

FOOD AND NUTRITION SOVEREIGNTY AND SECURITY IN NUTRICIONIST FORMATION: A LOOK AT LATIN AMERICAN CURRICULAR DOCUMENTS

SOBERANIA E SEGURANÇA ALIMENTAR E NUTRICIONAL NA FORMAÇÃO DO NUTRICIONISTA: UM OLHAR SOBRE DOCUMENTOS CURRICULARES LATINO-AMERICANOS

SOBERANÍA Y SEGURIDAD ALIMENTARIA Y NUTRICIONAL EN LA FORMACIÓN DE NUTRICIONISTAS: UNA MIRADA SOBRE DOCUMENTOS CURRICULARES LATINOAMERICANOS



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ABSTRACT: This work aimed to identify and analyze Food and Nutritional Sovereignty and Security (SSAN) content in curricular components of undergraduate nutrition courses at Higher Education Institutions (HEIs) in Latin America and carried out in 2018, through exploratory documentary research, referenced in content analysis integrating a quantitative and reflective approach. The study included 29 courses from 25 HEIs and 17 Political Pedagogical Projects (PPP). The analysis took place based on the categories: adherence, coherence, proportion, and position throughout the course, classified on a Likert scale into concepts A, B, and C. Of these 17 courses with PPP, the evaluations resulted in: 53% B, 29% C and 18% A, indicating the predominance of average and low scores. SSAN appears far from the comprehensive vision, expressed or not in the documents, reinforcing the importance of PPP and that they are constantly updated, cohesively deepening SSAN in its curricular components.

KEYWORDS: Vocational Formation. High Education. Nutrition.

RESUMO: Este trabalho objetificou identificar e analisar conteúdos de Soberania e Segurança Alimentar e Nutricional (SSAN) em componentes curriculares de cursos de graduação em nutrição de Instituições de Ensino Superior (IES) da América Latina. Realizado em 2018, através de pesquisa documental exploratória, referenciada na análise de conteúdo, integrando abordagem quantitativa e reflexiva. Fizeram parte do estudo 29 cursos de 25 IES e 17 Projetos Políticos Pedagógicos (PPP). A análise ocorreu a partir das categorias: aderência, coerência, proporção e posição ao longo do curso, classificadas em escala likert em conceitos A, B e C. Destes 17 cursos com PPP, as avaliações resultaram em: 53% B, 29% C e 18% A, apontando o predomínio de pontuações medianas e baixas. A SSAN se mostra distante da visão abrangente, expressa ou não nos documentos, reforçando a importância dos PPP e que os mesmos sejam constantemente atualizados, aprofundando coesamente a SSAN em seus componentes curriculares.

PALAVRAS-CHAVE: Formação Profissional. Educação Superior. Nutrição.

RESUMEN: Este trabajo tuvo como objetivo identificar y analizar contenidos de Soberanía y Seguridad Alimentaria y Nutricional (SSAN) en componentes curriculares de cursos de pregrado en nutrición en Instituciones de Educación Superior (IES) de América Latina. Realizado en 2018, a través de una investigación documental exploratoria, referenciada en el análisis de contenido integrando un enfoque cuantitativo y reflexivo. El estudio incluyó 29 cursos de 25 IES y 17 Proyectos Político Pedagógicos (PPP). El análisis se realizó con base en las categorías: adherencia, coherencia, proporción y posición a lo largo del curso, clasificadas en escala Likert en conceptos A, B y C. De estos 17 cursos con PPP, las evaluaciones arrojaron: 53% B, 29 % C y 18% A, indicando predominio de puntuaciones medias y bajas. La SSAN parece estar alejado de la visión integral, expresada o no en los documentos, reforzando la importancia de los PPP y que éstos se actualicen constantemente, profundizando cohesivamente la SSAN en sus componentes curriculares.

PALABRAS CLAVE: Formación Profesional. Educación Superior. Nutrición.

Introduction

In the realm of Higher Education, the consensus reached establishes that Higher Education Institutions (HEIs) have the duty to provide education committed to humanity and regarded as a social good (Reimers, 2021; UDUAL, 2022). In this regard, agreements made within the framework of the Regional Conferences on Higher Education 2008 and 2018 propose an active relationship of HEIs with their contexts, recognize, and reaffirm the adoption of approaches aimed at reconciling attention to social, economic, and environmental problems, promoting the reduction of hunger, poverty, and inequality, while maintaining biodiversity and life (UDUAL, 2022). Therefore, HEIs have a strategic role in achieving the Sustainable Development Goals (SDGs) (UNESCO, 2008; UNESCO, 2018). Of specific interest, the training of nutritionists is committed to the SDGs by envisioning beyond hunger (UN, 2020) the food systems as a cross-cutting element to all SDGs (Fontolan *et al.*, 2022).

Globalized food systems are strongly related to the pattern of prevalent diseases in most contemporary societies, while also affecting natural systems (Swinburn *et al.*, 2019; Fidalgo, 2020). This scenario places food systems at the center of the discussion and reflects that the ways of producing, processing, transporting, and consuming food disconnect food production from the cultural, physiological, and nutritional contexts of eating (Fakhri, 2021; Cini; Rosaneli; Cunha, 2018). This highlights the need to reorganize social relations with nature and to understand food processes from their complexity and integrality. It requires placing Food Sovereignty, Food and Nutritional Security (FNS), and human and environmental rights at the forefront of public policies (Cini; Rosaneli; Cunha, 2018).

The FNS recognizes food production as a right of people and autonomy, advocates for food as a fundamental human right that must be guaranteed, and proposes a systemic vision that integrates ecological, economic, and social dimensions for the sustainable development of peoples (Campesina, 1996; Gordillo, 2013). Therefore, it is the pathway to ensure the Human Right to Adequate Food (DHAA), which is the cornerstone of Food and Nutritional Security (FNS) (Gordillo, 2013). In doing so, the nutritionist is the professional who operates in scenarios involved with FNS, being a key actor capable of contributing to a future agenda that encompasses the complexities of nutrition, human rights, and sustainable development (Jacob; Araújo, 2020).

However, the degree of contribution in the field of food and nutrition science will depend on the university training process, which may or may not adequately address these FNS

issues in the Pedagogical Political Projects (PPP) (Hoyos; D'Agostini, 2017; Lisboa; Fonseca, 2020). Consequently, the teaching plans of HEIs may indicate the quality of training regarding the epistemological approach and the depth of the theme (Fonseca; Frozi, 2019). The professional training of the nutritionist is a challenge in the face of the complexity paradigm, which must adopt a systemic view of reality, calling for adjustments in the course curricula (Wanden-Berghe *et al.*, 2010; Alves; Martinez, 2016). However, it struggles with a historically ingrained practice in a biologist epistemology, making it a great challenge to generate integrative and holistic innovations that encompass the social, political, environmental, economic, and cultural dimensions of nutrition, required for action in the field of FNS (Vieira; Leite; Cervato-Mancuso, 2013; Vieira; Cervato-Mancuso, 2015).

In light of the above, it is essential to explore the curriculum of undergraduate nutrition programs regarding the knowledge proposed to be built for future professionals, how and where this knowledge is oriented in Latin American HEIs on FNS (Wanden-Berghe *et al.*, 2010; Lisboa; Fonseca, 2020). Thus, the objective of this study was to identify and analyze the FNS content in curricular components of undergraduate nutrition courses in Latin American HEIs.

Method

This is an exploratory documentary research, based on content analysis, taken as a method that provides the use of systematic and objective procedures for the description and quantification of content, but also allows the inference of knowledge from narrative analysis through a constructivist and holistic approach to the subject (Piaget, 1970; Polkinghorne, 1995). This integration of quantitative and qualitative approaches is characterized as a mixed method (Tashakkori; Newman, 2010), which can be based on pragmatism by constituting itself reflectively (King, 2022), as in this research where reflections take as reference international documents on the subject.

Content analysis is developed in three fundamental stages: pre-analysis, data and information exploration, and systematization of results. In the pre-analysis, a floating reading of the documents was carried out with the purpose of appropriating the content of the documents and coding relevant excerpts, seeking to identify themes and meanings. This allowed the construction of analysis categories, which in this research refer to curriculum attributes, keywords guided the coding and were defined based on FNS and related constructs.

Twenty-five HEIs were surveyed, which together comprised 29 academic units offering Nutrition courses, selected from the international ranking of the best universities in Latin America and the Caribbean by Times Higher Education in 2018 (Times Higher Education, 2018), using convenience sampling as the inclusion criterion. This sample of 25 HEIs was defined in order to reach the largest number of countries with universities present in the ranking, aiming to expand the analysis in the Latin American region, avoiding the selection of universities from countries already listed in the ranking.

The identification of documents took place between 2018 and 2020 through an institutional documentary search on the official universities' websites. However, in cases of unavailability, it was necessary to request the documents by email from the course coordinators. These documents consisted of the Pedagogical Political Project (PPP) or equivalent, the curriculum grid or structure, the syllabi of the curriculum components, and the teaching programs or plans. The search for curriculum documents was conducted in the 29 academic units offering Nutrition courses. Of the 29 courses identified, only 17 provided all the necessary documents for a complete analysis. After identifying the 29 courses and their respective documents, objects of analysis of the research, information characterizing these courses, including duration, workload, and conditions of offer, were extracted.

Preceding the reflexive reading of the documents, keywords were defined that would define the curriculum components to be included in the analysis: Food Security, Food and Nutritional Security, Food Sovereignty, Human Right to Adequate Food, and Food System. These keywords were searched in the names of the curriculum components (subjects, internships, and other curricular activities), in the syllabi, in the teaching plans, and in the basic and complementary bibliographies. The search was conducted in Spanish, English, and Portuguese.

Once the curriculum components to be subjected to analysis were identified, coding from the floating reading took place considering the presence of contents related to the dimensions of FNS: availability of adequate food for consumption, means of access to food, biological and sociocultural use of food as sustenance, stability and sustainability of the processes involved, and the agency power of the right-holder (HLPE, 2020). To cover Food Sovereignty, contents related to the right to land, seeds, and sustainable forms of production were considered. The presence of contents related to the HRtAF was identified from themes focused on the right and its enforceability, in addition to the dimensions of FNS. The focus on

food systems was sought from a systemic perspective, encompassing from natural systems to the impacts of the food acquisition and consumption process on global health (HLPE, 2020).

Coding from the floating reading resulted in the following analysis categories: adherence, coherence, focus, proportion, and position. These categories obtained through objective and reflexive criteria, defined by the authors at the moment of content analysis, were taken as indicators for evaluating the contents addressed by the course, obtained from the set of curriculum contents, and subsequently, courses were classified based on these attributes. These evaluation indicators/categories were expressed on a Likert scale, with scores ranging from 0 to 4 (none, low, medium, high).

The coding and classification process into analysis categories were systematized through a matrix built in Excel®. After identifying the extracted curriculum components, conducting the codings, and defining the categories, scores were assigned by one male and one female researcher independently. In a subsequent stage, consensus was sought between both for discordant scores. When it was not possible to reach an agreement, a third female researcher was consulted for the final decision.

Among the analyzed categories, "Adherence" was constructed through reflexive analysis, aiming to identify how aligned the selected contents for analysis were with the principles of Food and Nutritional Security (FNS). This involves assessing the extent to which the selected contents were guided by the principles of FNS, also encompassing the Human Right to Adequate Food (HRAF) and food systems, both jointly and independently. "Coherence" refers to the logical sequence among the elements of the curriculum components' planning. This implies verifying whether there is consistency among the keywords or codes of interest present in the names of disciplines, syllabi, contents, and bibliographies. The "Proportion" category describes the relationship between the number of hours that the set of curriculum components represents in relation to the total course workload.

In this case, it was decided not to include elective and optional components in the workload. The workload of the curriculum components of interest was divided into intervals of 5%, following the criteria below: no score for workload less than 5%; no score: workload < 5%; low score: workload $\geq 5\% < 10\%$; medium score: workload $\geq 10\% < 15\%$, and high score: workload > 15%. The "Position" refers to the distribution of the selected curriculum components for analysis throughout the course. There was no score for components located in the first two years or the initial four semesters; low score for the third year or the fifth and sixth

semesters; medium score for the fourth and fifth years of the course or the seventh to tenth semesters; and high score for distribution throughout the course.

Based on the scores obtained by each course, it was possible to assign concepts A, B, or C to the 17 courses for which sufficient documents were obtained for analysis. Concept A was assigned to courses that scored between 3 and 4 high scores, concept B to courses that obtained at least 2 medium scores, and concept C to courses that scored at least once.

A fifth category, called "focus," was also developed, which is non-classificatory and refers to the central approach of the contents, including Food Safety (safe food, food safety, contamination); Food and Nutritional Security (access, availability, utilization, stability, sustainability, and agency); Food Sovereignty (right to choose in food production, local identity, customs), Human Right to Adequate Food (food as a human right and basis for public policies), and Food Systems (cultivation practices, production, processing, distribution, and food supply, relationship with nature and natural resources, sustainability, diversity, agriculture, market, from a systemic perspective). It should be noted that in some FAO documents and for some countries in Latin America, the term Food Security is used interchangeably with Food and Nutritional Security, and for the purposes of this research, the use of FNS was standardized (FAO, 2017).

Results and Discussions

Among the top 25 HEIs in Latin America in the 2018 Times Higher Education ranking that offer undergraduate nutrition courses, 15 were Brazilian, 3 were Chilean, 2 were Argentine, 2 were Colombian, 2 were Mexican, and 1 was Peruvian (Times-Higher-Education 2018). Of this total, 21 were public higher education institutions, and 4 were private institutions. Of the 15 Brazilian HEIs, 4 offered nutrition courses at two campuses, totaling 29 courses analyzed, as shown in Table 1. Among the 29 identified courses, information was available for 23 courses, with 17 presenting the full PPP.

Table 1 - Identification of Higher Education Institutions in Latin America with Nutrition Courses included in the study, based on the Times Higher Education Ranking-2018

No.	Higher Education Institution	Acronym	Country	Sector
1	<i>Universidade de Campinas</i>	UNICAMP	Brazil	Public
2.1	<i>Universidade de São Paulo, Capital</i>	USP	Brazil	Public
2.2	<i>Universidade de São Paulo, campus de Ribeirão Preto</i>	USP-RP	Brazil	Public
3	<i>Pontificia Universidade Católica do Chile</i>	PUC-Chile	Chile	Private
4	<i>Universidade Federal de São Paulo</i>	UNIFESP	Brazil	Public
5	<i>Universidad de Chile</i>	Uchile	Chile	Public
6	<i>Universidade Federal de Minas Gerais</i>	UFMG	Brazil	Public
7	<i>Universidade Federal do Rio Grande do Sul</i>	UFRGS	Brazil	Public
8	<i>Universidade Estadual Paulista "Júlio de Mesquita Filho"</i>	UNESP	Brazil	Public
9.1	<i>Universidade Federal do Rio de Janeiro</i>	UFRJ	Brazil	Public
9.2	<i>Universidade Federal do Rio de Janeiro, campus de Macaé</i>	UFRJ-Macaé	Brazil	Public
10	<i>Universidade Federal de Santa Catarina</i>	UFSC	Brazil	Public
11	<i>Universidade de Brasília</i>	UNB	Brazil	Public
12	<i>Universidad de Concepción</i>	Uconcepción	Chile	Private
13	<i>Universidad de Antioquia</i>	UdeA	Colombia	Public
14.1	<i>Universidade Federal de Viçosa</i>	UFV	Brazil	Public
14.2	<i>Universidade Federal de Viçosa, campus de Rio Paranaíba</i>	UFV-RP	Brazil	Public
15	<i>Universidad Nacional de Córdoba</i>	UNC	Argentina	Public
16	<i>Universidade do Estado do Rio de Janeiro</i>	UERJ	Brazil	Public
17	<i>Universidad Autónoma Metropolitana</i>	UAM	Mexico	Public
18	<i>Universidade Federal da Bahia</i>	UFBA	Brazil	Public
19	<i>Universidad Nacional de Colombia</i>	UNAL	Colombia	Public
20	<i>Universidad Nacional de La Plata</i>	UNLP	Argentina	Public
21	<i>Pontificia Universidade Católica do Rio Grande do Sul</i>	PUC-RS	Brazil	Private
22.1	<i>Universidade Federal de Pernambuco</i>	UFPE	Brazil	Public
22.2	<i>Universidade Federal de Pernambuco, campus de Vitória de Santo Antão</i>	UFPE-VSA	Brazil	Public
23	<i>Universidade Federal do Paraná</i>	UFPR	Brazil	Public
24	<i>Instituto Politécnico Nacional</i>	IPN	Mexico	Public
25	<i>Universidad Peruana Cayetano Heredia</i>	UPCH	Peru	Private

Source: Authors' elaboration, 2023.

The general characteristics and details of the 29 identified courses are presented in Table 2. The majority of courses (n=13) have a total workload ranging between 3,500 and 4,000 hours. Courses created between the 1970s and 1990s predominate (n=9), followed by those established from the year 2000 onwards (n=7). Among the 17 PPPs available for analysis, the majority (n=10) are those with up to 5 years of existence, indicating relatively recent curriculum proposals, including 9 from Brazil and 1 from Colombia.

Table 2 - Characteristics of Selected Nutrition Courses in Latin America, 2022

Course	Course Name	Duration (years)	Total Workload	Course Establishment	Period	PPP Year
UNICAMP	Nutrition	4	3570	2009	Full time	-
USP	Nutrition	5	3555	1939	Morning and Evening	2019
USP-RP	Nutrition and Metabolism	5	5430	2003	Full time	2017
PUC-Chile	<i>Nutrición y Dietética</i>	5	-	2012	-	-
UNIFESP	Nutrition	4	4000	2006	Full time	2016
Uchile	<i>Nutrición y Dietética</i>	5	-	-	During the day	-
UFMG	Nutrition	5	3525	2004	Full time	2017
UFRGS	Nutrition	4,5	3840	1999	Full time	2018
UNESP	Nutrition	5	3510	1999	Noturno	-
UFRJ-Macaé	Nutrition	4,5	4500	2009	Full time	2013
UFRJ	Nutrition	4	3790	1948	Full time	-
UFSC	Nutrition	5	4500	1979	Full time	2018
UNB	Nutrition	4	3510	1976	Full time	2018
Uconcepción	<i>Nutrición y Dietética</i>	5	-	1975	During the day	-
UdeA	<i>Nutrición y Dietética</i>	5	8208	1972	Full time	2017
UFV	Nutrition	4,5	3525	2010	Full time	2018
UFV-RP	Nutrition	5	3960	1977	Full time	2013
UNC	<i>Nutrición</i>	5	4070	1985	Full time	-
UERJ	<i>Nutrición</i>	4	4250	1975	Morning and afternoon	2013
UAM	<i>Nutrición Humana</i>	4	-	1982	-	-
UFBA	Nutrition	4	4331	1956	During the day	2007
UNAL	<i>Nutrición y Dietética</i>	4,5	7584	1965	During the day	2014
UNLP	<i>Nutrición</i>	5	4016	-	-	2009

PUC-RS	Nutrition	4	-	-	Afternoon	-
UFPE	Nutrition	4	3570	-	Morning and afternoon	-
UFPE-VSA	Nutrition	4	3525	-	Morning and afternoon	2012
UFPR	Nutrition	4,5	3840	1979	Full time	2017
IPN	Nutrición	4	-	-	-	-
UPCH	Nutrición	5	6720	-	-	-

PPP: Pedagogical Political Project. Cells with dashes indicate information unavailability.
Source: Authors' elaboration, 2023.

In the available documents from 23 of the courses, 69 curriculum components were identified, which presented at least one of the keywords of interest, identified in the name, syllabus, content, or bibliography, whenever such items were available (Table 3). The Nutrition course at UNB (Brazil) had the highest number of curriculum components with the presence of keywords of interest, followed by UNC (Argentina) and then UFPR (Brazil). In 5 out of the 23 courses analyzed, the keywords were identified in only one curriculum component.

Among the analyzed curriculum components, 64 were characterized as disciplines, 06 as internships and/or practices, and 4 were not identified regarding the type of component. Regarding the theoretical and practical profile, 12 were theoretical, 33 were theoretical-practical, 03 were practical, and 27 did not mention the kind of curriculum component. Additionally, regarding the mandatory nature of the curriculum components, 61 were defined as mandatory, 2 as elective, and in 6 components, there was no mention of compulsory status.

Table 3 - Presence of keywords associated with Food Sovereignty and Food and Nutritional Security in the curriculum components of Nutrition Courses in Latin America, 2022

COURSE	CC1	CC2	CC3	CC4	CC5	CC6	CC7	CC8	CC9	CC10
	Presence of keywords: in the name / the syllabus / in the content / in the bibliography									
UNB	0/1/-/1	0/1/-/1	0/1/-/1	0/1/-/1	0/1/-/1	0/1/-/1	0/1/-/0	0/1/-/0	0/1/-/0	0/0/-/1
UNC	0/1/1/1	0/-/1/1	0/1/1/1	0/0/1/0	0/-/1/0	0/0/1/0	0/-/1/-	0/0/0/1		
UFPR	0/1/-/-	0/1/-/-	0/1/-/-	0/1/-/-	0/1/-/-	0/1/-/-	0/1/-/-			
UFSC	1/1/-/1	1/0/-/1	0/0/-/1	0/0/-/1	0/0/-/1					
USP	0/1/-/-	0/1/-/-	0/1/-/-	0/1/-/-						
UNIFESP	0/1/1/1	0/0/1/-	0/1/0/0							
UNICAMP	1/0/-/1	0/0/-/1	0/0/-/1							
UFMG	0/1/-/-	0/1/-/-	0/1/-/-							
UPCH	1/-/-/-	1/-/-/-	1/-/-/-							
USP-RP	0/1/0/1	0/0/1/1								
UdeA	1/-/-/-	1/-/-/-								
UFV-RP	0/1/1/1	0/0/0/1								

UFRGS	1/1/-/-	1/1/-/-								
UERJ	0/0/-/1	0/1/-/1								
UFBA	0/0/0/1	0/0/1/1								
UNAL	1/-/-/-	1/-/-/-								
UNLP	0/1/1/-	1/0/0/-								
UFPE-VSA	0/1/1/1	0/0/1/1								
UNESP	0/1/1/0									
UFRJ-Macaé	0/0/-/1									
Uchile	1/-/-/-									
UFV	1/-/-/-									
UAM	0/0/0/1									

CC = Curriculum component from 1 to 10; 1 = presence of keywords; 0 = absence of keywords; (-) = information unavailable.

Source: Elaborated by the authors, 2023.

The analysis and scoring based on the previously described categories are presented in Table 4, along with the concepts assigned based on the score attributed to each category. Three courses obtained Concept A, 9 obtained Concept B, and 7 obtained Concept C, according to the established criteria.

Table 4 - Adherence, coherence, proportion, and position of curriculum components associated with Food Sovereignty and Food and Nutrition Security in Nutrition Courses, Latin America, 2022

Course	Adherence	Coherence	Proportion	Position	Assigned Classification
UNB	High	High	High	High	A
UNC	High	High	-	High	A
USP	Medium	Medium	High	High	A
UNICAMP	Low	Medium	Medium	High	B
USP-RP	None	High	None	Medium	B
UFRGS	Medium	Medium	None	High	B
UFSC	Medium	Low	Low	High	B
UFV	Low	High	None	Medium	B
UFBA	Low	Low	None	High	B
UFPE-VSA	Low	Medium	Low	High	B
UFPR	High	None	Medium	High	B
UNIFESP	None	Low	Medium	Medium	B
UNESP	None	None	None	Low	C
UFRJ-Macaé	None	None	None	Low	C
UdeA	None	None	None	Low	C
UNLP	Low	Low	None	Low	C
UPCH	Low	None	None	Medium	C
UFMG	None	None	None	-	-
UERJ	None	None	None	-	-
Uchile	None	None	-	-	-

UFV-RP	None	None	-	-	-
UAMX	None	None	-	-	-
UNColombia	None	None	-	-	-

Note: Cells with dashes indicate the information is unavailable for evaluation.

Source: Elaborated by the authors, 2023.

The available documents allowed scoring, according to the established criteria, the degree of adherence to the theme in the curriculum components of 23 out of the 29 courses evaluated, with 10 of these courses not receiving a score in this indicator category, 9 receiving a medium or low score, and only 3 receiving a high score. Among these same courses, 11 did not receive a score in the coherence category, 8 received a medium or low score, and only 4 were classified with a high score.

Out of the 29 courses, it was possible to evaluate the proportion of the workload on Food Sovereignty and Food and Nutrition Security (FSFNS) content in the 17 for which the Pedagogical Political Project (PPP) was available. Of these, only 5 institutions had more than 10% of the total workload in curriculum components, including FSFNS content, with the course at USP-RP standing out with 29% of the workload. Most courses ranged from 0.1% to 8%.

Regarding the assessment of the position of curriculum components throughout the course, among the 17 for which the PPP was available, 9 courses received a high score for distributing the content throughout the course, 4 concentrated the content at the end of the course (medium score), 4 concentrated it in the middle (low score), and 2 did not receive a score for concentrating the content only in the first years.

Among the 69 curriculum components, 18 were characterized with a focus on FNS, 11 on the DHAA, another 11 combined FNS and DHAA, and only 4 of the courses managed to articulate all the relevant content, promoting a more comprehensive view of FSFNS through food systems. Another 25 curriculum components were related to two or three themes of interest but without a well-defined focus. FSFNS themes were more frequently addressed in non-Brazilian courses, while FNS was more present in Brazilian courses.

In this research, Food and Nutrition Security (FNS) in Nutrition curricula was considered a reference, with the Right to Adequate Food (RAF) and food systems as its foundations. The dimensions of these constructs were intensively sought in the documents, as evidence that these FSFNS contents had been addressed in the curriculum guiding documents and with what depth. For this, analysis and classification categories were created. The results revealed a predominance of low or null scores, indicating that FSFNS still needs to be deepened and gain more space in Nutrition courses' curricula.

This finding is consistent with an evaluation of the approach to Food and Nutrition Security in the curricula of Brazilian Federal Universities (Lisboa, Fonseca, 2020). At the time, it was evidenced that although most disciplines were in line with the guidelines of the Brazilian National Curriculum Guidelines (DCN) regarding the expected profile for graduates, FNS was addressed by a limited number of disciplines, indicating low representativeness of these contents compared to others. This data reinforces the results of this research, since the majority of the courses analyzed were Brazilian.

The approaches to FNS and RAF, as conceived today, emerged in 1996 and 1999 (ONU, 1999), while a broader approach to food systems began to be discussed in the *Agenda 2030* (PNUD, 2015) and subsequent publications (HLPE, 2017). Therefore, one would expect a greater prevalence of Food and Nutrition Security (FNS) and the Right to Adequate Food (RAF) in all documents, with a more incipient approach to food systems, especially in more recent documents. If we consider the age of the PPPs (Table 2) and the prevalence of curriculum components addressing FNS in the courses (Table 3), it is possible to observe that courses with more recent PPPs have a higher number of curriculum components of interest to the research. Hence, it is important that PPPs are updated frequently.

Among the 29 courses evaluated, 65% were Brazilian, and among the courses evaluated with concept B, 90% were Brazilian. Efforts were made to ensure that the analyses were not made with a Brazilian lens, using supranational documents as a reference, and therefore, the National Curriculum Guidelines (DCN) for Nutrition Courses in Brazil (Brasil, 2001) and the National Extension Policy (Brasil, 2018a), were not considered as a reference for the analysis. However, the existence of these references in Brazil may have contributed to this result. Similarly, the vocation for extension is a strong point in Cordoba, Argentina (Beato, Carrizo, Oliveira, 2022).

During the research, the National Curriculum Guidelines for Nutrition Courses in force in Brazil focused on humanistic and critical education, offering opportunities for developing skills and competencies focused on FNS, but this was still not enough. They appear to be overly theoretical, rigid, and inflexible, not meeting the particular requirements of each region, institution, or course, as well as social demands, representing the overcoming of the hegemony of the biomedical model and teacher-centered teaching (Soares, Aguiar, 2010). In Brazil, in 2018, FNS was included in the profile of the professional adopted by the Federal Council of Nutrition (Brasil, 2018b) and in the new National Curriculum Guidelines for Nutrition courses in 2022 (Brasil, 2022).

In 2012, the landmark reference on food and nutrition education was launched by the National Secretariat for Food and Nutrition Security, highlighting the importance of Food and Nutrition Security (FNS) in the role of the nutritionist as an educator (Brasil, 2012). These documents, which emerged after the development of many Pedagogical-Political Projects (PPP), carry with them the intention of advancing towards a more contextualized teaching process in their time, potentially contributing to greater integration of FNS into curricula, still considered fragmented and technicist (Neves; Sousa; Vasconcelos, 2014). Reinforcing this premise, in the city of São Paulo, Brazil, in 2013, coordinators of Nutrition Courses and Nutritionists from Primary Health Care recognized the importance of Food and Nutrition Security content in Nutrition curricula and the limitation of training characterized as technicist and disconnected from practice (Vieira; Cervato-Mancuso, 2015).

The fragmentation found in curricula is no different from the fragmentation that still exists in public policies related to FNS. Curriculum and public management have been compartmentalized, which runs counter to FNS policies, where intersectionality and social participation have been proven to be structural elements (Brasil, 2001). This also goes against the paradigm of complexity, in which a systemic and interdisciplinary view of reality is necessary to understand food systems in constant transformation and interaction with other human and natural systems (Morin, 1991).

Considering that curriculum components related to food and nutrition in public/community health are the ones most inclined to engage with FNS in its complexity, there is a need to expand spaces for these curriculum components or others that contribute to the training of professionals capable of analyzing food and nutrition problems, considering the historical-political-economic-demographic-environmental and epidemiological context (Costa, 1999; Alves; Martinez, 2016; Jacob; Araújo, 2020; Lisboa; Fonseca, 2020). It is concerning to note that only 5 out of the 17 courses for which this information was accessible had more than 10% of the total workload in components related to FNS. In Brazil, the incorporation of extension activities into the curriculum stipulates that at least 10% of the curriculum workload be dedicated to extension activities (Brasil, 2018a). This indicates that many Brazilian courses have not yet complied with this normative of the Ministry of Education (Brasil, 2018a).

Still considering the training and profile of the professional, it is necessary to take into account the pressures exerted by the market towards a technicist approach, as opposed to the skills and competencies required to work in the context of Food and Nutrition Security (FNS). These skills are related to a humanistic approach, the integration of theory with practice, critical

and emancipatory education, interprofessional, intersectoral, and interdisciplinary work, and reflection on public issues. Therefore, aligning the training of nutritionists with the present and future challenges of the FNS field will require deep reflection on their social role and their insertion into public policies and programs (Recine *et al.*, 2012). This debate becomes even more relevant in public institutions when considering whom public higher education is serving, especially in the case of subsidized or tuition-free institutions.

The reflective and participatory process is a fundamental element for the construction of Pedagogical Political Projects (PPP) and for pedagogical planning (Freire, 1997). Based on the inconsistencies identified through the analysis categories considered in this study, the lack of depth in Food and Nutrition Security (FNS) as a cross-cutting theme in curriculum guiding documents can be inferred, considering current paradigmatic and epistemological trends for nutrition education. To achieve this integration, a reflective and participatory process must be initiated.

Appropriation and development of comprehensive proposals only occur through participation as a continuous and meaningful process (Neves; Sousa; Vasconcelos, 2014). Interdisciplinarity and interprofessional actions are necessary structuring elements for educators and learners to be in constant learning, overcoming the perception of information accumulation, and articulating theoretical scientific rigor with the social context in practice (Recine *et al.*, 2014). However, it should be considered that in this research, the object of analysis is not flexible for process analysis, but rather a cross-sectional cut resulting from an elaboration process. There is no way to infer the quality of this type of process within the analyzed courses. Nevertheless, research that aims to address higher education in Nutrition cannot fail to highlight the importance of planned, participatory, and contextualized action in addressing current challenges.

In Latin America, it is crucial for nutritionists to understand that the crisis of food insecurity stems from a historical perspective in which increasingly globalized food sources have resulted in changes in diet and a gradual increase in weight, without a significant reduction in hunger. This situation is exacerbated by the COVID-19 health crisis (Fidalgo, 2020; Sousa; Ditterich; Melgar-Quiñonez, 2021).

Working within the context of FNS requires a systemic vision, under a humanistic approach, from the perspective of human rights and sustainability. This requires a review of guidelines and pedagogical practices (Oliveira *et al.*, 2012; Neves; Araujo; Vasconcelos, 2014). Items such as teaching-learning methodologies and educational technologies, extracurricular

activities, and the local and global integration of the course should be taken into account in an evaluation of FNS in curricula (Neves; Araujo; Vasconcelos, 2014; Recine *et al.*, 2014) which the nature of this research did not allow. The university experience, along with proposed, parallel, and hidden curricula, helps shape different profiles of university students.

In a post-pandemic scenario, an assessment of curricular components of Nutrition Courses cannot overlook the social role of the University, especially public ones, as in the case of the majority of the analyzed courses (Santos, 1996). The pandemic has exposed the structural determinants of hunger and the gap between the holders of the means of production and the large portion of the excluded (Lizarraga; Pereira, 2022).

A formação do Nutricionista encontra-se intrinsecamente comprometida com a superação das desigualdades estruturais existentes na América Latina. Um elemento que pode atuar a favor, se bem aproveitado, vem das tecnologias de informação, as quais permitem acesso mais rápido ao conhecimento e possibilidade de trocas e interações em qualquer distância, embora ainda dentro das universidades o acesso à internet seja problema para muitos estudantes e pesquisadores (Costa; Zancul, 2020; Nava-González *et al.*, 2023).

The training of Nutritionists is intrinsically committed to overcoming the existing structural inequalities in Latin America. One element that can act in favor, if properly utilized, comes from information technologies, which allow faster access to knowledge and the possibility of exchanges and interactions at any distance, although within universities, internet access is still a problem for many students and researchers (Costa, 1999; Toloza, 2003; Vasconcelos *et al.*, 2019) e representar um ganho para todos.

Finally, this research highlighted the importance of developing and disseminating the Pedagogical Political Project (PPP) of Nutrition Courses, as the lack of identified items in the documents selected for the research or their non-disclosure by Higher Education Institutions (HEIs) limited the analyses. Additionally, it evidenced the need for constant updating of PPPs for courses to keep pace with historical rhythms and contribute significantly to social transformation. The research also pointed to the importance of deeper exploration and content appropriation, aiming to make the documents more assertive and coherent. An effective PPP should be developed based on the desired professional profile, encompassing components and curriculum content suitable for the skills and competencies needed to meet this profile. It should adopt a systemic and humanistic view, reflecting adherence to the theme, coherence in document construction, and ensuring sufficient space for the theme, which should be addressed

in a balanced manner. Constructing a PPP of this nature requires reflective action and strong integration into local and global realities.

Final considerations

The results of this study reflect an epistemological stance distant from a systemic and comprehensive view of Food and Nutritional Sovereignty and Security in the analyzed documents and emphasize the importance of Pedagogical Political Projects and their constant updating and deepening of the theme in their curriculum components. It is also highlighted that these updates and discussions need to be proposed broadly through reflective and participatory action of the academic community and society.

Further studies should investigate a broader scenario across Latin American countries, covering both public and private universities, which have different curricular proposals for teaching nutrition and for the themes of food and nutritional sovereignty and security.

REFERENCES

- ALVES, C. G. L.; MARTINEZ, M. R. Lacunas entre a formação do nutricionista e o perfil de competências para atuação no Sistema Único de Saúde (SUS). **Interface – Comunicação, Saúde, Educação**, Botucatu, v. 20, n.56, p.159-69, 2016. DOI: 10.1590/1807-57622014.1336. Available at: <https://www.scielo.br/j/icse/a/znYJDxQJfg6VdYvRtMcRCJp/abstract/?lang=pt>. Accessed in: 15 July 2023.
- BEATO, G. C.; CARRIZO, L. A. D. V.; OLIVEIRA, M. R. M. de. Concepções e reflexões de membros da comunidade acadêmica da Universidad Nacional de Córdoba sobre a soberania e segurança alimentar no currículo de nutrição: relato de uma visita acadêmica. **Revista Internacional de Educação Superior**, Campinas, v. 9, n. 00, p. e023017, 2022. Available at: <https://periodicos.sbu.unicamp.br/ojs/index.php/riesup/article/view/8663953>. Accessed in: 13 Sept. 2023.
- BRASIL. Ministério da Educação. Conselho Nacional de Educação. Institui diretrizes curriculares nacionais do curso de graduação em nutrição. Resolução CNE/CES 5, de 7 de novembro de 2001. **Diário Oficial da União**: Brasília, DF, Seção 1, p. 39, 2001.
- BRASIL. Ministério da Educação. Conselho Nacional de Educação. Resolução 704, de 20 de outubro de 2022. Aprova as contribuições do Conselho Nacional de Saúde à proposta de Diretrizes Curriculares Nacionais do Curso de Graduação em Nutrição. **Diário Oficial da União**: Brasília, DF, seção 1, 2022.

BRASIL. Ministério do Desenvolvimento Social e Combate à Fome. Marco de referência de educação alimentar e nutricional para as políticas públicas. Brasília, DF: MDS; Secretaria Nacional de Segurança Alimentar e Nutricional, 2012.

BRASIL. Ministério da Educação. Conselho Nacional de Educação. Câmara de Educação Superior. Resolução CNE/CES nº 7, de 18 de dezembro de 2018. Estabelece as Diretrizes para a Extensão na Educação Superior Brasileira e regimenta o disposto na Meta 12.7 da Lei nº 13.005/2014, que aprova o Plano Nacional de Educação – PNE 2014-2024 e dá outras providências. **Diário Oficial da União**: Brasília, DF, 2018a.

BRASIL. Conselho Federal de Nutricionistas (CFN). Resolução CFN nº 599, de 25 de fevereiro de 2018. Aprova o Código de Ética e Conduta do Nutricionista e dá outras providências. **Diário Oficial da União**: Brasília, n. 64, p.182, 2018b.

CAMPESINA, V. **Declaração da Via Campesina**, Tlaxcala, 1996.

CINI, R.; ROSANELI, C.; CUNHA, T. Soberania alimentar na interseção entre bioética e direitos humanos: uma revisão integrativa da literatura. **Revista de Bioética y Derecho**, Barcelona, v.42, n.1, p.51-69, 2018. Available at: https://scielo.isciii.es/scielo.php?pid=S188658872018000100005&script=sci_abstract&tlng=pt. Accessed in: 15 July 2023.

COSTA, N. M. S. C. Revisitando os estudos e eventos sobre a formação do nutricionista no Brasil. **Revistas de Nutrição**, Campinas, v. 12, n. 1, p. 5–19, 1999. DOI: 10.1590/S1415-52731999000100001. Available at: <https://www.scielo.br/j/rn/a/xy7Q4cnBSB93qYZjrWRRYjN/>. Accessed in: 15 July 2023.

COSTA, S. S.; ZANCUL, M. S. Competências curriculares para o letramento científico em saúde: potencialidades e limitações em uma Instituição Federal de Educação Profissional. **Temas em Educação e Saúde**, Araraquara, v. 16, n. 2, p. 607–620, 2020. DOI: 10.26673/tes.v16i2.14095. Available at: <https://periodicos.fclar.unesp.br/tes/article/view/14095>. Accessed in: 15 July 2023.

FAKHRI, M. **Informe provisional del Relator Especial sobre el derecho a la alimentación**. Michael Fakhri. ONU. A/76/237. 2021.

FIDALGO, H. S. **La pandemia del coronavirus: una reflexión crítica sobre los patrones alimentarios corporativos**. En: Red Mundial por el Derecho a la Alimentación y a la Nutrición. Observatorio del derecho a la alimentación y a la nutrición. 2020. Available at: https://www.righttofoodandnutrition.org/files/rtn_watch12-2020_esp.pdf. Accessed in: 06 Mar. 2023.

FOOD AND AGRICULTURE ORGANIZATION (FAO). Organização Pan-Americana da Saúde (OPAS). **Visão geral da segurança alimentar e nutricional na América Latina e no Caribe**. Santiago do Chile: FAO; 2017.

FONSECA, A. B. C.; FROZI, D. S. Social and Natural Sciences in Nutrition: studying the opinion of undergraduates from Brazil and Spain. **Revista de Alimentação e cultura das**

Américas, Brasília, v. 1, n. 1, p. 28-45, 2019. Available at: <https://www.arca.fiocruz.br/handle/icict/41317>. Accessed in: 15 July 2023.

FONTOLAN, M. V.; FERRAREZE, R. B.; SIGNOR, A.; LIMA, R. S. ODS 2: fome zero e agricultura sustentável no contexto rural. **Segurança Alimentar e Nutricional**, Campinas, v. 29, n. 00, p. e022004, 2022. DOI: 10.20396/san.v29i00.8665666. Available at: <https://periodicos.sbu.unicamp.br/ojs/index.php/san/article/view/8665666>. Accessed in: 8 Aug. 2023.

FREIRE, P. **Pedagogia da autonomia**: saberes necessários à prática educativa. São Paulo: Paz e Terra, 1997.

GORDILLO, O. M. Seguridad y Soberanía Alimentaria. **Documento Base para la discusión**. Organización de las Naciones Unidas para la Alimentación. 2013.

HLPE, 2017. **A report by the High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security**. Rome 2017. Available at: www.fao.org/cfs/cfs-hlpe. Accessed in: 3 July 2023.

HLPE. **Food Security and Nutrition**: Building a Global Narrative towards 2030. Research Guides, 2020.

HOYOS, C. J. C.; D'AGOSTINI, A. Segurança Alimentar e Soberania Alimentar: convergências e divergências. **Revista NERA**, Presidente Prudente, v. 20, n. 35, p. 174–98, 2017. DOI: 10.47946/rnera.v0i35.4855. Available at: <https://revista.fct.unesp.br/index.php/nera/article/view/4855>. Accessed in: 15 July 2023.

JACOB, M.; ARAÚJO, F. Desenvolvimento de competências para Nutrição no contexto de Sistemas Alimentares Sustentáveis. **Ciência e Saúde Coletiva**, Rio de Janeiro, v. 25, n. 11, 2020. DOI: 10.1590/1413-812320202511.31652018. Available at: <https://www.scielo.br/j/csc/a/5RhPkyFBFGRfbSyddMsgL7D/>. Accessed in: 15 July 2023.

KING, R. The Utility of Pragmatism in Educational Research. **Creative Education**, China, v. 13, n. 1, p. 3153-61, 2022. DOI: 10.4236/ce.2022.1310199. Available at: <https://www.scirp.org/journal/paperinformation?paperid=120321>. Accessed in: 15 July 2023.

LISBOA, C. M. P.; FONSECA, A. B. Abordagem de segurança alimentar nutricional nos currículos das universidades federais brasileiras: principais enfoques. **Saúde e Sociedade**, Alagoas, v. 29, n. 3, p. 1–13, 2020. DOI: 10.1590/S0104-12902020190570. Available at: <https://www.scielo.br/j/sausoc/a/8D4byGLvQVfWZPQSKvgCpFR/>. Accessed in: 15 July 2023.

LIZARRAGA, P.; PEREIRA, J. F. **Atlas de los Sistemas Alimentarios del Cono Sur**. 1.ed. Ciudad Autónoma de Buenos Aires: Fundación Rosa Luxemburgo, 2022. Available at: https://mpabrasil.org.br/wp-content/uploads/2022/07/e-Atlas_individuales.pdf. Accessed in: 02 July 2023.

MORIN, E. **O paradigma perdido: a natureza humana**. 5. ed. Mens Martins: Europa-América, 1991.

NAVA-GONZÁLEZ, E. J.; APOLINAR-JIMÉNEZ, E.; BÉNITEZ-BRITO, N.; PÉREZ-ARMIJO, P.; PÉREZ-LÓPEZ, A.; TRONCOSO-PANTOJA, C.; BONILLA, D. A.; FERNÁNDEZ-VILLA, T.; PETERMANN-ROCHA, F.; GAMERO, A.; PÉREZ-ESTEVE, Édgar; NAVARRETE-MUÑOZ, E. M.; LOZANO-LORCA, M.; ALMENDRA-PEGUEROS, R. Formación del dietista-nutricionista clínico en Latinoamérica: un espejo donde debe mirarse España. **Revista Española de Nutrición Humana y Dietética**, [S. l.], v. 27, n. 2, p. 93–96, 2023. DOI: 10.14306/renhyd.27.2.1957. Available at: <https://renhyd.org/renhyd/article/view/1957>. Accessed in: 25 July 2023.

NEVES, J.; SOUSA, A. A.; VASCONCELOS, F. A. G. Formação em nutrição em saúde coletiva na Universidade Federal de Santa Catarina: reflexões sobre o processo de ensino para fortalecer o Sistema Único de Saúde. **Revista de Nutrição**, Campinas, v.27, n.6, p.761-773, 2014. DOI: 10.1590/1415-52732014000600010. Available at: <https://www.scielo.br/j/rn/a/Ns3Rp4yZ4mnmBpLqTyJyL7z/abstract/?lang=pt#>. Accessed in: 15 July 2023.

OLIVEIRA, A. R. P.; RECINE, R.; ALENCAR, B.; FAGUNDES, A. A.; SOUSA, J. S.; MONTEIRO, R. A.; TORAL, N. Percepção de professores e estudantes em relação ao perfil de formação do nutricionista em saúde pública. **Revista de Nutrição**, Campinas, v. 25, n. 5, p. 631–43, 2012. DOI: 10.1590/S1415-52732012000500008. Available at: <https://www.scielo.br/j/rn/a/fr8DjZHJM9HQ3ZhBdMhS9Jc/#>. Accessed in: 15 July 2023.

ORGANIZAÇÃO DAS NAÇÕES UNIDAS (ONU). **Comentário Geral número 12: O direito humano à alimentação** (art.11). 1 Comitê de Direitos Econômicos, Sociais e Culturais do Alto Comissariado de Direitos Humanos, 1999.

ORGANIZAÇÃO DAS NAÇÕES UNIDAS (ONU). **Objetivos de Desenvolvimento Sustentável**. Nações Unidas no Brasil, 2020. Available at: <https://brasil.un.org/pt-br>. Accessed in: 15 July 2023.

ORGANIZACIÓN DE LAS NACIONES UNIDAS PARA LA EDUCACIÓN, LA CIENCIA Y LA CULTURA. Instituto Internacional para la Educación Superior en América Latina y el Caribe. **Declaración de la Conferencia Regional de la Educación Superior en América Latina y el Caribe**. Colômbia: UNESCO IESCALC, 2008. Available at: <http://www.cres2018.unc.edu.ar/uploads/Declaracio%CC%81n%20CRES%202008.pdf>. Accessed in: 15 July 2023.

ORGANIZACIÓN DE LAS NACIONES UNIDAS PARA LA EDUCACIÓN, LA CIENCIA Y LA CULTURA. Instituto Internacional para la Educación Superior en América Latina y el Caribe. **Declaración Final de la III Conferencia Regional de Educación Superior en América Latina y el Caribe**. Argentina: UNESCO IESCALC, 2018. Available at: <http://www.cres2018.unc.edu.ar/uploads/Declaracion2018-Esp-CRES.pdf>. Accessed in: 01 de Feb. 2023.

PIAGET, J. **Psicologia e pedagogia**. Rio de Janeiro: Forense Universitária, 1970.

POLKINGHORNE, D. E. Narrative configuration in qualitative analysis. **Qualitative Studies in Education**, v. 8, n. 1, p. 5-23, 1995. DOI: 10.1080/0951839950080103. Available at:

<https://www.tandfonline.com/doi/abs/10.1080/0951839950080103>. Accessed in: 15 July 2023.

PROGRAMA DE LAS NACIONES UNIDAS PARA EL DESARROLLO (PNUD).

Transformar nuestro mundo: La agenda 2030 para el desarrollo sostenible. 2015. Available at: <http://www.ar.undp.org/content/dam/argentina/Publications/Agenda2030/PNUDAgent-DossierODS.pdf>. Accessed in: 05 July 2023.

RECINE, E.; GOMES, R. C. F.; FAGUNDES, A. A.; PINHEIRO, A. R. O.; TEIXEIRA, B. A.; SOUSA, J. S.; TORAL, N.; MONTEIRO, R. A. A formação em saúde pública nos cursos de graduação de nutrição no Brasil. **Revista de Nutrição**, Campinas, v. 25, n. 1, p. 21-33, 2012. DOI: 10.1590/S1415-52732012000100003. Available at: <https://www.scielo.br/j/rn/a/YmJcNhHgHbwXyvYfmSQM96s/abstract/?lang=pt>. Accessed in: 15 July 2023.

RECINE, E.; SUGAI, A.; MONTEIRO, R. A.; RIZZOLO, A.; FAGUNDES, A. Saúde coletiva nos cursos de nutrição: Análise de projetos político-pedagógicos e planos de ensino. **Revista de Nutrição**, Campinas, v. 27, n. 6, p. 747-60, 2014. DOI: 10.1590/1415-52732014000600009. Available at: <https://www.scielo.br/j/rn/a/wJ8PWkfdBYJZdGNV4gkrgb/abstract/?lang=pt>. Accessed in: 15 July 2023.

REIMERS, F. **Diálogos por un Nuevo Contrato Social para la Educación**. Informe Comisión Internacional Sobre los Futuros de la Educación. 2021.

SANTOS, B. S. **Para uma Pedagogia do Conflito**. In: SILVA, L. H. (org.). Novos mapas culturais, novas perspectivas educacionais Porto Alegre: Sulina, 1996.

SOARES, N. T.; AGUIAR, A. C. Diretrizes curriculares nacionais para os cursos de nutrição: avanços, lacunas, ambiguidades e perspectivas. **Revista de Nutrição**, Campinas, v. 23, n. 5, p. 895-905, 2010. DOI: 10.1590/S1415-52732010000500019. Available at: <https://www.scielo.br/j/rn/a/HSzk7z5WtNzDYVpKmSzyw3B/abstract/?lang=pt>. Accessed in: 15 July 2023.

SOUSA, L. R. M.; DITTERICH, R. G.; MLGAR-QUÍÑONEZ, H. A pandemia de Covid-19 e seus entrelaçamentos com desigualdade de gênero, insegurança alimentar e apoio social na América Latina. **Interface – Comunicação, Saúde, Educação**, Botucatu, v. 25, p. e200651, 2021. DOI: 10.1590/interface.200651. Available at: <https://www.scielo.br/j/icse/a/3XSRvG5ksSn6PR9KpjCtsjR/>. Accessed in: 15 July 2023.

SWINBURN, B. A.; KRAAK, V.; ALLENDER, S.; ATKINS, V.; BAKER, P.; BOGARD, J.; BRINSDEN, H.; CALVILLO, A.; SCHUTTER, O.; DEVARAJAN, R.; EZZATI, M.; FRIEL, S.; GOENKA, S.; HAMMOND, R.; HASTINGS, G.; HAWKES, C. HERRERO, M.; HOVMAND, P. S.; HOWDEN, M.; JAACKS, L. M.; KAPETANAKI, A. B.; KASMAN, M.; KUHNLEIN, H. V.; KUMANYIKA, S. K.; LARIJANI, B. LOBSTEIN, T.; LONG, M. W.; MATSUDO, V. K. R.; MILLS, S. D. H.; MORGAN, G.; MORSHED, A.; NECE, P. M.; PAN, A.; PETTERSON, W.; SACKS, G.; SHEKAR, M.; SIMMONS, G. L.; SMIT, W.; TOOTEE, A.; VANDEVIJVERE, S.; WATERLANDER, W. E.; WOLFENDEN, L.; DIETZ, W. H. The Global Syndemic of Obesity, Undernutrition, and Climate Change: The Lancet

Commission report. **The Lancet**, London, v. 393, n. 10173, p. 791–846, 2019. Available at: [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(18\)32822-8/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(18)32822-8/fulltext). Accessed in: 15 July 2023.

TASHAKKORI, A.; NEWMAN, I. Mixed Methods. **International Encyclopedia of Education**, Florida, v. 30, n. 1, p. 514-20, 2010. Available at: <https://www.sciencedirect.com/topics/psychology/mixed-methods>. Accessed in: 15 July 2023.

TIMES-HIGHER-EDUCATION. **Latin America University Rankings 2018** [Internet]. London: Quacquarelli Symonds; 2018. Available at: https://www.timeshighereducation.com/world-university-rankings/2018/latin-america-university-rankings#!/page/0/length/25/sort_by/rank/sort_order/asc/cols/undefined. Accessed in: 08 June 2023.

TOLOZA, D.C. **Nutricionista: um histórico da profissão até os dias atuais**. Universidade de Brasília, 2003.

UNIÓN DE UNIVERSIDADES DE AMÉRICA LATINA Y EL CARIBE. Conferencia Mundial de Educación Superior 2022 (WHEC2022), **Reformular los ideales y prácticas de la Educación Superior para asegurar el desarrollo sostenible del planeta y de la humanidad**. UDUAL, 2022. Available at: <https://www.udual.org/principal/wp-content/uploads/2022/02/UDUAL-Barcelona-febrero-final.pdf>. Accessed in: 08 Mar. 2023.

VASCONCELOS, A. G. F.; BRICARELLO, L. P.; COSTA, N. M. S. C.; MORAES, B. A.; AKUTSU, R. C. C. A. The 80-year history of the professional associations of nutritionists in Brazil: A historical-documentary analysis. **Revista de Nutrição**, Campinas. v..32, n. 1, p. e180160, 2019. DOI: 10.1590/1678-9865201932e180160. Available at: <https://www.scielo.br/j/rn/a/SNwcCPMDLPryJQ5NLZgnS9P/#>. Accessed in: 15 July 2023.

VIEIRA, V. L.; LEITE, C.; CERVATO-MANCUSO, A. M. Formação superior em saúde e demandas educacionais atuais: O exemplo da graduação em Nutrição. **Educação, Sociedade e Culturas**, Porto, v. 39, n. 1, p. 25–42, 2013. DOI: 10.34626/esc.vi39.312. Available at: <https://ojs.up.pt/index.php/esc-ciie/article/view/312>. Accessed in: 15 July 2023.

VIEIRA, V.L.; CERVATO-MANCUSO, A. M. Professional training in the context of food and nutrition security. **Primary Health Care Research and Development**. England, v.16, n. 5, p. 540–4, 2015. Available at: <https://www.cambridge.org/core/journals/primary-health-care-research-and-development/article/professional-training-in-the-context-of-food-and-nutrition-security/7C7C13E81BC65E86DF0B45D151A3C4A8>. Accessed in: 15 July 2023.

WANDEN-BERGHE, C.; VICTORIA, E. M.; VALERO, J. S.; CASTELLO, I. La formación en nutrición en Iberoamérica. **Nutrición Hospitalaria**, Madrid, v. 3, n. 3, p. 80–86, 2010. Available at: https://scielo.isciii.es/scielo.php?script=sci_arttext&pid=S0212-16112010000900011. Accessed in: 15 July 2023.

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