Interprofessional Education in Master’s and Doctoral programs: postgraduate students’ perception*

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This research was developed in the context of postgraduate studies in the area of health and aimed to analyze the perception of students who attended the discipline Teacher Education in Health in relation to the principles of Interprofessional Education. Interprofessional Education has remarkable characteristics: teamwork, discussion of roles and responsibilities, commitment to the solution of problems, permanent exercise of dialog, and negotiation in decision-making. A Likert-type instrument was answered by 79 students. The data underwent statistical and content analyses. The nucleus ‘Discipline’s Guiding Principles’ indicates that working in teams is possible and may be a path towards the development of teachers committed to the health professionals education aligned with the principles of the Brazilian National Health System (SUS).

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Teacher Education and Interprofessional Education

Teams that work together well are more effective and innovative\(^1\). (p. 173)

The interest in conducting this research with students who attended the discipline Teacher Education in the Area of Health, which is part of a Postgraduate Program, meets the need of analyzing how teachers are prepared to teach courses in the area of health in universities, in the perspective of Interprofessional Education. Our aim is to investigate and understand the importance given to the development of competencies in the postgraduate student so that they can be teachers and educate future professionals.

In the last decades of the 20\(^{th}\) century, important changes occurred in the scenario of professional education in colleges and universities that have fostered reflections on the teachers’ role, as they have shifted from transmitters of knowledge to mediators and facilitators of the construction of new knowledge. Some of these changes are “the explosive growth of knowledge and access to information, the great advances in the field of Educational Psychology and Higher Education, the introduction of new teaching and evaluation techniques, and modifications in the profile of the university student”\(^2\) (p. 246).

In Brazil, teacher education “remained, during a long time, in a peripheral position in the education of postgraduate students”\(^2\) (p. 246), as research was prioritized to the detriment of teacher development. These aspects should not move separately; rather, there should be a balance between education for teaching, based on didactic-pedagogical knowledge, and education for research, emphasizing scientific methods\(^3\).

In the daily routine of higher education, many teachers still replicate the models they received in their undergraduate course. In the majority of times, these models are characterized by traditional strategies of information transmission, which are content-based and centered on the teacher’s knowledge, and do not open space to new strategies\(^4\).

Reeves\(^5\) highlights the relevance of the teacher’s competence as a mediator in learning situations grounded on interprofessional education, arguing that “this competence involves a set of dimensions like previous experiences, intention to work in an interprofessional group, flexibility and creativity to experience situations in a shared way with students, and, last but not least, teachers’ involvement in and commitment to interprofessional education”\(^6\) (p. 203).

Batista and Batista\(^6\) state that teacher mediation, in this perspective, reveals a real demand for education, and define education as “a central axis within the scenario characterized by educational innovation experiences, the complex process of discussing professional identities during education, and the power of spaces for teachers’ exchange of knowledge and practices”\(^6\) (p. 203).

In this way, “an interprofessional experience [is configured]: Collaborative, significant and interactive, producing shared knowledge”\(^6\) (p. 203).

Research into teacher education is not recent\(^7-11\); however, productions that portray the educational trajectory of the new university teachers in the area of health are still scarce. It is important that this kind of research enables to align teaching, learning and evaluation processes with the principles of the National Curricular Guidelines\(^10-12\), in order to educate generalist, critical, reflective professionals who have contemporary skills, competencies and contents to act with quality and efficiency in Brazilian National Health System (SUS)\(^4\).

In this context, educating health professionals with these perspectives is challenging, as the curricula of some higher education institutions are still fragmented, with sequential disciplines in a ‘grid’, without space for teaching and learning in practice scenarios, which are considered fundamental to the interprofessional experience\(^13\).

Treviso and Pinheiro da Costa\(^14\), in a study carried out in ten undergraduate health courses, have indicated that research about teacher education has strengthened the need to understand the practice of teaching beyond mastering the content specific to the teacher’s area of activity, as well as the need to be committed to the qualification of these professionals. Teachers must also master aspects referring
to teaching, learning and evaluation processes, understanding their complexity and promoting the adequate conditions for students to experience a significant and long-lasting learning.

Araújo, Batista and Gerab have shown the importance of research that enables to understand the “process of change in the area, allowing to delineate guidelines to design teacher development projects” (p. 486).

One of the priorities for the development of research into interprofessional education is the challenge of educating the new generation of higher education teachers, both in undergraduate and postgraduate courses.

The need of conducting students' learning so that they learn with one another is one of the new challenges. Integrating this procedure demands interprofessional and collaborative work, with the aim of ensuring the provision of comprehensive care and the humanization of the assistance provided for SUS users.

The interprofessional education strategy has, as educational presuppositions, adult learning (students learn when they see meaning, when they perceive the applicability of what they learn, and when their previous knowledge is considered), interaction-based learning, and practice learning (movements of observation, simulation, action). Rossit et al. have analyzed the education of health professionals based on the experience of a curriculum grounded on the principles of interprofessional education, having the following evidences: Development of numerous teamwork competencies, collaborative practice, and of patient-centered and comprehensive care. The data showed that 84% of the participants were totally satisfied with the education they received.

The universities have received the challenging mission of educating health professionals, since the early years of the undergraduate course, to participate in interactions, exchanges and reciprocal actions among different professions with the purpose of consolidating the SUS “in an efficient way to deal with the different and entangled dimensions that compose the health-disease process” (p. 1564).

To educate professionals in this perspective, the higher education institutions need to invest in teacher development. As Batista and Batista argue, “the discussion about university teachers’ education in the area of health emerges, with its challenges and perspectives” (p. 17). It is challenging because being a good health professional and having years of clinical experience is not enough to teach competently. It is fundamental that the professional abandons crystallized practices that have permeated students' education and goes further, recognizing that interprofessional education and collaborative practice are important strategies to meet the professional demands of the 21st century. As described by Peduzzi, it is necessary to construct programs and curricula that adopt innovative teaching strategies and are grounded on the perspective of interprofessional education, enabling that students from “two or more professions learn about the others, with the others and among each other” (p. 6-7), in order to improve health outcomes.

In interprofessional education, teamwork, the discussion of roles and responsibilities, the commitment to solve problems, the permanent practice of dialog, and negotiation in decision-making are remarkable characteristics. Teaching in a dialogic and problematizing perspective, implementing innovative proposals to meet the educational demands of health professionals must be the essence of teacher education programs. These discussions must advance to “consolidate the change in the paradigm of the teacher’s action, from a mere transmitter of knowledge to a professional that plays different roles in the educational field, mastering the pertinent knowledge and skills” (p. 247).

It is important to highlight that the principles of interprofessional education also apply to the Permanent Education of the professionals who form work teams in the services and universities, as it is grounded on the presuppositions of adult learning, which considers previous knowledge as valuable, subjects’ experiences as important sources of knowledge acquisition, and the possibility of their immediate application.

In this direction, Reeves argues that studies about interprofessional education within Permanent Education are more efficient, as participants already have a solid understanding of their professional
identity, by means of which they develop communication skills, increase their capacity for critical analysis, and learn to value the challenges and benefits of teamwork.

According to Batista and Batista (p. 203), “experiencing interactive learning in interprofessional education is recognized as something that promotes the development of competencies for collaborative practice”.

The discipline Teacher Education in the Area of Health is a learning space in/about interprofessional education that contributes to the discussion about postgraduate courses being the best locus of study, research and development of competencies for university teaching, in the perspective of teamwork and collaborative practice.

However, it is necessary to bear in mind that this is neither an easy nor a brief task, as breaking with the education models in force in higher education - especially in the area of health, which values the division of labor - requires that teachers, students and managers are committed to proposals that enable the construction of a different teaching practice.

In light of the education of the new generation of teachers in the perspective of interprofessional education, it is stimulating and also challenging to investigate how the postgraduate students who attended the discipline Teacher Education in the Area of Health, of the Interdisciplinary Postgraduate Program in Health Sciences - Baixada Santista Campus-UNIFESP, perceive teachers’ education in the area of health based on the experience of shared learning.

Interprofessional Education in postgraduate programs

The discipline Teacher Education in the Area of Health was developed in the perspective of interprofessional education, with teams constituted of professionals from different areas of knowledge and with different experiences.

Based on the belief that the teaching and learning process is dynamic and dialogic, the discipline was developed in ten face-to-face encounters and moments of extra-class production. The contents were developed through readings, teamwork, directed studies, practical activities, interactive lectures, and construction of conceptual maps, among others, using active learning methodologies and valuing shared, significant and collaborative learning.

The evaluation of the postgraduates’ learning occurred in a continued and formative way, with feedback being given after each activity: Individual and collective productions, critical analysis of the theoretical framework, participation in teaching and learning processes, preparation and development of workshops about active methodologies, and planning of an educational health action. Each class was composed of 30 students organized in five heterogeneous teams formed by six participants from different professions and with different experiences. The students were required to attend a minimum of 75% of the encounters.

Considering the belief that teacher education must be grounded on interactions and exchanges, favoring proximity, dialog and collective work, the discipline constitutes a space of reflection and discussion of one’s own practice. It brought to the classroom the contributions of the daily routine of teachers, preceptors, professionals or students who were stimulated, in a critical way, to evaluate experiences and discuss the teacher’s role in higher education.

The discipline was structured in axes (Competencies, Development, Guiding Principles and Evaluation) and planned in three moments:

1- Discussion and reflection on themes related to teaching in the area of health - fostered collective thinking based on texts and experiences around themes that problematize teaching and learning in the field of the Health Sciences. Based on the theoretical-conceptual framework and on problem situations, conceptions about ‘what it means to be a teacher in the health professions’ were mobilized, favoring knowledge exchanges, shared learning, and the attempt to investigate triggering themes.

As described by Ausubel (p. 203), investing in methodological strategies that enable students’ active participation fosters significant learning, as their previous experiences and knowledge are valued as a source of new learning.
2- Teaching Practice - was grounded on the analysis of experiences in different active methodologies of teaching, learning and evaluation, with the aim of reflecting on 'the place of educational strategies and didactic resources in and to the construction of new knowledge, in different teaching and learning scenarios'. We purposefully assumed a perspective that articulated technique, reflection and criticism, producing possibilities of negotiation, assignment of meanings, decision-making and mediation of conflicts. The discussion about instructional resources starts with workshops in which the postgraduate students select themes related to the health and education binomial to experience different active methodologies. These workshops provide opportunities to establish relations between contents and to discuss the selected educational strategy, the outlined objectives, the expected competencies, and the strategies to evaluate learning.

3- Planning of a Teaching Activity - encompassed the collective construction process of an educational action proposal in the area of health. The plan was developed in face-to-face and extra-class moments with the mediation of the teacher, who explained the objectives. It favored not only learning related to the act of planning, but also a reflection on social responsibilities in the area of health.

These three moments characterized the dynamics of the face-to-face encounters. By reflecting, the students develop a teaching practice that, in turn, translates a certain planning; they move across the systematized contents of educational science, the subjects’ representations, and the conditionings of the health area as a socially and historically situated practice. Furthermore, they deal with professional diversity, which requires the contextualization of the occupations and their education, teaching and learning processes, as well as the construction of interprofessional and collaborative practices.

The planning of the discipline emphasizes the development of competencies for teaching, understood as the result of a set of skills, attitudes and knowledge that give to the health professional or teacher conditions to develop their work efficiently. This understanding corroborates the definition of Deluiz27 when she argues that competency is the “capacity for articulating and mobilizing knowledge, skills and attitudes, using them to solve problems and face unpredictable events in concrete work situations within a given cultural context27” (p. 13).

Teamwork proposes to integrate knowledge and actions and has become an essential component of the provision of comprehensive care. It is possible within an amplified view of the health-disease process, where professionals value the context of life of the people involved and understand the human being with their specificities, while, at the same time, they provide autonomy for the health services’ user.

In this article, we will analyze the perception of students who attended the discipline Teacher Education in the Area of Health based on the directing nucleus ‘Discipline’s Guiding Principles’. The nucleus revealed the postgraduate students’ perception of teacher education targeted at teamwork, showing that exchanges among subjects with different backgrounds can strengthen dialogic relations towards the development of collaborative competencies.

Methodological approach

An exploratory-descriptive study with a quantitative and qualitative approach was carried out. In the period between 2014 and 2017, 205 postgraduate students attended the discipline Teacher Education in the Area of Health and 79 out of them (38.5%) participated in the research.

According to Gil28, exploratory research is developed with the objective of providing a general, approximate view, of a certain fact. Descriptive research, in turn, describes the characteristics of a certain population or phenomenon, or establishes relationships between variables.

The quantitative data were collected through the administration of an instrument structured in four directing nuclei: Competencies (five assertions), Development of the Discipline (eight assertions), Discipline’s Guiding Principles (ten assertions), and Evaluation (seven assertions). The instrument
contains thirty assertions in a four-point Likert-type Scale\(^{(d)}\) (I completely disagree, I am inclined to disagree, I am inclined to agree and I completely agree) and a list of 33 competencies in which the student should check one of the options - 'I've developed it, I haven't developed it, I've improved it, I haven't improved it' - to each competency.

The qualitative data were provided by the answers to the four open questions about the challenges of participating in the discipline, developed in the perspective of interprofessional education and collaborative practice.

As the respondents might be in different places, the instrument was prepared and put in an electronic platform.

The invitation letter, the link to access the consent document and the instrument were sent to the students’ private electronic addresses by the teacher responsible for the discipline.

The quantitative data were analyzed statistically, using the Linear Correlation Test (\(r\)), the Spearman-Brown Reliability Analysis, Factor Analysis, Principal Component Analysis, the Likelihood Ratio Test, and calculation of means. The assertions' means were classified as ‘danger zone’ for assertions with means ranging from 1.0 to 1.33; ‘alert zone’ for assertions with means ranging from 1.34 to 2.67; and ‘comfort zone’ for assertions with means ranging from 2.68 to 4.0.

The reports of the open questions were fully transcribed and analyzed with the tools of thematic analysis. According to Minayo\(^{30}\), thematic analysis encompasses a pre-analysis of the collected material through floating reading, the constitution of the data corpus, and an in-depth reading to identify Context Units (CU) and Recording Units (RU).

The participants’ anonymity was preserved. The fragments are identified by letter ‘E’ followed by the order in which the participants answered the instrument, according to the following configuration: E\(_1\), E\(_2\), E\(_3\)... and so on.

The project was approved by Opinion no. 1.575.739/2016 and Brazil Platform - CAEE 54774116.6.0000.5505. The study complied with Resolution no. 466 of December 12, 2012 of the National Health Council and was submitted to the Research Ethics Committee of Universidade Federal de São Paulo – UNIFESP.

**Results and discussion**

Of the 205 postgraduate students who attended the discipline Teacher Education in the Area of Health in the period between 2014 and 2017, 79 (38.5%) completed the instrument and 59 out of them (74.7%) answered the open questions.

The statistical analysis of the instrument, evaluated by means of the Spearman-Brown test, showed validation of the 30 assertions and reliability of 0.90. The general mean of the assertions was 3.63, which indicates comfort zone, revealing respondents’ positive perception and denoting success in the investigated aspects.

Graph 1 presents the mean of the assertions of the directing nucleus “Discipline’s Guiding Principles” and Chart 1 presents the assertions corresponding to this nucleus.

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\(^{(d)}\) Likert’s work made it clear that his scale had five points. Although the use of scales with a number of items other than five represents a classification scale, when the scale does not have five options of answer, it is not a Likert Scale - it is a “Likert-type” Scale\(^{29}\) (p. 163).
A15 - Based on the experience I had of interprofessionality and collaborative practice during the discipline Teacher Education in the Area of Health, I understand the importance of teaching within this perspective.

A16 - Attending the discipline Teacher Education in the Area of Health made me rethink teaching in terms of breaking with the logic of banking education and analyzing, with students, the articulation between Health and Education for significant learning practices.

A17 - The interaction of postgraduate students with different backgrounds is fundamental to the process of learning and developing competencies (knowledge, skills, attitudes) targeted at teamwork and interprofessionality.

A18 - The discipline Teacher Education in the Area of Health was an innovative experience in the field of interprofessional learning that favored dialog, negotiation of knowledge, exchange of experiences, and affectivity.

A19 - The relationship between educational innovation and teacher education is determinant for transformations triggered by educational policies.

A20 - The discipline Teacher Education in the Area of Health enabled students to understand what Interprofessional Education is and how to develop it.

A21 - The teacher’s mediation during the discipline was fundamental to the understanding of the teacher’s role in higher education.

A22 - Learning how to teach students “ones with the others, ones about the others, and ones for the others” was a new and challenging experience.

A23 - The discipline Teacher Education in the Area of Health promoted the understanding of the roles and responsibilities of different professions when we had to plan learning strategies for interprofessional groups.

A24 - We learn how to teach in the perspective of interprofessional education reflecting on experiences, sharing knowledge, constructing collective projects, and planning intervention strategies.

The postgraduates’ perception of the importance of interprofessional education and teamwork presupposes the collective construction of new learning experiences to educate teachers in the area of health. This corroborates the ideas of Batista and Batista, who state that “we learn to teach in the perspective of interprofessional education by teaching and reflecting on experiences, constructing collective knowledge, strategies and projects” (p. 203).

The discipline Teacher Education in the Area of Health provided learning moments in which innovative practices stimulated creativity, reflections, and exchange of experiences in the paths of teaching. It provided postgraduate students with significant experiences and “shared moments of learning as important gains to change the logic of professional education in the area of Health” (p. 758).
The assertions A15, A16, A18, A20 and A23 had a high index of ‘I completely agree’, showing the value that the students assigned to the development of the discipline for interprofessional learning and teamwork, as the dynamics focused on “learning by doing”, leading students to reflect on teaching, knowledge sharing, negotiation, meanings, learning scenarios, and leaderships. Learning with the other and about the other is challenging both to the person who educates and to the person who is being educated.6,18

Thus, planning spaces and opportunities to experience interprofessionality and collaborative practice, either in postgraduate courses or in teacher development programs, will provide those who teach with innovative and different experiences, with the aim of educating professionals who are better prepared for health practice.

The perception in relation to assertion A22 is strengthened by the students’ testimony, as they recognize the contribution of each participant, even with different backgrounds, to the planning of activities, resolution of problems and use of creativity. These topics enrich their experience, as “learning how to learn”, “learning how to do” and “learning how to live” together are competencies that education and collaborative work allow to develop.18,31

[...] The education is very different. It enables to enrich, to discuss, to see different ways of creating, of solving the problem-questions and developing these methodologies. [...] Each student comes with their load of knowledge, but the different backgrounds enabled to enrich this experience [...]. (E3)

[...] I saw people engaged in teamwork and cooperation all the time, one complementing the other’s idea [...] beautiful things came out! The works that were presented were very good, so was their construction! [...] the learning we constructed was very good, a very good experience. (E4)

Articulating teaching and learning activities among professionals with different backgrounds is a challenge to teachers involved in programs grounded on the perspective of interprofessional education and collaborative practice.18

Barr16 argues that the universities must undergo a democratization process to understand that it is no longer possible to continue educating professionals who are not capable of interacting and negotiating, and do not know how to work in teams.

Thus, it is essential to plan activities that can break with the uniprofessional logic that still prevails in the education of health professionals. This is no easy task and it needs to be discussed by those responsible for designing curricula and teacher qualification programs and, also, by managers of the health services.12,22.

The students recognize that professionals who have the opportunity of being educated with professionals from other areas since the undergraduate course find it easier to live with differences when compared to others, being able to see possibilities to solve problems that go beyond their specific background, sharing actions and knowledge.32

What was most different, besides the structure of the discipline, was the type of education we received. Some students came from the interdisciplinary program and were already used to it, while others had never dealt with this. I think the group did very well and we could live with differences very well. It’s hard at the beginning, but it adds to your experience and broadens it a lot. There are things you’d never think within your view, sometimes because of your experience or your background. (E1)

[...] dealing with differences enriches us and prepares us in relation to the power of argumentation, and also in relation to the training we must have to participate in the group. (E14)
Assertion A17 (the interaction of postgraduate students with different backgrounds is fundamental to the learning process) obtained the highest mean (3.89). This aspect was reinforced in the postgraduate students’ testimonies, as they recognize the importance of developing competencies (knowledge, skills, attitudes) for teamwork and interprofessionalism. At the same time, they understand that “teaching, learning, relating to one another and reflecting on health problems”12 (p. 760) are fundamental elements in collaborative practice.

[... ] you learn a lot and you contribute to the other’s learning. I think that, all things together, this facilitates a lot and develops skills that perhaps you wouldn’t have or perceptions you didn’t have. You end up developing yourself in relation to attitudes [...] this potential for having an attitude, moving forward, risking, trying to understand, trying to do, even though you make mistakes, because you know there will be someone there who can help you in this process, one helping the other [...] it was very productive to me, I understood many things. (E1)

It’s cool to see differences of focus in the action of each of the different professionals, referring to the same theme. This helps to guide students in relation to how to maintain a synergic effort in favor of the patient, respecting each area’s limits of action. (E6)

According to Reeves5, “it is expected that interprofessional education enables health professionals to have the necessary skills to work effectively together, ensuring the safe provision of high-quality care for patients” (p. 185).

Interprofessional education and collaborative practice should be developed not only in undergraduate courses; they should be targeted at all professionals and teachers, who should have the opportunity of being educated in this perspective5. This aspect was shown in the mean score of assertion A15 and in the testimonies.

[... ] this proposal of the discipline is a challenge! I think it’s still taking its first steps, I think it’s a promising proposal within the teaching and learning process, both of students and teachers. The experience of sharing with other students was very rich. When we experience the teaching and learning process with other students from diverse areas, we end up understanding a little bit more about the standpoint of the other, and of the other professions, without leaving our professional identity aside. (E7)

[... ] Accepting the other’s opinion and deconstructing some “truths” was quite challenging. (E8)

Final remarks

This study enabled to identify the potentialities of a discipline, developed in the context of a postgraduate program, that influenced the way in which teachers are prepared to teach courses in the area of health in universities, in the perspective of interprofessional education and collaborative practice.

Experiencing the construction of collaborative work mediated by active teaching and learning methodologies in the context of this discipline, with different professional areas involved, was a singular path marked by transformations and great challenges.

The development of this discipline implied that students thought about and practiced teaching as a contextualized social practice, as relationship and action among subjects; after all, it is an intense process of assigning meanings and breaking paradigms, permeated by the subjectivity of different types of knowledge involved in practicing teacher education by means of interprofessional education.

The collective construction of the educational planning was presented at the end of the discipline and revealed a rich and diversified network of educational possibilities in the area of health, as well as intentions and choices that were discussed. Thus, it became possible to apprehend the impact of this
experience in the posture of working in teams, learning how to deal with differences, negotiating and constructing consensuses based on collective decision-making, and improving or developing qualified hearing, capacity for synthesis, and communication.

The teams of postgraduate students, intentionally formed by different professions, presented course proposals, disciplines for undergraduate and postgraduate courses, symposiums, cycles of lectures, health education in the community, workshops, prevention campaigns, and the construction of a matrix for the development and evaluation of common competencies for health professionals. These proposals were targeted at university students, people from different age groups, users of health and education services, groups of caregivers, elementary and high school students, health services workers, graduates and professionals in their permanent education processes.

The challenges for the development of this discipline include, among others, enabling the postgraduate students to reflect on teaching in the area of health as a complex and dynamic activity, and to experience teamwork with professionals who have different backgrounds.

Other challenges were present in the intentions of the teachers in charge of the discipline: identifying participants’ profile for the composition of heterogeneous teams, breaking paradigms among postgraduate students, mediating different perceptions, opinions and concepts about the same object, and mediating discussions and decision-making in small groups. However, the biggest challenge was being the ‘model teacher’ for the future generations of teachers.

In this dynamic scenario where the construction of dialog was present, the paths of collective construction were fundamental in the transformation of the teaching practice.

In the postgraduate students’ perception, the format in which the discipline Teacher Education in the Area of Health was offered contributed to the education of new teachers who understood the importance of interprofessional education as an educational strategy. We highlight their motivation, involvement, creativity and interest in trying to learn more about the acquired knowledge.

It is important to mention that the discipline was a learning space in/about interprofessional education that became an excellent locus of study, research and development of competencies for teaching, in the perspective of teamwork and collaborative practice. Thus, it is possible to conclude that working in teams is possible and can be a solution in the education of teachers committed to the complexity that involves health work in the context of the SUS.

Studies on processes that prepare teachers to teach university courses in the area of health in the perspective of interprofessional education are still scarce and recent. In this sense, this research shows that it is possible to plan and develop a discipline structured through the principles of interprofessionality and collaborative practice, and it is feasible to develop competencies in order to educate future professionals and enhance the education of those who already work as teachers.

The findings presented here refer to a successful experience in a public university with expertise in the implementation of curricula, in undergraduate and postgraduate programs, grounded on the principles of interprofessional education and interdisciplinarity. It is important to highlight the need of further studies to obtain more robustness.
Contributors

Maria Aparecida de Oliveira Freitas was responsible for the conception and design of the project, data collection and analysis, discussion of the results, the writing of the manuscript, and for the approval of the article’s final version. Gabriela Souza dos Santos Demarchi was responsible for constructing and organizing the database and for reviewing and formatting the text and the references. In addition, she participated in the discussion of the results and in the approval of the manuscript’s final version. Rosana Aparecida Salvador Rossit supervised the creation of the project and was responsible for the writing of the manuscript, the discussion of the results, and the approval of the manuscript’s final version.

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