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# Points and counterpoints in the development of interdisciplinarity in nursing technical training\*

Pontos e contrapontos no desenvolvimento da interdisciplinaridade na formação técnica em enfermagem

Puntos y contrapuntos en el desarrollo de la interdisciplinariedad en la formación técnica en enfermería

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#### **ABSTRACT**

Objective: To characterize the points and counterpoints in the development of interdisciplinarity in the nursing technical training. Method: This is an exploratorydescriptive study with a qualitative approach conducted through interviews with 30 teachers and coordinators of nursing technical courses from 12 different regions of the state of São Paulo. Data analysis was performed through theme-based content analysis. Results: Regarding the theme of institutional orientation, it was found that, although there are initiatives to promote interdisciplinarity, since there is teacher training and definition of goals for articulation with other courses and for the joint work among the teachers of the disciplines, these are still vague and ineffective. As for the theme, the implementation of interdisciplinarity by the teachers, it is observed that they seek different forms of integration, but they come across the curricular structure, the form of teacher hiring, and the resistance to changes. With respect to the comprehension of the concept, relevant aspects of its meaning are recognized; however, they admit the existence of limits. Conclusion: The institution defines a trajectory aiming at interdisciplinarity, the teachers try to follow the path for its implementation; however, they find structural obstacles, little comprehension of the concept, and resistance to changes. It appears that efforts are needed to advance the curricular implementation with the logics of interdisciplinarity.

#### **DESCRIPTORS**

Interdisciplinary Placement; Education, Nursing, Associate; Health Human Resource Training.

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# **INTRODUCTION**

The work in the health care area, whatever the scenario, is essentially relational and covered with subjectivity, demanding from professionals specific skills and quality training, for them to be perceived as protagonists of knowledge and transformative practices in their work place. However, even with some guiding policies, some inadequacy in the professional training<sup>(1)</sup> is observed.

In this context, nursing professionals training at high school level in Brazil is of great importance, as it represents a large contingent of health professionals working at front-line care, who have direct contact with users and, therefore, have great responsibility for the quality of care provided.

In the last decades, some national movements have sought to direct this training aiming to meet social and labor market needs. Law No. 9,394 of 1996 of Guidelines and Bases of National Education was decisive insofar as it referred to the training of active and reflective professionals in specific sectors<sup>(2)</sup>.

Therefore, in 1999, the Federal Government created the Nursing Workers Professionalization Program to qualify the professionals who were inserted in the health services and did not have the required preparation. This program was developed in the context of work, also seeking to regularize the situation of workers in accordance with Law No. 7,498/1986 of the Federal Nursing Council, which extinguished the position of nursing attendant, since this professional performed activities without due preparation. This training was necessary essentially for those without access to courses offered by the educational market<sup>(3)</sup>.

To expand the offer, strengthen and qualify technical training in accordance with the principles and guidelines of the Brazilian Public Health System (SUS), in 2000, the Network of Technical Schools of Nursing was created, which has 36 technical schools and training centers in all states of the country<sup>(1)</sup>. Its pedagogical organization is based on the methodology of problematization, the integration of teaching and service, and interdisciplinarity.

The nursing technician training has undergone changes also driven by the National Curriculum Guidelines for technical vocational education at secondary level, which proposes, among other aspects, the inseparability between education and social practice, with emphasis on the fact that interdisciplinarity shall be ensured in the curriculum and pedagogical practice, aiming to overcome the fragmentation present in the teaching process<sup>(4)</sup>.

However, there are still some difficulties in defining it, considering the multiplicity of interpretations. Among them, the rational logic that defends learning construction justified only by knowledge is highlighted; there is also the interpretation that interdisciplinarity is determined by the know-how and, finally, the prevailing conception in Brazil that views interdisciplinarity beyond knowledge

and know-how, because it also involves the affective aspect, which takes place through attitudes capable of promoting human growth and fulfillment<sup>(5)</sup>.

To this conception of interdisciplinarity, the convergence of all human sciences is added, leading to a synthesis in the view of man and society<sup>(6)</sup>. It requires a flexible institutional structure and new articulated curricular content related to real problems. Thus, the closer the disciplines get to vocational education, the greater the relevance of adopting an interdisciplinary approach to facilitate learning<sup>(7)</sup>.

Interdisciplinarity has been discussed in Brazil since the 1970s, with the understanding that, in its instrumental function, it uses useful and usable knowledge to answer to social issues and problems. It is an attitude around knowledge, with an emphasis on human relations, based on a consistent pedagogical practice and an appropriate curricular organization<sup>(5)</sup>.

However, it has been observed that it is still little practiced, mainly due to the lack of teachers with this knowledge, since this teaching concept is based on contextualization, problematization, and on the interrelation of different aspects of personal, social, and cultural life<sup>(8)</sup>.

When considering the new educational trends in the training of non-graduate nurses in the face of the yearnings of the world of labor, the present research starts from the questioning about what the proposals, advances, and challenges of the implementation of interdisciplinarity in nursing technical training in the state of São Paulo were. The study aims to characterize the points and counterpoints in the development of interdisciplinarity in nursing technical training.

# **METHOD**

# Type of study

This is an exploratory-descriptive study with a qualitative approach carried out through interviews regarding the interdisciplinary practices developed in the nursing technical course of state technical schools in the state of São Paulo.

#### **S**CENARIO

The study local is an educational institution in the state of São Paulo that offers free vocational education, consisting of 223 school units, under the management of the central administration, in charge of guiding the work developed in school units through specific guidelines based on the country legislation and in line with the standards and guidelines of the institutional regulations. The schools offer 150 courses on different technological axes, with 58 school units offering the nursing technical course, with an average offer of 1,865 vacancies per semester in 12 administrative regions throughout the state of São Paulo<sup>(9)</sup>.

In the case of the nursing technical course, the curricular structure is organized into four modules, in which

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each corresponds to a semester, with completion at the end of two years, with a course load of 1,280 class hours. There is an intermediate certification, as a nurse assistant, after completing two semesters, that is, two modules. The school units are partners of health institutions in the city and region, to ensure the supervised internship to students, for them to obtain skills inherent to the profession, approach to theory with practice, and incentive to the development of interdisciplinary actions in the promotion of learning.

#### **SAMPLE DEFINITION**

For sample definition, 12 state technical schools in the state of São Paulo were selected by lot. These schools offer the nursing technical course, with one school per administrative region. At this stage there was no refusal. In each of the 12 units, the current course coordinator and two teachers suggested by the school unit's coordination and/or management were invited to participate in the study. At least two years of work at that school unit were required. The subjects invited were contacted via e-mail to be informed about the study and for the obtainment of the research participation agreement. Eighteen teachers refused to participate in the initial phase of contact via e-mail; thus, three new lots were carried out in an attempt to obtain the acceptance of members from the 12 units. However, in two of them, only one teacher answered and, as for the coordinators, even though they agreed with the study and provided the teachers' contacts details, were unable to participate in the interviews with the allegation of lack of time. The sample consisted of 30 participants.

## **DATA COLLECTION**

The interviews were scheduled with the participants via telephone and conducted by video calls through WhatsApp. The interviews had a semi-structured script, containing questions about the identification data and information on the understanding of interdisciplinarity, the initiatives carried out to work with interdisciplinarity, advances, and challenges of this practice. They were recorded and transcribed in full for later analysis.

#### **DATA ANALYSIS AND TREATMENT**

Theme analysis was referenced by the technique proposed by Braun and Clarck<sup>(10)</sup> and consists of a qualitative analytical method that allows the identification, analysis and reporting of the theme established in the research, interpreting various aspects within the data collected, allowing the presentation of the contents and the meaning of patterns (themes) in the data collected<sup>(10)</sup>.

The operationalization of thematic analysis occurs in six phases that allow successive familiarization with the data. In the first phase, familiarization with the data takes place, being achieved by data immersion through repeated readings to get content depth and breadth<sup>(10)</sup>.

The second phase involves the assignment of initial codes from the data. These codes represent the semantic or latent content related to the most basic data segment or element. The third phase includes the search for themes; it is developed from the list of codes and covers the screening of the different ones to compose potential themes. At the end, there was a collection of themes and sub-themes. Phase four is time to revisit the themes; data are refined, and the internal homogeneity and external heterogeneity criteria are considered for the creation of the thematic map. Then, in phase five, the themes are defined and named, that is, each theme subject essence is identified. In the last phase, the analysis and writing of the academic report begins<sup>(10)</sup>.

#### **ETHICAL ASPECTS**

The project was subjected to the Human Research Ethics Committee of the proposing institution and received a favorable opinion, under No. 3.312.041/2019, in accordance with Resolution No. 466/2012, of the National Health Council, regarding the ethical principles that involve social research with human beings. The participants were informed about the purpose of the study and, after acceptance, signed the Free and Informed Consent Form, scanned it and sent it to the researcher's email. Aiming at maintaining the subjects' anonymity, they were organized by acronyms, in which P represents teacher, C coordinator and C/P coordinator and teacher, preceded by the numbers from 1 to 30, representing the total number of participants.

# **RESULTS**

Among the total number of study participants (30), the majority (27) (90.0%) are female, 22 (73.3%) are teachers, 7 (23.3%) accumulate the roles of coordinator and teacher, and 1 (3.3%) is only a coordinator. As for the length of work in the educational institution, 10 (33.0%) have between 2 and 5 years of work, 7 (23.0%) between 7 and 12 years, 7 (23.0%) between 14 and 17 years, and 6 (20.0%) between 18 and 24 years. All respondents have an undergraduate nursing degree, 27 (90.0%) have a graduate certificate in the area, and (20.0%) a master's degree in the area of Nursing or Education.

The analysis of the data obtained in the interviews with teachers and coordinators of the nursing technical course allowed the elaboration of three themes: institutional orientation, the path of interdisciplinarity, and the understanding of the concept, each of which presenting aspects that favor and aspects that hinder interdisciplinarity, these being considered as points and counterpoints of this implementation in nursing technical training (Figure 1).

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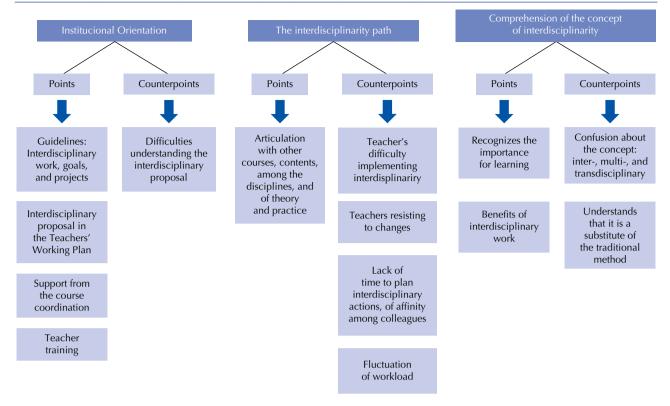


Figure 1 - Distribution of themes and sub-themes according to points and counterpoints.

# INSTITUTIONAL GUIDANCE FOR THE IMPLEMENTATION OF INTERDISCIPLINARITY

In the interviews, it is revealed that there is an institutional orientation in the search for an interdisciplinary work, since there is a concern with issuing guidelines and defining the goals to develop projects articulated with other courses, as well as the requests that interdisciplinary initiatives be placed in the teaching work plan. There is also a pedagogical coordination that supports this development through meetings, semester courses, dialogue, and conversation.

It has a faculty training center for the continuing education of professionals working in schools, keeping them updated for curriculum development in compliance with the school unit's course plan and the pedagogical project.

In fact, we have goals to have at least one project to work on interdisciplinarity (3C/P).

The institution's guidance is that we put it within the teaching work plan... and then we have to develop it together with the other courses for everyone to participate (7P).

[...] teachers are instructed in pedagogical meetings, they already start with the instructions in the course meetings and have the others in continuity (12P).

[...] if we have any doubts about how to work, we take the lesson plan and see how the material will be worked (19P).

Nevertheless, in this trajectory, the respondents point to difficulties inherent in this process, since, for them, the guidelines are few and vague, and have to be worked on more effectively with the institutional support of the school team. Thus, information is lost in the project, and it does not take place in practice.

During the semester planning, we talk, we make a project related to this, but, you know, it didn't go past the planning stage! (4P).

They give the guidelines, but they are a little superficial and, in practice, we can't implement it... it is very difficult to reconcile all teachers (30P).

We have not received this information so clearly. To work with interdisciplinary projects, in my opinion, they should be more disseminated, more clarified (8P).

[...] I think there could be some qualification, training, a course for teachers about interdisciplinary activities... There were some guidelines, but there were few (10P).

#### THE PATH OF INTERDISCIPLINARITY TAKEN BY THE TEACHERS

To make interdisciplinarity effective, the respondents articulate with other high school courses, articulate content and disciplines, the components of a module, and aim at an articulation of theory and practice.

We have a project together with the school's Event course, which aims to develop the issue of hospitality within the hospital environment (13P).

We also have to work with the interdisciplinarity of the school's own courses, that of Computer Science and Management (2C/P).

We have a cycle of lectures on first aid at school involving all students (9P).

I try to have a relationship with the theory teacher so that I can help and facilitate the learning of the practice (17P).

As a counterpoint to the construction trajectory, the teachers indicate that they came across some difficulties, such as resistance to changes, because they considered it a laborious activity. They also state that they do not have common schedules for planning and carrying out activities in an integrated manner, there is lack of affinity and consensus among colleagues, and classes assignments not always occur on a regular basis, that is, the previous semester course load is not maintained, making the process stressful, demotivating, and tiring.

Some teachers are more resistant, they want more traditional classes to handle the content. They find interdisciplinarity too laborious (29P).

You see, for teachers, some have some facilities, but some have a lot of difficulty. They don't understand! Especially older teachers (3CP).

When I can, the other teacher can't, you know! And we also have the semiannual course and each class assignment can change for each teacher (12P).

[...] I had my workload reduced, due to the class assignment and, as an assignment is always a surprise, when we get more classes, we have more time to dedicate to it (12P).

[...] often due to lack of affinity with the our own colleagues (18P).

And sometimes it gets truncated, because, when we want to relate two theories in a more effective, more in-depth way, the colleague does not always have the same view we have (21C/P).

It's stressful! It is demotivating and tiring, because most colleagues do not have the view and they are not dedicated (21C/P).

# UNDERSTANDING THE CONCEPT OF INTERDISCIPLINARITY

The respondents understand the importance of interdisciplinarity, considering that, with its implementation, the teacher and the student learn, expand their views, add knowledge, learn how to work in groups, and make the student learn what a project is, avoid content repetitions, allowing the correlation of theory with practice.

Interdisciplinarity helps so much to build your knowledge... doing together I learn and the student too (5P).

You see, I think interdisciplinarity is super important, because one subject in a discipline is related to the other (28C).

[...] To add knowledge and learn to work as a team and that he/she will leave the course, will work with other professionals (10P).

[...] makes the student really understand what a project is, how to carry out that project together with other components and along with other courses (10P).

I think that, through interdisciplinarity, the student is able to cover, to have greater knowledge that the classes come out of the traditional, here we try to do it together with the practical part and bring other professionals (16C/P).

However, they consider that there is some confusion about the concept when it comes to interdisciplinarity, transdisciplinarity, and multidisciplinarity. They believe that interdisciplinarity shall exist concurrently with and not as a substitute of the traditional method.

There are still many teachers who have doubts and get very confused about inter- and transdisciplinarity (3C/P).

I also think that you can't take the traditional way out... So it [Interdisciplinarity] has to be worked with the fragmented disciplines (4P).

# **DISCUSSION**

In view of the data contained in the interviews with teachers and coordinators of the nursing technical course, the indications of advances related to the implementation of interdisciplinarity were taken as a starting point and, as counterpoints, the aspects that hinder its implementation, which are related to the institutional orientation, in the path of interdisciplinarity taken by teachers, and to the comprehension of the concept.

The points and counterpoints, however, are not seen as dichotomous, but as aspects that affirm and deny each other reciprocally, and that constitute a driving force for the necessary changes, since for two characteristics to be opposed, they need to have something in common and remain actively interconnected<sup>(11)</sup>. In this perspective, considering the complexity of the object of study, which goes further within advances and challenges inherent to the processes of change, reflections and in-depth thoughts are constructed to broaden the understanding of the interdisciplinary movement in the nursing technical course.

With regard to the institutional orientation to promote interdisciplinarity, an important aspect to be considered in the successful implementation of change processes, since it is up to the organization to provide the necessary structure for its development, it is observed that this occurs to the extent that they offer training and guide the way, through official documents and monitoring of pedagogical actions. However, these actions are considered insufficient, since they also rely on structural aspects that hinder the work in this logic, as they essentially lack the necessary flexibility to insert articulated contents from real problems<sup>(7)</sup>.

It should be noted that the course syllabus needs to be built in a flexible and oriented way so that the student can face the challenges of learning, and this can become concrete when there is room for interdisciplinary discussion that provides a teaching directed to this practice, starting from real problems. Thus, when the student is exposed to interdisciplinary activities, the perception of the existence of a common goal to be achieved within disciplines becomes possible. Thus, a new attitude towards teaching becomes evident, one in which the curriculum is thought in its entirety

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to be applied at all times of the school year, always guided by planned institutional actions<sup>(7,12)</sup>.

Thus, it is recognized that hiring teachers with parttime or temporary workload is a hindering factor in this process; however, this is a frequent condition in the schools offering nursing technical courses. Similar difficulties for the implementation of interdisciplinarity are encountered by Brazilian universities. Even with significant efforts for its promotion, organization and functioning are strongly established in the disciplines rationale, resulting in the need to create more adequate conditions for the implementation of this practice<sup>(13)</sup>. In this perspective, it is important to recall that interdisciplinarity is built through multiple possibilities of meetings with the actors involved in the teaching and learning process, which implies having a teacher with an instructional connection that allows training, dedication and effective involvement in the educational actions that are developed.

Based on the consideration that the watchword in interdisciplinary practice is dialogue, the way it happens defines this practice as productive or problematic<sup>(13)</sup>, and it is possible to observe that these two aspects are present in the respondents' routine along the way through interdisciplinarity. On the one hand, they seek to articulate contents, disciplines and modules, as well as theory with practice, and, on the other hand, there is resistance to changes and lack of structure for its implementation. Thus, it is agreed that interdisciplinarity is characterized by the exchange of information, integration between disciplines, and relies on the interpersonal relationship with the team<sup>(5,14)</sup>.

With regard to the difficulties, these include communication disarticulation among teachers for the insertion of interdisciplinarity in the curriculum, which directs us to a discussion related to the syllabus. It is necessary to go beyond the curriculum organized by disciplines and advance in relation to the juxtaposition of areas, which do not have the proper articulation of the contents, that is, there is interaction only for the resolution of specific, sporadic cases, defined by each discipline<sup>(15)</sup>.

As for the curricular organization, although in the course in question the curriculum is organized by modules, it is observed that the contents sometimes are developed in isolation, with few possibilities for meetings and joint development.

In the Educational Guidelines Complementary to the National Curriculum Parameters, it is described that interdisciplinarity shall be constantly worked among teachers; however, some divergences within them can hinder this practice, which occurs frequently, since the pedagogical proposal of articulation of knowledge, through interdisciplinarity, is not clear to teachers in their school practice, as it was observed among the respondents in the present study<sup>(16)</sup>.

Another aspect to be considered in the implementation of interdisciplinarity refers to the conceptual understanding on the part of the respondents. In this perspective, when considering that teachers and coordinators working in nursing technical education were not trained based on this logic, it is expected that educational institutions promote training in a cohesive and comprehensive manner, in addition to providing a structure for this new logic to occur satisfactorily, through the articulation of disciplines and multiple knowledge, required when facing complex situations<sup>(17)</sup>.

The attempt to implement interdisciplinary practice ends up happening through proposals without an interdisciplinary relationship, as they are limited to the execution of joint activities, demonstrating the need to train teachers for the effectiveness of interdisciplinarity<sup>(18)</sup>. This shows the need for interaction between teachers and the institution to structure their pedagogical practice, group work, and the reframing of the pedagogical policy proposal, so that interdisciplinarity is implemented in the action of everyone involved in the process, which demands the teacher's engagement, when an integrated curriculum is the goal.

Interdisciplinarity contributes to professional training providing assistance to human beings individually and collectively. The challenges in nursing teaching lead to the consideration of changes in the learning process, of the teaching instruments and strategies in problem solving, so that they are based on the interdisciplinary context. Thus, the challenge is to understand the complexity of human care, in alignment with the interdisciplinary proposal in the exercise of the profession<sup>(4)</sup>.

It is also relevant to consider that, for the integration of disciplines to occur, it is necessary to have subjects willing to build an integrative perspective, to incorporate innovation in daily life and also to be open to changes in pedagogical practices that are rooted in the teachers' imaginary. In fact, this was shown to be a difficult action to take, as observed in this study, because there is some resistance from teachers to these changes<sup>(19)</sup>. Therefore, it should be emphasized that overcoming the fragmentation of knowledge requires a transformation in the school, in the curriculum, in the teacher's posture, and clarity about the meaning of the concept of interdisciplinarity, such as the mastery of curricular and pedagogical knowledge<sup>(20)</sup>. Thus, paradigmatic changes are necessary, which certainly require time, teacher training and openness to incorporate new views on the teaching and learning process, as well as institutional investment in this area.

Therefore, a sustained channel for dialogue and for the valorization of people in their entirety, through the recognition of their potentials and respect for their dignity, is required. Through dialogue, there is a rescue of generosity, the opening of space for the other, the rupture of each person's internal barriers, which will culminate in the promotion of changes<sup>(21)</sup>.

In this process, the importance of the protagonism of those involved and the power of autonomy of each member in the group shall be taken into account, and this will lead to shared management and distributed leaderships, with an emphasis on human relations, based on the principle of diversity and on the way of each member being and staying in the world, with a view to promoting the feeling of belonging<sup>(22)</sup>.

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The limitation of the present study is the fact that it was carried out in a single institution. Although it has units distributed throughout the state of São Paulo, it has specific characteristics of structure and organization. However, it is believed that the results contribute to reflections on a theme relevant to the context of health education and, more specifically, to the nursing technicians training. Thus, advances can be made in the training of professionals in line with the needs of the world of labor.

# CONCLUSION

When analyzing the points and counterpoints of interdisciplinarity in the nursing technical course, from the perspective of teachers and coordinators, aspects related to institutional orientation, implementation by teachers, and the concept of interdisciplinarity are found.

The institution provides guidelines for interdisciplinary work and sets goals for projects linked to other courses and counts on a pedagogical coordination that supports teachers in the construction of this logic. However, they point to the insufficient training of the teaching staff for this practice to become effective.

In teaching practice, there is an effort to connect with other courses offered at schools, in terms of contents of the disciplines, the components of a module, and the theory and practice. As a counterpoint, teachers find it difficult to plan and share activities with other teachers, due to the form of hiring with a part-time workload, in addition to resistance to changes, lack of affinity and consensus among teachers.

The respondents see interdisciplinarity as important, considering that with it the teacher and the student learn, allowing an expanded view, which adds knowledge, promotes group work, and avoids content repetition. There is confusion regarding the concept, especially when it comes to what is meant by interdisciplinarity, transdisciplinarity, and multidisciplinarity.

In view of the points and counterpoints found in the teachers' speeches, it is observed that there is a need to move forward in this construction, through its implementation in the context of the nursing technician training, and constant reflections on the changes made are required, with a view to its continuous reconstruction.

Therefore, studies are required that also seek to check the perception of nursing technicians about their training, aiming at complementing the results presented here, as well as others studies in different realities, so that it is possible to face the challenges imposed on this training.

#### **RESUMO**

Objetivo: Caracterizar os pontos e contrapontos no desenvolvimento da interdisciplinaridade na formação técnica em Enfermagem. Método: Estudo exploratório-descritivo com abordagem qualitativa realizada por meio de entrevistas com 30 docentes e coordenadores de cursos técnicos em Enfermagem de 12 diferentes regiões do estado de São Paulo. A análise dos dados foi de conteúdo temática. Resultados: No que se refere à temática de direcionamento institucional, constatou-se que, embora existam iniciativas para promover a interdisciplinaridade, uma vez que há capacitação docente e definição de metas para articulação com outros cursos e para o trabalho em conjunto entre os docentes das disciplinas, estas ainda são vagas e pouco efetivas. Na temática, implementação da interdisciplinaridade pelos docentes, verifica-se que eles buscam diferentes formas de integração, mas esbarram na estrutura curricular, na forma de contratação docente e na resistência às mudanças. Sobre a compreensão conceitual, há o reconhecimento de aspectos relevantes do seu significado; porém, admitem a existência de limites. Conclusão: A instituição define uma trajetória visando à interdisciplinaridade, os docentes buscam percorrer o caminho de sua implementação, porém encontram entraves estruturais, pouca compreensão conceitual e resistência a mudanças. Depreende-se que são necessários esforços para avançar na implementação curricular na lógica interdisciplinar.

# **DESCRITORES**

Práticas Interdisciplinares; Educação Técnica em Enfermagem; Capacitação de Recursos Humanos em Saúde.

#### **RESUMEN**

Objetivo: Caracterizar los puntos y contrapuntos en el desarrollo de la interdisciplinaridad en la formación técnica en Enfermería. Método: Estudio exploratorio-descriptivo con abordaje cualitativa realizada por medio de entrevistas con 30 docentes y coordinadores de cursos técnicos en Enfermería de 12 diferentes regiones de la provincia de São Paulo. El análisis de los datos fue de contenido temático. Resultados: En lo que concierne al tema de direccionamiento institucional, se verificó que, aunque existan iniciativas para promover la interdisciplinariedad, una vez que hay capacitación a los docentes y definición de metas para articulación con otros cursos y para el trabajo en equipo entre los docentes de las disciplinas, todavía son imprecisas y poco efectivas. En el tema implementación de la interdisciplinariedad por los docentes se verificó que buscan diferentes formas de integración, pero encuentran obstáculos en la estructura curricular, en la manera de contratar a los docentes y en la resistencia a cambios. Acerca de la comprensión conceptual, existe el reconocimiento de aspectos relevantes de su significado, pero se admite la existencia de límites. Conclusión: La institución define una trayectoria que tiene como objetivo la interdisciplinariedad, los docentes buscan su implementación, pero encuentran barreras estructurales, poca comprensión conceptual y resistencia a cambios. Se concluye que esfuerzos son necesarios para avanzar en la implementación curricular en la lógica interdisciplinar.

#### DESCRIPTORES

Prácticas Interdisciplinarias; Graduación en Auxiliar de Enfermería; Capacitación de Recursos Humanos en Salud.

### **REFERENCES**

- 1. Machado MH, Ximenes Neto FRG. The Management of work and education in Brazil's Unified Health System: thirty years of progress and challenges. Cienc Saúde Colet. 2018;23(6):1971-80. https://doi.org/10.1590/1413-81232018236.06682018
- 2. Vieira AMDP, Souza Junior A. A educação profissional no Brasil. Interacções. 1996;12(40):152-69. https://doi.org/10.25755/int.10691

- Kurebayashi LF, Mecone MC, Matos FG, Mendoza IY, Monteiro BA, Pinho PG, et al. [Amendment proposals concerning the nursing professional practice law, n. 7.498/86]. REME Rev Min Enferm [Internet]. 2008 [cited 2020 Jun 2];12(4):573-9. Available from: http:// www.reme.org.br/artigo/detalhes/303
- 4. Corrêa AK, Sordi MR. The secondary technical-professional education in the sus and the teacher training policy. Texto Contexto Enferm. 2018;27(1):e2100016. https://doi.org/10.1590/0104-07072018002100016
- Perez OC. O que é interdisciplinaridade? Definições mais comuns em artigos científicos brasileiros. Interseções. 2018;20(2):454-72. https://doi.org/10.12957/irei.2018.39041..
- 6. Silva MO. A interdisciplinaridade como uma possibilidade no processo de ensino: aprendizagem da educação profissional de nível tecnológico para o mundo do trabalho. Rev Bras Educ Prof Tecnol. 2017;2(13):13-30. https://doi.org/10.15628/rbept.2017.4766
- 7. Japiassu H. Interdisciplinaridade e patologia do saber. Rio de Janeiro: Imago; 1976.
- 8. Silva DM, Araújo FO, Ferreira RG. [Interdisciplinarity: reflections on pedagogical practices in integrated middle school]. Rev Bras Educ Prof Tecnol. Portuguese. 2020;1(1):1-20. https://doi.org/10.15628/rbept.2020.8814
- 9. São Paulo (Estado). Centro Paula Souza. Localização das Etecs [Internet]. São Paulo: Centro Paula Souza; [2020] [cited 2020 Jun 2]. Available from: http://www.portal.cps.sp.gov.br/etec/escolas/
- 10. Braun V, Clarke V. Using thematic analysis in psychology. Qual Res Psychol. 2008;3(2):77-101. https://doi.org/10.1191/1478088706qp063oa
- 11. Marquit E. Contradições na dialética e na lógica formal. Princípios Rev Teór Polít Inf [Internet]. 1996 [cited 2020 Jun 2];43:58-68. Available from: http://www.grabois.org.br/cdm/colecao-principios/151718-44623/1996-11-01/contradicoes-na-dialetica-e-na-logica-formal
- 12. Bilar JG, Bortoluzzi LZ, Coutinho RX. [Interdisciplinarity and professional practice: challenges in integrated secondary education]. Rev Eletr Cient Ensino Interdisc. 2018;4(11):397-409. Portuguese. https://doi.org/10.2192/recei.v4i11.2732
- 13. Pereira SP, Garcia CA, Kanaane R, Fernandez SA, Lima R. Empreendedorismo utilizando a ABProj (Aprendizagem Baseada em Projetos) na educação profissional. Anais do XII Workshop de Pós-Graduação e Pesquisa do Centro Paula Souza; 3-5 out 2017; São Paulo, SP. São Paulo: Centro Paula Souza; 2017. p. 623-33.
- 14. Fazenda IC. Integração e interdisciplinaridade no ensino brasileiro: efetividade ou ideologia. 6a ed. São Paulo: Loyola; 2011.
- 15. Fiorin PB, Salamoni B, Motta GA, Balsissera FG, Zaneti IC, Magalhães CR. The interdisciplinary education in healthcare: prospects for the multiprofissional development. Rev Didática Sist [Internet]. 2014 [cited 2020 Jun 2];16(2):30-43. Available from: https://periodicos.furg.br/redsis/article/view/4551
- 16. Berti VP, Fernandez C. Interdisciplinaridade sob olhares distintos. In: Anais do VI Encontro Nacional de Pesquisa em Ensino de Ciências; 2007; Florianópolis, SC. Belo Horizonte: Abrapec; 2007. p. 736-47.
- 17. Freire LA, Almeida RS. [Interdisciplinarity as knowledge integration: overcoming the fragmentation of knowledge]. Percurso Acad. 2017;7(14):436-52. Portuguese. https://doi.org/10.5752/P.2236-0603.2017v7n14p436-452
- 18. Satolo VP, Bernardo CH, Lourenzani AE, Morales AG. A historical and conceptual overview of interdisciplinary research: an analysis of interdisciplinary graduate courses. Educ Rev. 2019;35:e185294. https://doi.org/10.1590/0102-4698185294
- 19. Lima VV, Ribeiro EC, Padilha RQ, Mourthé Júnior CA. Challenges in the education of health professionals: an interdisciplinary and interprofessional approach. Interface (Botucatu). 2018;22(2):1549-62. https://doi.org/10.1590/1807-57622017.0722
- 20. Rios DR, Sousa DA, Caputo MC. [Interprofessional and interdisciplinary dialogues in university extension: a pathway towards incorporating a broader concept of health into academic education]. Interface (Botucatu). 2019;23:e180080. Portuguese. https://doi.org/10.1590/interface.180080
- 21. Mendonça KM, Moraes DC. Métodos consensuais de solução de conflitos: a produção dialógica para uma cultura de paz. Ver EPOS [Internet]. 2016 [cited 2020 Nov 18];7(2):73-84. Available from: http://pepsic.bvsalud.org/scielo.php?script=sci\_arttext&pid=S2178-700X2 016000200006&lng=pt&nrm=iso&tlng=pt
- 22. Cardelli J, Duhalde M, Maffei L. Educação para o século XXI. São Paulo: Instituto Polis; 2003.



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