RESUMO
Objetivo: analisar o processo de formação pedagógica para docentes realizado nas escolas técnicas do Sistema Único de Saúde. Método: revisão integrativa, com busca em publicações entre 2012 a 2016, nas bases de dados LILACS, MEDLINE, BDENF e Biblioteca Virtual SciELO. Seis artigos atenderam aos critérios de inclusão e os Descritores para orientar a pesquisa foram: Educação Continuada; Educação em Enfermagem; Capacitação de Recursos Humanos em Saúde e Sistema Único de Saúde. Resultados: foram identificadas as categorias “Desafios da Formação Pedagógica” e “Autonomia das escolas como estratégia de mudança”. Conclusão: o estudo contribuiu para o conhecimento acerca do processo de formação pedagógica realizado nas escolas técnicas do Sistema Único de Saúde. São relevantes para o desenvolvimento e o fortalecimento das escolas a mudança do modelo de gestão, para garantir sua autonomia, a execução de recursos e a continuidade da formação pedagógica e dos cursos. Descritores: Educação Continuada; Recursos Humanos em Saúde; Sistema Único de Saúde; Educação em Enfermagem.

RESULTADOS
Desafios da Formação Pedagógica: a continuidade de la formación pedagógica y la ejecución de recursos y la continuidad de la formación pedagógica y de los cursos.

Descritores: Educación Continuada; Enfermería; Recursos Humanos en Salud y Sistema único de Salud.

RESUMEN
Objetivo: analizar el proceso de formación pedagógica para docentes realizado en las escuelas técnicas del Sistema Único de Salud. Método: revisión integrativa, con búsqueda en publicaciones entre 2012 a 2016, en las bases de datos LILACS, MEDLINE, BDENF y Biblioteca Virtual SciELO. Seis artículos atendieron a los criterios de inclusión y los Descriptores para orientar la investigación fueron: Educación Continuada; Educación en Enfermería; Capacitación de Recursos Humanos en Salud y Sistema Único de Salud. Resultados: se identificaron las siguientes categorías: "Desafíos de la Formación Pedagógica" y "Autonomía de las escuelas como estrategia de cambio". Conclusión: el estudio contribuyó para el conocimiento acerca del proceso de formación pedagógica realizado en las escuelas técnicas del Sistema Único de Salud. Son relevantes para el desarrollo y el fortalecimiento de las escuelas del cambio del modelo de gestión, para garantizar su autonomía, la ejecución de recursos y la continuidad de la formación pedagógica y de los cursos. Descriptores: Capacitación de Recursos Humanos en Salud; Educación Continuada; Recursos Humanos en Salud.
INTRODUCTION

The Nursing profession has been changing since its institution influenced by social, political and economic changes that seek, among other principles, humanization and integral health care.

As a result of the struggles of the Sanitary Reform Movement, the promulgation of the current Federal Constitution, and the implementation of the Unified Health System, the techno-health model of health incorporated the expansion of the concept of health, requiring schools to train health professionals to reformulate their health systems pedagogical projects.

The Unified Health System has assumed a role of reorientation of strategies and models to care for, treat and achieve individual and collective health, seeking to change the formation and development in health through various programs. Among them, there is the creation of technical schools in health, which have been called the Technical School of Health of the Unified Health System (ET SUS), aimed at the training and qualification of workers in the health services.

The training of a health professional is based on the acquisition of skills and technical skills to perform integral care respecting ethical and moral aspects. Specifically for the nurse, the technical-scientific, ethical-political and socio-educational competencies are outlined as essential.1

The intention is to develop the capacity of this subject to be an active agent in the transformation of society, specifically in the context where it is inserted, acting as a facilitator and promoter of dialogue with the workforce in management, in comprehensive health and education practices.

In Brazil, pedagogical training or pedagogical complementation programs are regulated by the National Education Guidelines and Bases Law (LDB) No. 9.394/96.2

In particular, the Resolution of the National Education Council No. 02/1997 makes it possible to open and flex the current structures of undergraduate courses, seeking to meet the present needs, granting a certificate and the right to exercise the teaching profession at the intermediate level.3

In order for this training to take place, according to the National Curriculum Guidelines, training centers should stimulate the formation of critical, reflective, affective health professionals capable of analyzing, making decisions, contributing to the evolution and transformation of the work process. This is a non-neutral conception of professional and requires constant analysis of its implications in the exercise of its practice.4

Continuing education actions have been developed in services with an impact on the practice of health professionals, but the curricula continue to be fragmented. Regarding the formative aspects, the pedagogical conceptions seek to develop capacities to establish relationships that promote the quality of life and interfere in the nature of the services provided in the health system.5

Pedagogical training for SUS professionals is an important tool for understanding work processes, with a view to a collective construction of knowledge and strategies for a comprehensive health care with quality, promoting the integration of teaching-service and community.

The Technical Schools of the Unified Health System formed, from 2000 to 2005, thirteen thousand, six hundred and one teachers, through the Professional Project of Nursing Workers, specialists in Professional Education in the Health area.6

The professional qualification courses that were then in the Lato sensu postgraduate format, called Specialization in Pedagogical Formation in Professional Education in the Health Area, offered in the modality of Distance Education and coordinated by the National School of Public Health of Oswaldo Cruz Foundation, had face-to-face moments in the Teaching Support Centers, implanted in 49 higher education institutions, with a total workload of 660 hours.

Starting in 2007, the schools began to carry out the Pedagogical Training in person at their headquarters, due to the need for immediate hiring of health professionals with pedagogical training, being called the Pedagogical Workshop, totaling 40 hours of workload. Attempts were made to maintain the initial characteristics of the training project, which is the integration of teaching and professional practice, facilitating the interconnection of the knowledge learned in theory with the practice developed in the work fields.

This new mode of training was motivated by the high turnover of teachers in schools, precarious employment relationships, since most health professionals were hired or invited to participate in the project. Some difficulties in training are due to this new political context, such as many breaks or delays, which end up influencing the classroom training process, sometimes not completing the schedules. After the training, the meetings, the sharing of experiences, the continuity of the training and the updating of
content were interrupted. Currently, some schools carry out pedagogical training in 20 hours or only in an eight-hour meeting.

The original proposal of the Etsus was that the pedagogical capacities for the teachers should happen in a continuous and regular way, since the majority of the graduated professionals do not have a degree or teaching qualification to act in the technical formation and, also, by the permanent need of updating the technologies used in education. Currently, there are 40 technical schools, human resources training centers and public health schools in the country, which make up the SUS Technical Schools Network (RET-SUS), which offer technical qualification (training of auxiliaries and technicians), training initial and continuing qualifications and specializations. There are 33 under state management; six, municipal and one, federal. The actions of the network are coordinated by the General Coordination of Technical Actions in Health Education of the Ministry of Health's Department of Labor Management and Education (DEGES/SGTES/MS).

Organizational and structural problems have made it difficult to carry out the training that, in turn, generates a fragmented professional training affecting the quality of Nursing care, work relations and degree of satisfaction of users.

Working with pedagogical concepts that reorient the training methodologies aimed at health professionals, in order to develop a care practice with integrity, constitutes a challenge and possibilities for producing changes in practices, management and social participation.

The approach to service practice allows the process of reflection and learning of various experiences in the context of the service attributing meaning to the information received to interpret them, relating them to their life situations.\(^7\)

The theoretical framework that guides the thought of professional formation, which bases this study, shows that this is a process in permanent becoming, not only as an update that occurs from the accumulation of information, but that occurs through contextualized training with reality and that builds knowledge from critical reflection.\(^8\)

When considering the thematic relevance of Pedagogical Training, the object of this study is the pedagogical training of teachers performed in the Technical Schools of the Unified Health System.

It is understood that active and meaningful learning is able to involve people, bring about changes and autonomy of the subjects, which is consistent with the thinking brought about ethical training.

### OBJECTIVE

- To analyze the process of pedagogical training for teachers carried out in the technical schools of the Unified Health System.

### METHOD

It is an integrative review in which six stages were developed: 1. Identification of the theme and selection of the research question; 2. Establishment of inclusion and exclusion criteria; 3. Identification of pre-selected and selected studies; 4. Categorization of selected studies; 5. Analysis and interpretation of results; 6. Presentation of knowledge review/synthesis.\(^9\)

The integrative review is a methodological approach that offers health professionals quick access to the results of research that underlies the conduct or decision making, providing a knowledge from a critical reflection.\(^10\-\)\(^12\)

The guiding question of this study was: How is the pedagogical training process carried out for teachers in the Technical Schools of the Unified Health System?

The inclusion criteria of the studies in this integrative review were articles in Portuguese, indexed and collected in the LILACS, MEDLINE, BDENF and SciELO virtual library databases, in the years between 2012 and 2016, which addressed the pedagogical training process for teachers in the Schools Techniques of the Unified Health System. A sample of 45 articles was obtained and, after extensive reading, six articles answered the objective and inclusion criteria of the study. The search for articles occurred in the period from February to April 2017 with the descriptors registered in the Descriptors in Health Sciences (DeCS): Nursing; Continuing Education; Nursing Education; Training of Human Resources in Health; Continuing Education and Single Health System.

After this step, a thorough reading of all the articles was carried out in the sequence, delimiting variables for analysis and discussion of the data: database; title/author; newspaper/year; type of study and thematic considerations.

The research data were respected to the extent that the authors of the works were duly referenced throughout the work, detailed, seeking explanations in each study and confronting them with the others.
The results were collected and discussions developed after a thorough reading of all the articles compiled and described in figure 1.
<table>
<thead>
<tr>
<th>DATA BASE</th>
<th>TITLES/AUTHORS</th>
<th>JOURNALS/YEAR</th>
<th>TYPE OF STUDY</th>
<th>THEMATIC RESULTS</th>
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<tbody>
<tr>
<td>Lilacs</td>
<td>The technical schools of SUS: what political-pedagogical projects sustain them?</td>
<td>Phys: Collective health research magazine /2012</td>
<td>Qualitative research</td>
<td>It aimed to explore the political-pedagogical visions expressed by the managers of the five Technical Schools of SUS, in the five regions of the country. They identified how these institutions organize, structure and sustain themselves. The results showed the lack of specific training and the human resource deficit. They underscored the pedagogical quality and contribution to strengthening SUS.</td>
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<tr>
<td>Lilacs</td>
<td>Technical Schools of SUS (Etsus) in Brazil: regulation of integration teaching service and Administrative sustainability.</td>
<td>Collective health research /2012</td>
<td>Qualitative research</td>
<td>It analyzed the administrative sustainability of the Technical Schools the SUS (ETSUS), the integration service teaching, work management. The study points out problems and fragility regarding management, regulation of teaching activity and training for pedagogical training.</td>
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<tr>
<td>Bedenf</td>
<td>Projections and expectations of students in the course of teacher education in professional technical education in health.</td>
<td>Journ sc Nurs USP /2013</td>
<td>Qualitative research</td>
<td>He analyzed the projections and expectations of the participants in a teacher training course for Etsus professionals. The results revealed the transformation of the process and concern of the teachers with the increase of the work overload. They point to permanent updating needs and evaluative studies.</td>
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<tr>
<td>Lilacs</td>
<td>SUS technical school of health Blumenau: pedagogical contributions to nurses.</td>
<td>Space for Health- Public Health Magazine of Paraná /2014</td>
<td>Descriptive research with qualitative approach</td>
<td>It evaluated the results achieved by teachers in the training at Lato Sensu postgraduate level bringing the issues and tensions observed. The results revealed difficulties faced by teachers in overcoming unilateral visions about the reality they play, precarious attachment and overload of work in school, low participation in academic tasks, and updating needs. It brings reflections on the proposals of the teacher formation.</td>
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<tr>
<td>Lilacs</td>
<td>The teaching-learning process in the training of SUS: reflections from the Etsus experience.</td>
<td>Journal Work, Education, Health /2016</td>
<td>Qualitative research</td>
<td>He reported on experiences in ETSUS Blumenau's pedagogical training. The study concludes that the pedagogical training makes possible the learning about the problematizing method of the teachers of the permanent staff of the school. They revealed that the turnover of professionals in the health service limits and influences the applicability of the methodology in care. He evaluated the development of teaching and learning using the problematic methodology from the perspective of teachers and students of Etsus de Tocantins. Three themes were identified: problematization as a methodological option; application of problematizing methodology; challenges of the process; and factors that hinder or facilitate the teaching-learning process. The studies revealed that the teachers do not use the problem methodology because of the time for class planning; the group became more involved and involved in the process. They score advances in school, report the need for updating for teachers, lack of infrastructure, insufficient teaching resources and lack of school autonomy.</td>
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Of the six original articles selected for the study, five (83.3%), published in LILACS, and one (16.7%) article, in BDENFE, are characterized as qualitative research. As for the year of publication: two (33.3%) were published in 2012; one (16.7%) article in 2013; two (33.3%) articles were published in 2014 and one (16.7%) articles in 2016. In the search, no publications appeared for the year 2015. The data show the need for publications on teacher education and training held in the SUS Technical Schools.

Regarding the origin of the studies, all the research was carried out in Brazil. In four (66.7%) articles, the authors were managers of Etsus; in two (33.3%) articles, the authors serve as coordinators of course at Etsus. The data show the lack of publications of the teachers who participated in the pedagogical training offered by the schools.

It is believed that the experience report, the experience, the look, the perception and the critical reflection of the professionals who participated in the pedagogical training as students would contribute to the dissemination, evaluation, improvement and discussion of this process.

To legitimize educational actions, it is important that individuals are protagonists of this process, actively participating in the production of health and knowledge, merging what is known as popular knowledge and scientific knowledge.  

During the searches in the databases, we found papers of conclusion of course, dissertation of master and books published like product of the formation, but these were the criteria of exclusion of this study. Among the selected sample, five (83.3%) articles highlight the need for updating and specific training for teachers, while one (16.7%) article does not report this problem.

The six (100%) articles show the human resource deficit and staff turnover as a problem for the effectiveness of training. The lack of regulation of the teaching activity in service makes difficult the formation of a permanent framework for pedagogical training. The fragility and precariousness of employment bonds are a reality in most schools.

The permanent staff, mostly from the health department, the municipality or the Ministry of Health, are assigned to work as health professionals in the school, but work in teaching without a career plan.

The strength of work in most schools is through projects. When there are financial resources for the execution, a selective process is carried out for the temporary hiring of health professionals to perform the teaching function.

Regarding the lack of school infrastructure, five (83.3%) articles highlight this problem and only one (16.7%) does not report it. The data show that Etsus have different realities due to their own legal identity and administration.

The results obtained in the articles were grouped, according to the thematic axis, emerging two categories for the discussion: Challenges of Pedagogical Formation; Autonomy of schools as a strategy for change.

**DISCUSSION**

♦ Category 1- Challenges of Pedagogical Training

In the selected articles for this category, one can highlight the use of the active methodologies in the process of formation of the schools.

The methodology of the problematization aims at the construction of the individual's knowledge stimulating the reflexive act, the capacity for observation and the critical analysis. The use of this methodology makes possible the daily performance, since it uses a real scenario and does not require many physical changes in the organization.

For the competence in the field of education and health, it is necessary to maintain a critical perspective for the liberating perspective in which the training of health workers can be reconfigured to approximate professional training built on more solidary logic of existence in relationships between people.

This pedagogy of education is liberating because it values dialogue and reality and because there is social transformation through a critical and conscientious practice. Problematizing is not restricted to merely presenting questions, but to reflecting.

The professionals talk about the quality of the course, feel qualified for teaching after the course, see the transformation in the health service where they work and the methodology enables learning.

The six (100%) articles point to the human resources deficit and staff turnover as a problem for the effectiveness of training. The lack of regulation of the teaching activity in service makes difficult the formation of a permanent framework for pedagogical training. The precariousness of employment links is a reality in most schools.

The permanent staff, mostly from the health department, the municipality or the Ministry of Health, are assigned to work as health professionals in the school, but work in teaching without a career plan.
The strength of work in most schools is through projects. When there are financial resources for the execution, a selective process is carried out for the temporary hiring of health professionals to perform the teaching function.

All articles report needs and difficulties of updating teachers and of teaching-service integration due to the reduced number of permanent staff, the high turnover of teachers due to the fragile employment relationship and the lack of financial resources. It is important to emphasize that the articulation of the schools with the health service depends very much on the health secretariats.

Being a teacher is not a simple mission: it requires preparation, awareness and ethical commitment to society, with professional training permeated by the critical reflection of educational practice and the development of intellectual autonomy.²¹

There are 40 technical schools that have specificities. Most are linked to municipal or state health management, but some are linked to education (state or municipal training center, faculty) in co-management with the health sector and a school is linked to federal management (has autonomy and financial resources own).

Bureaucratic obstacles and local political issues have a negative influence on this process, since most schools do not have administrative, financial and decision-making autonomy and present difficulties for the articulation and management of training.

Three (50%) articles indicate that teachers do not use the problem-solving methodology in the classroom. Most of the teachers are tied to the assistance and have specific training in the health areas, but do not have training for teaching. It is believed that this contributes to the non-adherence, in the classroom, to this methodology and, in addition to the aforementioned problems, there is fragmentation of the teacher training process, with reduced working hours, increased work, lack of conditions lack of collective planning, supervision, and teacher support.

Opening services as places of production of subjectivity and taking relations as production, place of problematization, openness to production and not as conformation allow us to practice vigorously the Permanent Education in Health.

Teacher training is a process of construction throughout a professional career in which the teacher progressively learns to master his/her work environment. For this, the formation and the updating must be constant for the fulfillment of the educational requirements of the contemporaneity.²⁵

Category 2 - Autonomy of schools as a strategy for change

Studies have shown that schools need to change the management model by ensuring autonomy for the coordination of their workforce and the execution of financial resources and courses. Most schools use the same managerial models since they were created and there is a need for participatory and qualified management.

The lack of autonomy of some schools for the management and execution of resources does not contribute to the changes that are necessary and increases the precariousness of the training and the qualification of the workers. There is a need for the regulation of legal instruments for the management and execution of resources. Physical structures and facilities also have peculiarities, depending on the school.

Regarding the lack of school infrastructure, five (83.3%) articles highlight this problem and only one (16.7%) does not report it. The data show that the Etsus present different realities due to their own legal identity and the administration.

Conclusion

The results of the review allowed us to identify that staff turnover, lack of physical structure and technological equipment, lack of autonomy and the difficulty of managers to execute financial resources are challenges to effectiveness and pedagogical training.

Despite the difficulties, the pedagogical training offered by the schools can be considered as a strategy for the consolidation of the Unified Health System, by provoking changes in the work process, allowing the involvement of teachers with the methodology to promote integrated and integrated care practices, of critical reflections and shared knowledge.

The study contributed to the knowledge and critical reflection about the process of pedagogical training carried out in the technical schools of the Unified Health System. It is relevant for the development and strengthening of schools to change the management model to guarantee its autonomy, the execution of continuity of pedagogical training and courses.

It is necessary to carry out research to explore more the thematic of the process of pedagogical formation of the Technical Schools of the SUS by teachers who have experienced this formation in the schools.
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