementary Material. Box S1. http://cadernos.ensp.fiocruz.br/static//arquivo/suppl-e00152320-s1_6178.pdf), their objectives, and interfaces with the food dimensions, curriculum components, and the principles of the Framework for Food and Nutrition Education; the second presents an exercise for linking the themes of food and nutrition to the contents and curriculum components identified in the first workshop and/or adopted in the Manuals according to food dimension and school segment (Supplementary Material. Box S2. http://cadernos.ensp.fiocruz.br/static//arquivo/suppl-e00152320-s2_9233.pdf).

Results and discussion

Food dimensions in the Matrix and Manuals

Box 4 shows the Matrix of food and nutrition themes by food dimension and school segment.

The first point for reflection is the expanded approach to food and nutrition in schools provided by the Matrix. Analyses of school textbooks and Food and Nutrition Education practices in schools suggest that this theme is often presented to the school community with a focus on nutritional and health aspects, thereby reducing food and nutrition to their biological dimension^{26,27,28}. The adoption of food dimensions as the theoretical reference allowed a dialogue with curriculum components that were previously lacking or treated superficially, as in History and Geography. The food dimensions favored the contextualization of eating practices in the territories and over the course of historical processes related to changes and persistence in different life contexts.

The attempt was also to approach the biological dimension of food in such a way as to overcome the idealized and/or medicalizing view of food and the focus on the prevention and treatment of diseases²⁹. The process was also intended to acknowledge the link between this dimension and the others: in the proposed activities, based on the principles of the *Dietary Guidelines for the Brazilian Population* and the NOVA classification of foods, the nutritional and health aspects were problematized, considering the impacts of food choices on health, culture, and the environment^{2,30}. The pedagogical approaches based on this classification have proven more effective than the traditional approaches³¹.

This expanded focus can also be seen in the contents proposed by the Matrix and developed in the activities, featuring the following: the human right to adequate and healthy food³², breastfeeding³, and the food system³³ in the three school segments; care for the body¹⁸, and cooking³⁴ in preschool; food classification according to the extent and purpose of processing², regional foods³⁵, and commensality³⁶ in the early years of elementary school; and food sovereignty³⁷, body image³⁸, contemporary aspects of food, especially gender issues³⁹ and consumerism⁴⁰ in the final years of elementary school (Supplementary Material. Box S1. http://cadernos.ensp.fiocruz.br/static//arquivo/suppl-e00152320-s1_6178.pdf; Supplementary Material. Box S2. http://cadernos.ensp.fiocruz.br/static//arquivo/suppl-e00152320-s2_9233.pdf).

The second point for reflection is the Matrix as organizer of a crosscutting approach to food and nutrition over the course of the school segments. This is expressed in a gradient of complexification in the way a given theme is treated both in the Matrix and in the proposed activities, allowing more in-depth discussion according to the child's development and the curriculum's organization.

Box 4

Matrix of food and nutrition themes by food dimensions and school segments. Rio de Janeiro, Brazil, 2019.

DIMENSIONS	PRESCHOOL	EARLY YEARS OF ELEMENTARY SCHOOL	FINAL YEARS OF ELEMENTARY SCHOOL
Human right to adequate food	- Right to food and right to clean water	- Eating and notion of rights and citizenship - Access to foods	- Food and nutritional security (food as a right or merchandise, the State's role; public policies, school food as a right; inequalities; equity) - Food sovereignty
Biological	- Identifying foods (water) - Body (care, growth) - Body image - Sensory characteristics	- Food groups/classification of foods according to processing - Eating over the course of life - Metabolism: foods and nutrients - Hygiene and foods - Water as food	- Classification of foods according to processing - Body and food (subjectivity)
Socio-phycocultural	- Cooking - Commensality - Breastfeeding	- Eating habits and customs in families from regions and societies - Eating over time - Cooking and commensality - Breastfeeding - Media and consumption	- Food choices - Food and contemporaneity (commensality, time, globalization, changes in eating patterns, cooking, and gender) - Breastfeeding - Media and consumption
Economic	- Professions in the food system - Waste of foods	- Professions in the food system - Availability and access to foods - Production, storage, transportation, and marketing of foods	- Work relations in the food system
Environmental	- Origin of foods - Hygiene	- Production and disposal of waste - Waste in all stages of the food system - Food system (production, marketing, consumption of foods, agriculture, environment, water, waste in all stages, waste disposal) - Impacts of food choices	

Source: prepared by the authors (2019).

For example, the human right to adequate and healthy food ³² is explored as one of children's rights, along with playing and studying in preschool; as the concept of human rights in the early elementary school; and as a right to be guaranteed by the State in late elementary school. The food system ³³ is discussed in preschool via the professions related to it; the identification of its main components (food chain, food systems, and food practices) in early elementary school; and the discussion on work relations established in this system in late elementary school (Box 4). This crosscutting approach provided by the Matrix and materialized in the activities proposed in the Manuals favors concepts and practices in the promotion of adequate and healthy food that are sensitive to the curriculum and linked to it ¹² (Supplementary Material. Box S2. http://cadernos.ensp.fiocruz.br/static//arquivo/suppl-e00152320-s2_9233.pdf), besides allowing integration of food and nutrition themes in each school's pedagogical project.

In general, all the food and nutrition topics provided in the Matrix were addressed, with varying degrees of emphasis. These topics can be the activity's main contents; they can be present in aspects to be discussed in greater depth according to each group of students; or they can also be included in the suggested educational materials for supporting the activities' development.

Activities in the Manuals and curriculum components

The activities allowed a dialogue with various curriculum components (Supplementary Material. Box S1. http://cadernos.ensp.fiocruz.br/static//arquivo/suppl-e00152320-s1_6178.pdf). For preschool, the components in the dimensions "personal and social formative process" and "nature and society" were addressed in the set of proposed activities; and all those in elementary school were covered in each of the two segments, except for physical education in early elementary school.

The activities' conception also favored links between different curriculum components, allowing a comprehensive approach to the knowledge¹⁸. In early elementary school, the activities included two to six components (in most cases three or four). In late elementary school, they included three to five components (mostly three). This effort at dialogue with the curriculum components and interlinkage is a major practical step forward in food and nutrition education.

In preschool, orality, psychomotricity, and knowledge of oneself and others are characteristics of childhood development that display intense dialogue with food practices, considering the child as a historical subject with rights that builds his or her identity, the structuring dimensions of pedagogical practices and interactions and playing. In this phase, educating and caring are concepts associated with the educational process, and experiences in school, family, and community are the basis for learning socialization, autonomy, and communication¹⁸. Thus, the central characteristics of the activities in the preschool Manuals are playfulness, stimulus for autonomy and self-care, and the family's involvement.

Elementary school (defined here as primary plus junior high) covers the first nine years of school life in the Brazilian educational system and includes the transition from preschool to early elementary, the change from generalist teachers to specialist (subject-by-subject) teachers, and the transition to late elementary (equivalent of junior high). Over the course of early elementary school, the pedagogical practices that began in preschool are consolidated, organizing the literacy process. Playfulness is still present, interactions with the world are expanded, and logical reasoning is developed progressively. In a dynamic process between the child and the collectives in which he or she participates, autonomy is developed along with the use of multiple languages for the construction and expression of new forms of knowledge¹⁸. The activities proposed in the Manual for early elementary school are based on logical reasoning and stimulus for the development of orality, maintaining the playful aspects and drawing on social uses of writing and math to build knowledge on food and nutrition. The activities provide opportunities to exercise observation, perception, analysis, representation, and discoveries and are adapted to different needs and capacities for mobilization of cognitive operations.

The transition to late elementary school occurs in a continuous process of expansion of pedagogical practices mediated by relations between individuals and nature, history, technology, and the environment. This is a period of greater cognitive complexity, specialization in areas of knowledge, and critical interaction with different sources of information. Abstract reasoning and the capacity to situate oneself in the other's place contribute to strengthening autonomy and the development of moral and ethical values. This transition accompanies the passage from childhood to adolescence; thus, to understand the different ways of entering adolescence and expressing the multiple forms of youth is essential for proposing contextualized and dialogical activities¹⁸. The Manual for late elementary school proposes activities that value this age group's characteristic critical sense and prioritize argumentative capacity as a way of contributing to citizens' participation in society, such as the debate on the relationship between poverty and hunger and the promotion of adequate and healthy food. The activities propose different forms of expression and research using information and communication technologies, seeking to contribute to dialogue between the contemporary world's immediatism and the need for the students' deeper reflections on food and nutrition issues.

In elementary school, organization of the curriculum by components (i.e., subjects) in the areas of knowledge (language, math, natural sciences, and human sciences) becomes more challenging for

an approach to food and nutrition that promotes linkage between these components. For example, in the activity *Cooking, Yesterday and Today*, the dialogue with the curriculum components occurred as follows: with the Portuguese language, to stimulate written comparisons between characteristics of the student's food and that of older family members; with History, exploring changes and permanence in eating habits and practices over time; with Math, building charts for a quantitative summary of the collected information; with Geography, identifying foods consumed in the students' territories; with Science, in the discussion of healthy eating habits; and with Arts, through the possibility of customizing the proposed charts and ways of expressing the systematization of the collected information.

In most cases, the content proposed in the DCN for each segment was used as the basis for developing the activity. For example, "personal, family, and social identity" and "valuing local culture" provided the basis for activities that link to the Portuguese language component (e.g.: *Learning About Our Eating Practices*) and Geography (e.g.: *Our Land's Flavors*) in early elementary school. In late elementary school, the contents "self-esteem and diversity" and "identities and beauty" provided the basis for the activities linking History, Geography, Portuguese, Science, and Phys Ed (e.g.: *Body Image I: Collective Identity and Diversity* and *Body Image II: Individual Identity and Self-Esteem*).

Activities in the Manuals and the principles in the Framework for Food and Nutrition Education

The Matrix and the set of proposed activities converge with all the principles of the Framework for Food and Nutrition Education, which assume specific shapes in the approach to each of the school segments as a function of the child's development and the organization of the school's routine (Box 4 and Supplementary Material. Box S1. http://cadernos.ensp.fiocruz.br/static//arquivo/suppl-e00152320-s1_6178.pdf). This convergence was expressed in the contextualization of eating practices in the territories and the schoolchildren's realities; in the problematizing approach, which encourages critical thinking and promotion of autonomy for both teachers and schoolchildren; and in the inter-sector planning through themes and action strategies, encouraging collaboration between healthcare professionals and teachers.

Box 5 presents a systematization of the number of activities proposed in the Manuals that address each principle in the Framework for Food and Nutrition Education and illustrate the way the principle was approached in activities in each school segment.

The principles most often approached in preschool are the promotion of self-care and autonomy (principle V) and active and informed participation (principle VI). The activities value the child's relationship to his or her body, exploring the foods' sensory characteristics, and the perception of relations between food and social practices. These aspects favor learning in general, building the child's positive relationship to food, and the formation of healthy eating habits.

The activities in early elementary school feature the principles of valuing local food culture and respect for different kinds of knowledge (principle III), food as a reference in valuing cooking as an emancipatory practice (principle IV), and promotion of self-care and autonomy (principle V). Dialogue with these principles allows recognition of the plurality of food practices in the Brazilian people's different cultures, since the proposed activities' focus is on food, on the understanding that food is part of daily life, and on the reflections on food practices throughout life. Besides this dialogue, there was also a frequent link to the principles of social, environmental, and economic sustainability (principle I) and the comprehensive approach to the food system (principle II) through linkage with the food system's components, exploring the territory in which the students live, and identification of the actors involved in the production and marketing of foods.

The activities in late elementary school feature the principles of social, environmental, and economic sustainability (principle I), valuing local food culture and respect for different kinds of knowledge (principle III), and promotion of self-care and autonomy (principle V). Their linkage is established through discussions on food in the contemporary context and food systems. Reflection and debate on such issues as commensality, globalization, cooking, food and gender, food choices, consumption, and sustainability, advertising and food labeling, and other components of the food system allow establishing a critical vision of contemporary food and nutrition.

Box 5

Number and examples of activities according to the principles in the *Framework for Food and Nutrition Education for Public Policies* (Framework for Food and Nutrition Education), by school segment. Rio de Janeiro, Brazil, 2020.

PRINCIPLE IN THE FRAMEWORK	SCHOOL SEGMENT		
	PRESCHOOL	EARLY YEARS OF ELEMENTARY SCHOOL	FINAL YEARS OF ELEMENTARY SCHOOL
	NUMBER OF ACTIVITIES (EXAMPLE)	NUMBER OF ACTIVITIES (EXAMPLE)	NUMBER OF ACTIVITIES (EXAMPLE)
I. Social, environmental, and economic sustainability	5 (planting seeds and seedlings)	12 (factors that influence food practices)	18 (impact of food production and consumption on the environment)
II. Approach to the food system as a whole	5 (open-air markets as a space for healthy foods)	12 (changes in foods based on degree of processing)	16 (daily consumption practices)
III. Valuing local food culture and respect for diversity of opinions and perspectives, considering the legitimacy of different kinds of knowledge	10 (foods consumed by families)	22 (regional foods)	24 (protection for breastfeeding)
IV. Meals and eating as references; valuing cooking as an emancipatory practice	17 (typical dishes in regional festivals)	27 (foods, cooking dishes, equipment, and utensils in different generations)	17 (food and gender)
V. Promotion of self-care and autonomy	25 (perceptions of the body and personality characteristics)	29 (water in the composition of foods and the human body)	24 (concept of beauty and diversity)
VI. Education as a permanent process generating autonomy and active and informed participation	26 (experience preparing foods)	33 (production of a recipe book by the class)	26 (elaboration of a communication piece (slogan, music, video, poem, open letter, etc.))
VII. Diversity in food practice scenarios	8 (open-air market/grocery store/dining hall)	13 (town square/backyard/schoolyard)	14 (pharmacies/supermarkets/school kitchen)
VIII. Inter-sector issues	8 (partnership with the Family Health Strategy)	10 (conversation with farmer, agronomist, or farm extension technician)	11 (studies in the Brazilian National Institute of Historical and Artistic Heritage on recipes and utensils as cultural heritage)
IX. Planning, evaluation, and monitoring of actions	The activities are presented in script format, demonstrating the importance of planning (prior organization) for execution of the actions, emphasizing local diagnosis. In many cases it also involves the students in this phase, thus strengthening the participatory approach recommended by the Framework for Food and Nutrition Education.		

Fonte: elaborado pelas autoras (2020).

The principle of education as both a permanent process generating autonomy and individuals' active and informed participation is present in all the activities in the three school segments. This occurs through proposals of elements for the continuous and integrated incorporation of food and nutrition education in the areas of knowledge and the promotion of autonomous and healthy eating practices. This principle also materializes in the problematizing approach drawing on underlying

questions in the dialogue with schoolchildren, seeking to explore the different forms of knowledge. This approach implements in practice the perspective that food and nutrition education should prioritize active processes, incorporate real-world knowledges and practices, and contextualize individuals' realities¹⁶. This happens through dialogical activities, with proposals that encourage critical reflection and understanding of the individual's relationship to the world. The reflection becomes clearer for individuals when the point of departure is situations they experience⁴¹, such as valuing each family's food diversity, for example in the backyard vegetable gardens; analysis of labels on snacks that children bring to school; a survey of foods that enter their homes, etc. Valuing playfulness and the use of artistic expressions (modeling clay, cut-and-paste, music, painting, games, etc.) are examples of strategies for children's active participation.

Each proposed activity focuses on at least two principles in the approach and may even include all of them. As a reflexive exercise on the translation of the framework's principles to the activities, we will analyze each one's approach in the activity. *The School in the Open-air Market*, proposed for early elementary school, approaches all the principles as follows: valuing the open-air food market or "farmers' market" as a space for purchasing natural and minimally processed foods and in the dialogue between food production, supply, marketing, and distribution (principles I and II); the focus on preservation of food culture with research on typical regional foods (III); discussion of natural foods as a reference for valuing typical dishes from the child's region and that are based on these foods (IV); reflexive dialogue on the reasons students have never tried some foods (V); further development of the visit with a proposal for conversation with the market vendors and/or farmers (VI); visit to the open-air market (VII); and conversation with farmers (VIII). Meanwhile, principle IX is expressed in the detailed planning in "prior organization" and in the evaluation made by the class itself with a collective drawing that records their experience.

The Manuals favor joint planning between health and education by proposing action strategies that encourage collaboration between these two sectors. The proposed activities are intended to extend beyond traditional approaches in health and education that often fail to make sense for the individuals' lives⁴². Although the materials produced here have a national scope, the activities allow the incorporation of different realities in the schoolchildren's life context and the organization of the school curriculum. These two perspectives are consistent with the "planning" component of principle IX of the Framework for Food and Nutrition Education since they contribute to the definition of common objectives between health and education in the sphere of the PSE and strategies to reach them, which are essential elements for more effective and sustainable practice in food and nutrition education.

In relation to the methodological experience, during the process of elaboration and publication of these materials, DCN were updated due to the curricular reorganization that incorporated daycare centers and preschool into basic education and defined elementary school as nine years of schooling. Especially in preschool, interaction and playfulness were valued and further developed as experiences in these updates, to safeguard the right and need to play and the school's role with families to strengthen small children's autonomy. The changes were in the sense of upgrading the previous guidelines¹⁸, and the Manuals' content and approach thus remained convergent with the new guidelines.

Another aspect that should be mentioned is that due to the deadlines for delivering the series of materials, it was not possible to pretest all the activities. However, they were mostly built according to activities already tested in various experiences with undergraduate Nutrition students and in practice by healthcare professionals and teachers. To address this limitation, a study is being designed to assess the materials' use. Planning is also underway for the activities in dissemination of the materials. These will involve online forums with state and municipal administrators of the PSE and other strategic actors working the healthcare and school systems that can disseminate and encourage the materials' use.

A key strength of the study was the involvement of pedagogical experts with experience in teaching practice in all three school segments, which allowed consistence and depth in linking the materials and activities to the curriculum.

The challenge of producing a single set of materials for all of Brazil provided a daring opportunity. The strategy for reaching this goal was to adopt a process for production of the materials that involved participation by actors from different states of Brazil, representing all five major geographic regions of the country and an approach to the materials that encourages their adaptation to local realities and the discussions raised by the students as the point of departure for the activities.

Final remarks

The Matrix and Manuals contribute to the incorporation of the theme of food and nutrition in schools through actions in food and nutrition education that link the different food dimensions to the contents of the curriculum components in each school segment based on the principles in the Framework for Food and Nutrition Education. It is hoped that this proposal will help overcome the approach to food and nutrition that is limited to the components of Sciences and Biology, to expand educators' repertoire on the theme of food and nutrition, and to include the materials and activities in the school curriculum on a daily and crosscutting basis.

The Matrix had been conceived as a strategy to organize the thinking and work process, but by the end of the elaboration of the materials it had become a theoretical expression of this knowledge-building with the potential to orient the production of other materials⁴³ and projects and practices in food and nutrition education in schools. In addition to the materials produced here, the article's reflexive exercise contributes to the debate on food and nutrition education in the curriculum and to the support for materializing this linkage.

By assuming an expanded understanding of food, we were able to produce a sufficient range of activities to allow dialogue with different curriculum components and to present a series of possibilities for joint action between educators (both schoolteachers and healthcare professionals) and the school community. The proposed activities are anchored in and encourage the autonomy of these educators, since the materials' versatility allow their adaptation to the curricular organization in each school system and to the local contexts. The initiative presented in this article thereby strengthens the actions in food and nutrition education in the school environment and supports the relationship between health and education, a basic element in PSE.

Contributors

L. Maldonado, S. C. Farias, J. J. Damião, L. M. C. Castro, A. C. F. Silva and I. R. R. Castro participated on the project design, production, analysis and interpretation of data, writing and review of the article.

Additional informations

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References

1. Secretaria de Atenção à Saúde, Ministério da Saúde. Política Nacional de Alimentação e Nutrição. Brasília: Ministério da Saúde; 2013.
2. Departamento de Atenção Básica, Secretaria de Atenção à Saúde, Ministério da Saúde. Guia alimentar para a população brasileira. 2ª Ed. Brasília: Ministério da Saúde; 2014.
3. Departamento de Promoção da Saúde, Secretaria de Atenção Primária à Saúde, Ministério da Saúde. Guia alimentar para crianças brasileiras menores de 2 anos. Brasília: Ministério da Saúde; 2019.
4. Fundo Nacional de Desenvolvimento da Educação. Resolução nº 06, de 08 de maio de 2020. Dispõe sobre o atendimento da alimentação escolar aos alunos da educação básica no âmbito do Programa Nacional de Alimentação Escolar – PNAE. Diário Oficial da União 2020; 12 may.
5. Departamento de Atenção Básica, Secretaria de Atenção à Saúde, Ministério da Saúde. Matriz de ações de alimentação e nutrição na atenção básica de saúde. Brasília: Ministério da Saúde; 2009.
6. Secretaria Nacional de Segurança Alimentar e Nutricional, Ministério de Desenvolvimento Social e Combate à Fome. Marco de referência de educação alimentar e nutricional para as políticas públicas. Brasília: Ministério do Desenvolvimento Social e Combate à Fome; 2012.
7. Casemiro JP, Fonseca ABC, Secco FVM. Promover saúde na escola: reflexões a partir de uma revisão sobre saúde escolar na América Latina. Ciênc Saúde Colet 2014; 19:829-40.
8. Food and Agriculture Organization of the United Nations. School food and nutrition framework. Rome: Food and Agriculture Organization of the United Nations; 2019.
9. Carvalho FFB. A saúde vai à escola: a promoção da saúde em práticas pedagógicas. *Physis* (Rio J.) 2015; 25:1207-27.
10. Silva CS, Bodstein RCA. Referencial teórico sobre práticas intersectoriais em promoção da saúde na escola. *Ciênc Saúde Colet* 2016; 21:1777-88.
11. Brasil. Decreto Presidencial nº 6.286, de 5 de dezembro de 2007. Institui o Programa Saúde na Escola – PSE, e dá outras providências. *Diário Oficial da União* 2007; 6 dec.
12. Brasil. Lei nº 11.947, de 16 de julho de 2009. Dispõe sobre o atendimento de alimentação escolar e do Programa Dinheiro Direto na Escola aos alunos da educação básica; altera as Leis nos 10.880, de 9 de junho de 2004, 11.273, de 6 de fevereiro de 2006, 11.507, de 20 de julho de 2007; revoga dispositivos da Medida Provisória nº 2.178-36, de 24 de agosto de 2001, e a Lei nº 8.913, de 12 de julho de 1994; e dá outras providências. *Diário Oficial da União* 2009; 17 jun.
13. Brasil. Lei nº 13.666, de 16 de maio de 2018. Altera a Lei nº 9.394, de 20 de dezembro de 1996 (Lei de Diretrizes e Bases da Educação Nacional), para incluir o tema transversal da educação alimentar e nutricional no currículo escolar. *Diário Oficial da União* 2018; 17 may.
14. Castro IRR. Desafios e perspectivas para a promoção da alimentação adequada e saudável no Brasil. *Cad Saúde Pública* 2015; 31:7-9.
15. Castro IRR, Castro LMC, Silva ACF, Gugelmin SA. A questão alimentar nas políticas públicas: cenário atual, desafios e perspectivas. In: Diez-Garcia RW, Mancuso AMC, organizadores. *Mudanças alimentares e educação alimentar e nutricional*. 2ª Ed. Rio de Janeiro: Guanabara Koogan; 2017. p. 99-121.

16. Vasconcelos EM. A saúde nas palavras e nos gestos: reflexões da rede de educação popular e saúde. São Paulo: Hucitec; 2001.
17. Brasil. Lei nº 9.394, de 20 de dezembro de 1996. Estabelece as diretrizes e bases da educação nacional. Diário Oficial da União 1996; 23 dec.
18. Conselho Nacional de Educação, Ministério da Educação. Base nacional comum curricular. Brasília: Ministério da Educação; 2018.
19. Secretaria de Educação Fundamental, Ministério da Educação e do Desporto. Referencial curricular nacional para a educação infantil. v.1. Brasília: Ministério da Educação; 1998.
20. Secretaria de Educação Fundamental, Ministério da Educação e do Desporto. Referencial curricular nacional para a educação infantil. v. 2. Brasília: Ministério da Educação; 1998.
21. Secretaria de Educação Fundamental, Ministério da Educação e do Desporto. Referencial curricular nacional para a educação infantil. v. 3. Brasília: Ministério da Educação; 1998.
22. Secretaria de Educação Básica, Ministério da Educação. Diretrizes curriculares nacionais para a Educação Infantil. Brasília: Ministério da Educação; 2010.
23. Secretaria de Educação Fundamental, Ministério da Educação. Parâmetros curriculares nacionais: primeiro e segundo ciclos do Ensino Fundamental. Introdução aos parâmetros curriculares nacionais. Brasília: Ministério da Educação; 1997.
24. Secretaria de Educação Fundamental, Ministério da Educação. Parâmetros curriculares nacionais: primeiro e segundo ciclos do Ensino Fundamental. Introdução aos parâmetros curriculares nacionais. Brasília: Ministério da Educação; 1998.
25. Conselho Nacional da Educação, Secretaria de Educação Continuada, Alfabetização, Diversidade e Inclusão, Secretaria de Educação Básica, Ministério da Educação. Diretrizes curriculares nacionais gerais da educação básica. Brasília: Ministério da Educação; 2013.
26. Greenwood SA, Fonseca AB. Espaços e caminhos da educação alimentar e nutricional no livro didático. Ciênc Educ (Bauru) 2016; 22:201-18.
27. Santos AM, Alves TS. Revisão sistemática sobre educação alimentar e nutricional: sujeitos, saberes e práticas em diferentes cenários. Revista Saúde.com 2015; 11:425-42.
28. Ramos FP, Santos LAS, Reis ABC. Educação alimentar e nutricional em escolares: uma revisão de literatura. Cad Saúde Pública 2013; 29:2147-61.
29. Viana MR, Neves AS, Camargo Jr. KR, Prado SD, Mendonça ALO. A racionalidade nutricional e sua influência na medicalização da comida no Brasil. Ciênc Saúde Colet 2017; 22:447-56.
30. Monteiro CA, Cannon G, Levy RB, Moubarac JC, Louzada MLC, Rauber F, et al. Ultra-processed foods: what they are and how to identify them. Public Health Nutr 2019; 22:936-41.
31. Nazmi A, Tseng M, Robinson D, Neill D, Walker J. A nutrition education intervention using NOVA is more effective than MyPlate alone: a proof-of-concept randomized controlled trial. Nutrients 2019; 11:2965.
32. Câmara Interministerial de Segurança Alimentar e Nutricional. Plano Nacional de Segurança Alimentar e Nutricional: 2012/2015. Brasília: Câmara Interministerial de Segurança Alimentar e Nutricional; 2011.
33. High Level Panel of Experts on Food Security and Nutrition. Nutrition and food systems: a report by the High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security. Rome: Committee on World Food Security; 2017.
34. Mills S, White M, Brown H, Wrieden W, Kwasnicka D, Halligan J, et al. Health and social determinants and outcomes of home cooking: A systematic review of observational studies. Appetite 2017; 111:116-34.
35. Departamento de Atenção Básica, Secretaria de Atenção à Saúde, Ministério da Saúde. Alimentos regionais brasileiros. 2ª Ed. Brasília: Ministério da Saúde; 2015.
36. Moreira SA. Alimentação e comensalidade: aspectos históricos e antropológicos. Ciênc Cult (São Paulo) 2010; 62:23-6.
37. Brasil. Decreto nº 7.272, de 25 de agosto de 2010. Regulamenta a Lei nº 11.346, de 15 de setembro de 2006, institui a Política Nacional de Segurança Alimentar e Nutricional – PNSAN, estabelece o parâmetro para a elaboração do Plano Nacional de Segurança Alimentar e Nutricional e dá outras providências. Diário Oficial da União 2010; 25 aug.
38. Schilder P. A imagem do corpo: as energias construtivas da psique. São Paulo: Martins Fontes; 1981.
39. Biroli F. Gênero e desigualdades: os limites da democracia no Brasil. São Paulo: Boitempo; 2018.
40. Ministério do Meio Ambiente. Consumismo infantil: na contramão da sustentabilidade. Brasília: Ministério do Meio Ambiente; 2014. (Cadernos de Consumo Sustentável, 3).
41. Freire P. Pedagogia da autonomia: saberes necessários à prática educativa. 58ª Ed. São Paulo: Paz e Terra; 1997.
42. Santos LAS. O fazer educação alimentar e nutricional: algumas contribuições para reflexão. Ciênc Saúde Colet 2012; 17:455-62.
43. Castro SFF, Melgaço MB, Souza VMG, Santos KS. Convergência de políticas públicas educacionais na promoção da alimentação adequada e saudável. Rev Panam Salud Pública 2019; 43:e96.

Resumo

Buscando apoiar iniciativas de educação alimentar e nutricional na escola contínuas e integradas ao currículo, foi elaborada uma série de materiais de apoio para profissionais de educação e de saúde. O artigo apresenta a matriz de temáticas de alimentação e nutrição que serviu de base para a construção destes materiais (Matriz) e apresenta a convergência entre a abordagem adotada nas atividades dos Cadernos de Atividades que compõem a série de materiais e as dimensões da alimentação, os princípios do Marco de Referência de Educação Alimentar e Nutricional para Políticas Públicas (Marco de Educação Alimentar e Nutricional) e as diretrizes curriculares nacionais para a educação básica. A Matriz permitiu a concepção de atividades educativas que oportunizam uma abordagem ampliada sobre alimentação e nutrição e, ao mesmo tempo, transversal e articulada ao currículo. As atividades possibilitaram o diálogo com diferentes componentes curriculares e a articulação entre eles. A convergência das atividades com o Marco de Educação Alimentar e Nutricional se expressou na contextualização das práticas alimentares nos territórios e realidades dos escolares; na abordagem problematizadora, que estimula o pensamento crítico e a promoção de autonomia tanto de educadores como de escolares; e no planejamento intersetorial por meio de temas e estratégias de ação, que encorajam a pactuação entre profissionais de saúde e de educação. Sendo assim, a iniciativa apresentada neste artigo fortalece as ações de educação alimentar e nutricional no âmbito da escola e pode colaborar para a ampliação do repertório dos educadores sobre a temática de alimentação e nutrição e para sua inclusão no currículo de forma cotidiana e transversal.

Comportamento Alimentar; Serviços de Saúde Escolar; Materiais de Ensino

Resumen

Buscando apoyar iniciativas de educación alimentaria y nutricional en la escuela, continuas e integradas en el currículo, se elaboró una serie de materiales de apoyo para profesionales de educación y de salud. El artículo presenta la matriz de temáticas de alimentación y nutrición, que sirvió de base para la construcción de estos materiales (Matriz), y presenta la convergencia entre el abordaje adoptado en las actividades de los Cadernos de Actividades, que componen la serie de materiales y las dimensiones de la alimentación, los principios del Marco de Referencia de Educación Alimentaria y Nutricional para Políticas Públicas (Marco de Educación Alimentaria y Nutricional), y las directrices curriculares nacionales para la educación básica. La Matriz permitió la concepción de actividades educativas que dan la oportunidad de un abordaje ampliado sobre alimentación y nutrición y, al mismo tiempo, transversal y articulado en el currículo. Las actividades posibilitaron el diálogo con diferentes componentes curriculares y la coordinación entre ellos. La convergencia de las actividades con el Marco de Educación Alimentaria y Nutricional se expresó en la contextualización de las prácticas alimentarias en los territorios y realidades de los escolares; en el abordaje problematizador, que estimula el pensamiento crítico y la promoción de autonomía, tanto de educadores como de escolares; y en la planificación intersectorial mediante temas y estrategias de acción, que fomentan los acuerdos entre profesionales de salud y de educación. Siendo así, la iniciativa presentada en este artículo fortalece las acciones de educación alimentaria y nutricional en el ámbito de la escuela y puede colaborar en la ampliación del repertorio de los educadores sobre la temática de alimentación y nutrición, así como en su inclusión dentro del currículo de forma cotidiana y transversal.

Conducta Alimentaria; Servicios de Salud Escolar; Materiales de Enseñanza

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