

Didactic-pedagogical training in *stricto sensu* graduate programs in Health Sciences of Federal Universities in the Northeastern region of Brazil

Formação didático-pedagógica na pós-graduação *stricto sensu* em Ciências da Saúde nas Universidades Federais do Nordeste do Brasil

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Keywords

Faculty; Education, higher; Health sciences; Health postgraduate programs; *Curriculum*

Descritores

Docentes; Educação superior; Ciências da saúde; Programas de pós-graduação em saúde; Currículo

Submitted

August 2, 2017

Accepted

September 18, 2017

Abstract

Objective: To identify the distribution of taught components related to the didactic-pedagogical training in *stricto sensu* graduate programs in Health Sciences of federal universities in the Northeastern region of Brazil.

Methods: Descriptive, exploratory, documentary study. The 122 compulsory and optional taught components related to teaching training in the MSc courses (MA) and PhD courses (DO) of the graduate programs (GP) were mapped through the online access to the platform Sucupira of the Coordination for the Improvement of Higher Education Personnel (CAPES).

Results: The distribution of taught components related to the didactic-pedagogical training was presented in an unequal way, and most of them were optional rather than mandatory. There was a predominance of course descriptions essentially aimed at classroom development, not linked to the discussion between theory, epistemology of education, and teaching practice.

Conclusion: The aspects of the didactic-pedagogical training are insufficiently worked in the *stricto sensu* graduate programs in the area of Health Sciences in the Northeastern region of Brazil.

Resumo

Objetivo: Identificar a distribuição dos componentes curriculares relacionados à formação didático-pedagógica nos programas de pós-graduação *stricto sensu* em Ciências da Saúde das universidades federais do Nordeste do Brasil.

Métodos: Estudo documental, descritivo e exploratório. Por meio do acesso *online* à plataforma Sucupira da Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES) mapearam-se os 122 componentes curriculares obrigatórios e optativos relativos à formação docente nos cursos de mestrado acadêmico (MA) e doutorado (DO) dos programas de pós-graduação (PPG).

Resultados: A distribuição dos componentes curriculares alusivos à formação didático-pedagógica se apresentou de forma desigual e majoritariamente de natureza optativa em detrimento das obrigatórias. Houve predomínio de ementas essencialmente direcionadas ao desenvolvimento em sala de aula desvinculadas da discussão entre teoria, epistemologia da educação e prática docente.

Conclusão: Os aspectos da formação didático-pedagógica são trabalhados insuficientemente nos currículos da pós-graduação *stricto sensu* na área de Ciências da Saúde no Nordeste do Brasil.

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DOI

<http://dx.doi.org/10.1590/1982-0194201700072>



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Conflict of interest: this manuscript is part of the doctoral studies of Figueredo WN.

Introduction

Education in health has been changing in search of models that are compatible with the social needs and consistent with the current health policies. In this perspective, teaching training is characterized as an alternative to transpose conservative educational models in order to overcome the biologicist paradigm. However the fragility of this training has been the object of several criticisms, particularly due to the lack of preparation in relation to the didactic-pedagogical aspects of those teaching in academic spaces.⁽¹⁾

Didactic-pedagogical training is based on the development of epistemological, theoretical, and practical knowledge for the educational process. The pedagogical skill is guided by the science of Pedagogy of Education to draw theoretical and practical knowledge that converge to the clarification of its object - the educational phenomenon.⁽²⁾ Didactics, a part of Pedagogy, deals with the teaching and learning processes, relating instruments, conditions, and modalities for the development of students' cognitive skills.⁽²⁾

Teaching is not restricted to a mere transmission of knowledge; being a professor requires the development of this specific knowledge.⁽³⁾ Mastery over a given content and good public speaking skills do not guarantee quality teaching; it is necessary that this professional is appropriately prepared to perform the role of a knowledge mediator.

In the health area, during undergraduate studies, future professionals are prepared to the development of specific skills and competences for the practical performance, as described in the Brazilian National Curriculum Guidelines.⁽⁴⁾ However there are few discussions on the training required for those intending to pursue a teaching career; graduate programs take this role.

In this sense, although the National Educational Bases and Guidelines Law (LDB), article 66, points out that teaching training should primarily occur in graduate programs, including both MSc and PhD levels, the mentioned law does not provide for the need of a practical workload for higher education teaching, and

does not determine the complementation for this training scope.⁽⁵⁾ Moreover, concerning the recommendation by LDB, the Coordination for the Improvement of Higher Education Personnel (CAPES) points out the academic MSc and PhD courses as a locus of teaching training by stating they are aimed at promoting the training of higher education professors.

Given the absence of a legal determination to define how this training should occur, universities tend to prioritize the training of researchers rather than the training of professors, considering that the academic production resulted from research activities contributes to the assessment of performance of these institutions. Thus, although the scientific production has a great relevance in the assessment and classification of *stricto sensu* graduate programs, teaching activities, which are also important, are relegated to the background.⁽⁶⁾

Therefore, in a moment in which a movement is initiated by some undergraduate courses in the area of health, such as physiotherapy and nursing, proposing a discussion about the training process for future professionals and the consequent review of the National Curriculum Guidelines, it is necessary to know how education is structured for teaching in graduate programs (GP) to encourage and propose discussions on the reformulation of the curriculums of those specifically trained to teach.

In view of this scenario, the objective of this study was to identify the distribution of taught components related to didactic-pedagogical training in *stricto sensu* graduate programs in Health Sciences of federal universities in the Northeastern region of Brazil.

Methods

Descriptive, exploratory, documentary research. Data were collected in the platform *Sucupira* of the CAPES in January 2017.

The population consisted of *stricto sensu* graduate programs in the areas of Health Sciences of fed-

eral universities in the Northeastern region of Brazil. Academic PhD and MSc courses were included; professional modality courses were excluded as they are focused on the daily practice on duty, as well as interunit graduate programs, that is, interinstitutional MSc (Minter) and interinstitutional PhD courses (Dinter), as each of them present particular pedagogical projects.

The methodology followed the stages of identification, selection, and eligibility as presented in figure 1.

The first stage identified federal universities in the Northeastern region by accessing the online page of the records of higher education institutions and courses of the Ministry of Education (e-MEC). The division of basic areas, subareas, and specialties followed the classification of the areas of knowledge proposed by CAPES.

Online access to the Platform Sucupira, item Program Information, Enquiries, and subitem Program Registration Data enabled the second stage and the selection of the eligible graduate programs to achieve the proposed objective.

Through the subitem Subjects, the third stage presented the selection of taught components fo-

cused on the training of professors and those presenting elements related to theoretical training and/or practical teaching activity in their course descriptions. Discussion about the professor-student relationship, the methodological strategies, and the learning context are emphasized among these elements.⁽²⁾

An analysis matrix was created with the use of the software Microsoft Office Excel® 2013 to organize the data, with the following information: “State”; “University”; “University site link”; “*Stricto sensu* courses”; “Nature”, “Graduate program site link”, “Assessment area”, “Basic area”, “Concentration areas”, “Taught component name”, “Level”, “Mandatory unit”, “Course description”, and “Term”. Numerical data were organized in tables considering simple and relative frequencies, grouped by institution. Qualitative data were classified into two groups based on the thematic content analysis, namely: theoretical training for teaching and practical teaching activity.

This study was not required to be submitted to a research ethics committee as secondary data from public domain and electronically available for free were used.

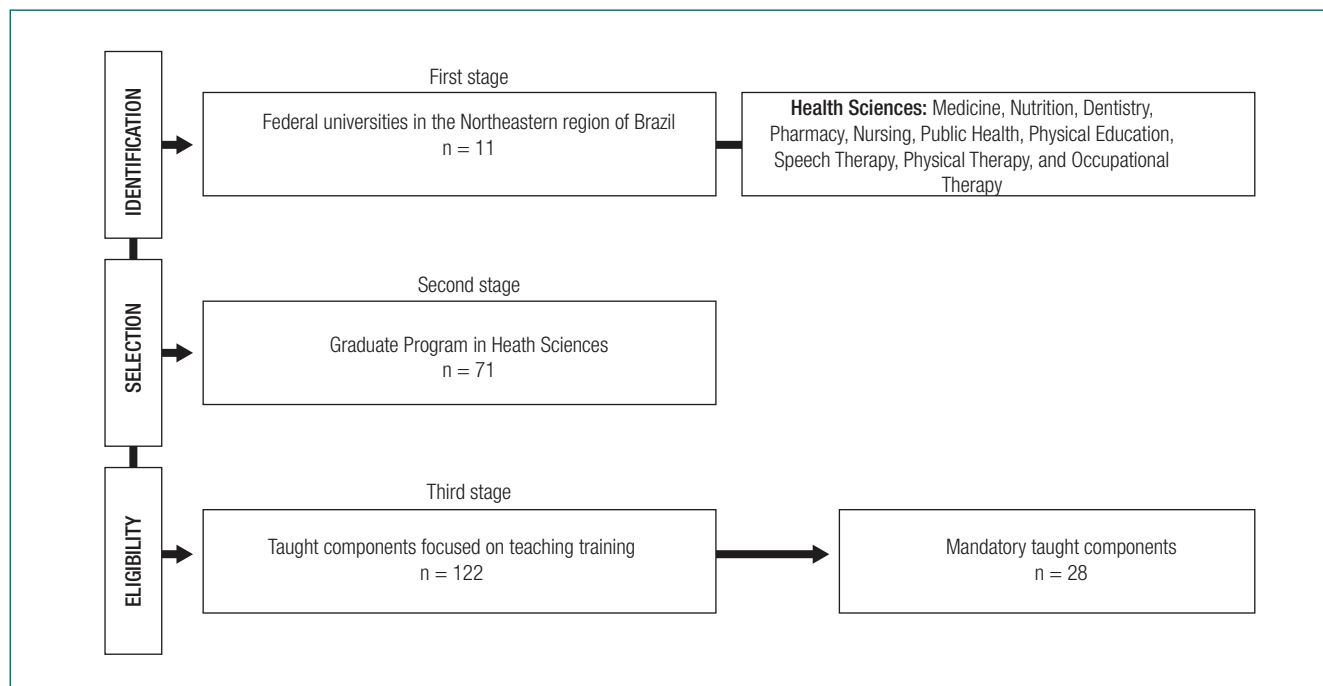


Figure 1. Study flowchart

Results

There are currently 63 federal universities (FU) in Brazil, distributed in all the 27 states. Eleven federal universities were found in the Northeastern region with *stricto sensu* graduate programs certified in the area of Health Sciences, with 70 academic MSc courses (MA) and 40 PhD courses (DO) distributed in 71 graduate programs, as shown in table 1.

Table 1. Distribution of graduate programs in Health Sciences, courses, and didactic-pedagogical taught components in federal universities of the Northeastern region of the country

FU	Courses			Didactic-Pedagogical TC*		
	GP n	MA	DO	n	Mandatory n(%)	Non-mandatory n(%)
UFAL	4	4	1	6	3(50.0)	3(50.0)
UFBA	9	9	7	13	2(15.4)	11(84.6)
UNILAB	1	1	-	1	-	1(100.0)
UNIVASF	2	2	-	4	-	4(100.0)
UFC	7	7	6	22	9(40.9)	13(59.1)
UFMA	6	6	3	8	3(37.5)	5(62.5)
UFPB	4	4	4	5	2(40.0)	3(60.0)
UFPE	15	15	9	17	1(5.9)	16(94.1)
UFPI	5	5	1	8	1(12.5)	7(87.5)
UFRN	11	10	7	23	3(13.0)	20(87.0)
UFS	7	7	2	15	4(26.7)	11(73.3)
Total	71	70	40	122	28(23.0)	94(77.0)

FU - Federal university; GP - Graduate program; TC - Taught component; MA - Academic MSc; DO - PhD; UFAL - Universidade Federal do Alagoas; UFBA - Universidade Federal da Bahia; UNILAB - Universidade da Integração Internacional da Lusofonia Afro-Brasileira; UNIVASF - Universidade Federal do Vale do São Francisco; UFC - Universidade Federal do Ceará; UFMA - Universidade Federal do Maranhão; UFPB - Universidade Federal da Paraíba; UFPE - Universidade Federal do Pernambuco; UFPI - Universidade Federal do Piauí; UFRN - Universidade Federal do Rio Grande do Norte; UFS - Universidade Federal do Sergipe; *Some didactic-pedagogical TCs are common to the MA and DO courses, and were computed only once in this table

The nine states of the Northeastern region have *stricto sensu* GP offered by at least one federal university. Among these, Pernambuco occupies a prominent position, offering 15 options of which nine are PhD courses, followed by the states of Rio Grande do Norte and Bahia, offering 11 and 9 options of programs, respectively, with seven PhD options in each institution. Although the state of Paraíba presents only four options of programs, it is noteworthy that all of them offer PhD courses.

In relation to the components covered in teaching training, 19 (27%) of the 70 MSc courses in the Northeastern region presented mandatory units

and 48 (69%) presented optional units. In relation to the 40 PhD courses, only seven (18%) had mandatory units and 32 (80%) had optional units, as shown in table 2.

Table 2. Distribution of academic MSc and PhD courses in relation to the offer of didactic-pedagogical taught components

FU	Total of courses		Courses that offer mandatory components		Courses that offer optional components		Courses that do not offer didactic-pedagogical components	
	MA	DO	MA	DO	MA	DO	MA	DO
UFAL	4	1	2	NF	1	1	1	-
UFBA	9	7	2	1	5	6	2	1
UNILAB	1	-	NF	-	1	-	-	-
UNIVASF	2	-	NF	-	2	-	-	-
UFC	7	6	4	3	6	6	-	-
UFMA	6	3	2	1	4	2	-	-
UFPB	4	4	2	NF	2	2	-	2
UFPE	15	9	1	NF	11	8	3	1
UFPI	5	1	1	NF	5	NF	-	1
UFRN	10	7	2	1	7	5	2	1
UFS	7	2	3	1	4	2	0	0
Total	70	40	19	7	48	32	8	6

NE - not found

Predominance of optional units was observed in relation to teaching training. UFC and UFS present the highest percentages of mandatory units per number of courses, 54% and 44%, respectively, unlike UFPE that despite the higher number of courses, offers the unit in the mandatory modality in only one (4%) of them.

It is also important to mention that the number of PhD and MSc courses without any units related to teaching practice was lower than the number of units offered in all the institutions, and the highest percentage was observed in the UFPB (25%).

Regarding mandatory taught components approaching the didactic-pedagogical training, 17 (60.7%) presented course descriptions directed to practice and classroom development. The main titles of these units were: “teaching internship” and “guided training”. The other 11 (39.3%) components were focused on the theory and epistemology of education, with the following main titles of the course descriptions: “higher education methodology” and “higher education didactics”.

Discussion

The described results presented an overview of the federal higher education institutions in the Northeastern region in the area of Health Sciences, as well as a fragility of teaching training in these spaces. Therefore it is necessary to discuss this practice and the creation of strategies for curriculum changes in such programs.

The presence of *stricto sensu* GP in at least one federal university in all the states is characterized as an important fact, indicating a change in the field of higher education. The expansion of the courses to different regions leads to an expansion of access, allowing a reduction in the displacement of people to other states.

In this sense a demographic study conducted by the Center for Strategic Studies and Management points out that between 1996 and 2014 the MSc and PhD programs in the area of Health Sciences presented a growth of 105% and 109%, respectively, but are still below the national average when considering all the areas of knowledge, which presented a growth of 205% and 210% in all modalities, respectively. There was also an increase of nearly 700% in the number of PhD programs in the health area in the Northern, Northwestern, and Central-Western regions, which is a much higher value than that observed for the growth in the whole country (210%).⁽⁷⁾

The increase in the number of *stricto-sensu* graduate courses and vacancies in the Northeastern region has certainly contributed to improve the qualification of the teaching staff, particularly those working in the universities where these courses are located, favored by the offer of courses in their own workplace.

It is also important to mention that the existence of GP is presented as an increment factor for the scientific production of an area, considering that the development of research is strongly encouraged by MSc and PhD programs that focus their objectives primarily on training researchers rather than professors. The scientific production is essentially recognized and valued as the assessment of *stricto sensu* graduate programs is related to productivity

criteria with a focus on researchers and research group leaders.⁽⁸⁾

In this perspective, despite the benefits resulting from the scientific production and the solid training for research in the MSc and PhD graduate programs, it is important to point out that in general these courses qualify researchers that are not well prepared for the teaching practice, a fact that represents a paradox in view of the high number of graduates that follow the teaching career.⁽⁸⁾

In relation to the offer of units related to the development of teaching training there is a fragility in the approach to this content in the taught components of the graduate courses. Although there is no specific legislation to guide and determine the training of professors, the educational environments of academic MSc and PhD courses are still the most suitable for the improvement of this skill.

In the LDB/1996 *stricto sensu* graduate programs are described as the main environment for preparation of higher education teaching staff, and despite the updates up to the year of 2016 this determination remains unchanged in the mentioned law.⁽⁹⁾ The current National Graduate Plan⁽¹⁰⁾ omits considerations about this theme, differing from the previous plan that contained guidelines consistent with the LDB/1996. Thus, in view of the lack of a proposal for any transference of responsibility or changes related to the need of didactic-pedagogical training of professors it is valid that MSc and PhD courses keep their focus not only on the training of researchers but also on the training of higher education professors.

In this sense, in view of the absence of laws to legitimize the required pedagogical training, a strategy would be the investment in discussions involving universities and bodies such as CAPES for the construction of a legal system that encourages didactic-pedagogical training in higher education.⁽¹¹⁾

This study emphasizes that even assuming that MSc and PhD courses primarily aim at training researchers, the offer of at least some optional unit with a focus on the preparation of professors would still be coherent with the labor market demand, as a significant number of masters and doctors are engaged in teaching activities.⁽¹²⁾ The results of this

research evidenced a devaluation of the pedagogical training directed to teaching practice as it pointed out a significant number of courses that do not approach any unit focused on this field of knowledge.

It should be noted that information related to the curriculum organization, as well as the training objectives, also differ within the universities according to the proposals of the GP of each area. However these particularities were discussed within the scope of this study; they may be the object of study of future investigations.

Another point to be discussed relates to the classification of taught components based on the interpretation of content of their course descriptions. Approximately 60% of the 26 mandatory components for the MSc and/or PhD courses presented activities related to the practical exercise of teaching; the associated theoretical training was not clearly described. A qualified teaching performance requires knowledge beyond the specific training and professional experience; it requires the development of pedagogical knowledge as well.⁽¹³⁾ This is a domain that may only be reached through the reflection and intentional performance of the educational practice, supported by didactic-pedagogical training that prepares in an appropriate manner those who teach or will teach.⁽¹⁴⁾

The effective training of future professors should not be restricted to the practical activity devoid of or incoherent with theoretical training, inconsistent with the needs and current concepts of excellence education. Teaching performance is not limited to the repetition of practices learned during the academic life; it is an activity that has a theoretical-practical dimension that demands cautious preparation, dense training, and acquisition of specific teaching-related knowledge.⁽⁸⁾ Thus professors should master didactic and pedagogical concepts as well as the teaching-learning process in order to perform the teaching activity in a critical and transformative way rather than as a mere transmitter of knowledge.⁽¹⁵⁾

Education to train health professionals is presented as a propeller of changes by providing resources for the construction of knowledge and professional performance. Thus, higher education

institutions, recognized as producers of knowledge, should be responsible for the complex attribution of training professionals duly qualified to intervene in social needs. However, the current scenario evidences a fragile and deficient higher education system, unable to train professionals imbued with the expected skills to meet the demands of society. The fragility of university quality is expressed as multifactorial, permeated by economic, social, and institutional aspects,⁽¹⁶⁾ and may be justified by rationalization of resources, mercantilism, and lack of strategic planning that is appropriate to the current context and public policies.⁽¹⁷⁾

Conclusion

Data obtained showed that the academic MSc and PhD courses of the *stricto sensu* graduate programs of Health Sciences in the Northeastern region of Brazil do not qualify professionals to develop didactic-pedagogical training for future higher education professors. The taught components and their course descriptions related to teaching training, when not present and not mandatory, are characterized as deficient for promotion of teaching qualification.

Acknowledgments

To the Coordination for the Improvement of Higher Education Personnel (CAPES) for the doctoral scholarship of Figueredo WN. To the Bahia Research Foundation (FAPESB) for the doctoral scholarship of Dias ACS. To the Dean of Graduate Studies of the Federal University of Bahia for the financial support derived from the Scientific Production Support Program.

Collaborations

Figueredo WN collaborated in the research conception, design, writing, analysis, interpretation of data, critical review of the article, and final approval of the version to be published. Laitano ADC collaborated in research design, writing, analysis, interpretation of data, critical review of the article, and final approval of the version to be published. Santos VPFA and Dias ACS collaborated in the writing, analysis,

interpretation of data, critical review of the article and final approval of the version to be published. Silva GTR and Teixeira GAS participated in the relevant critical review of the intellectual content and final approval of the version to be published.

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