

# TEACHING-LEARNING PROCESS IN NURSING TECHNICAL TRAINING: INTEGRATIVE REVIEW

---

*Leonardo Saboia Paz*

<https://orcid.org/0000-0002-1895-6663>

*José Maria Ximenes Guimarães*

<https://orcid.org/0000-0002-5682-6106>

*Ellen Pereira Mendes Saboia*

<https://orcid.org/0000-0002-0638-3335>

*Etelvina Sampaio Melo*

<https://orcid.org/0000-0001-5099-6553>

*Elizabeth Chagas Gomes*

<https://orcid.org/0000-0003-2879-7536?lang=pt>

*João Breno Cavalcante Costa*

<https://orcid.org/0000-0002-4512-1944>

*Cleiton Machado Pinho*

<https://orcid.org/0000-0002-8478-4804>

All content in this magazine is licensed under a Creative Commons Attribution License. Attribution-Non-Commercial-Non-Derivatives 4.0 International (CC BY-NC-ND 4.0).



**Abstract: Goal:** to analyze the scientific productions on the teaching-learning process of students of the technical nursing course. **Method:** integrative review, the search was carried out in the MEDLINE, BDEF, LILACS and SCIELO databases, with the association of the descriptors learning and nursing education; nursing learning and teaching; learning and vocational education and learning and the role of the technician. **Results:** 5 studies were selected and analyzed, we observed that there is a low scientific production about teaching-learning in technical training in nursing. Overall, the studies show the use of digital technologies in teaching, lack of commitment on the part of teachers to learning and the need to reorient the teaching-learning processes. **Conclusion:** the proposed interventions include the use of teaching-learning methodologies that can be used by professors in technical training in Nursing. It is highlighted in some studies that the evaluation of the process must be continuous and contributes to good results. **Keywords:** Learning. Teaching. Technical education in Nursing.

## INTRODUCTION

In Brazil, high school vocational education has become an opportunity for the insertion of countless individuals in the job market. In this context, an expansion of the offer of professional education has been observed, especially in the area of Nursing.

It is known that in different health services, whether public or private, most of the workforce is represented by staff from nursing teams, and in these, the representation of Nursing technicians varies from 70% to 90% of professionals (CAMARGO et al., 2016). In this sense, the understanding is built that in this area there can be a great offer of jobs, which can corroborate the expansion of the offer of professional courses.

On the other hand, it is argued that technical training must meet both the needs of students and the regulatory bodies of the Brazilian educational system. To this end, educational institutions must structure their courses in accordance with the norms established in the Law of Directives and Bases (LDB) for Professional Education and the National Curriculum Guidelines (DCN) for Vocational Education at a Technical Level, according to which training of professionals must promote the development of skills to work in the area in question (GÓES et al, 2015).

In Nursing, however, training, in addition to meeting the aforementioned requirements, must consider the needs of the Unified Health System (SUS), in the perspective of reorienting the care model. In these terms, training must overcome traditional teaching models, centered on technicist-based biomedical rationality, in which there are huge gaps between theory and reality of health practices.

Thus, training institutions face the challenge of expanding the educational process, in order to transpose the traditional model and reorient training in the perspective of developing the student's critical and reflective reasoning, which emerges from the reality in which health practices are developed, the which configures a fundamental condition for the production of humanistic care. It is reiterated that professional education at a technical level in nursing must incorporate the concern of training professionals with a profile compatible with the needs of the health system in the context of building the care model, which is guided by universality, equity, integrality and humanization of care, considering the social health needs of the population (MACHADO, 2009; DIAS et al., 2013).

It is considered that the availability of resources in the school for the teacher, such as: training instrument, didactic material,

environments (laboratories and classrooms), human and material resources can interfere positively or negatively in the teaching-learning process and must be identified, analyzed and published during the training process (COSTA et al.,2013).

The role of the educator is essential, since he must actively participate in the process of building the curriculum so that he can act in accordance with the definitions contained therein. The articulation between theory, practice, objectives and students' learning rights, taking into account the role of the school in the formation of subjects, in line with what is in the curriculum (formal curriculum) and what is being carried out in the classroom class (real curriculum), ratify the importance of their participation in the entire process, allowing them to be the subject and protagonist in the process of building the proposal (STEFENON and CASTELLAR, 2020).

In the conception of Costa et al. (2013), professional education in nursing must take a technical perspective integrated with general education, offered in the same space, reducing the risk of a minimalist and light training. Nursing coexists with a traditional and technicist form of learning, which does not allow students to have a critical and reflective training. Nursing technicians are trained, for the most part, without the possibility of acquiring a set of knowledge that allows them to enter the job market as transforming agents that contribute to social well-being.

In the context of the implementation of the Unified Health System (SUS), in which efforts are made to change the care model, based on the expanded conception of health, the recognition of the social determinants of the health-disease process, has been defended the argument that it is necessary to promote the reorientation of the health training model, forging it in a way that is coherent with

the principles and guidelines of the health system, with a view to adequately meeting the demands of the population. Thus, reflection on teaching-learning in the training of nursing technicians is opportune.

This Integrative Review aimed to analyze how the teaching-learning process takes place in technical nursing courses in the Brazilian scenario.

## METHODOLOGY

The method used was the Integrative Literature Review (IR), as it is the broadest methodological approach regarding reviews, allowing the inclusion of experimental and non-experimental studies for a complete understanding of the analyzed phenomenon. It also combines data from the theoretical and empirical literature, in addition to incorporating a wide range of purposes: definition of concepts, review of theories and evidence and analysis of methodological problems of a particular topic (SOUZA et al., 2010).

To prepare this integrative review, the model proposed by Mendes et al. (2008), according to which the following phases were developed:

1. Elaboration of the guiding question – used to guide the planning and execution of the study. Thus, the starting point was the following question: how does the teaching-learning process take place in technical/professional nursing education?

2. Survey of evidence or definition of sampling in the literature – a search for scientific articles was carried out in the following databases: LILACS (Latin American and Caribbean Literature on Health Sciences); BDNF (Nursing Database) and SciELO (Scientific Electronic Library Online). For that, the following descriptors were used: learning, nursing education, nursing education, vocational education.

The search was carried out through online access, during the month of July 2017, resulting in a sample composed of 05 articles published in the period from 1997 to 2017, as shown in Table 1.

The inclusion criteria for the articles initially defined for this integrative review were: article available in full, article written in Portuguese, article whose main focus was technical nursing education.

Editorials, reviews, dissertations, theses and monographs, abstracts published in annals of events and review articles, in addition to those not directly related to the topic, were excluded.

3. Selection of information extracted from the studies included in the sample - a synoptic table was used to summarize the results obtained, based on keywords and considering the excerpts related to the theme under analysis in this study. Subsequently, thematic categories were constructed.

4. Evaluation of included studies – phase equivalent to data analysis in a field survey. A step considered relevant as its conclusion may result in recommendations for changes in practice.

5. Discussion of the results – based on the analysis of the content of the articles included in the sample, two categories emerged: Teaching-learning strategies in technical training in nursing and Challenges of teaching practice in technical training in Nursing.

6. Presentation of the integrative review – phase that produces an impact due to the accumulation of relevant information on the research topic.

Thus, the Integrative Review was presented in the form of thematic categories, based on the systematization of the main results evidenced in the analysis of the selected articles.

## RESULTS AND DISCUSSION

In the end, 5 articles were included in

the study whose results were analyzed and discussed in full. The studies that made up the sample were published in 3 national journals, being available in full in national databases and being classified in Qualis Capes as A2 (Rev. Esc. Enferm. USP), B1 REME (Rev. Min. Enferm.), A2 REBEn (Brazilian Journal of Nursing).

A detailed analysis of the results was only possible through a careful examination of each of the articles, with an effort to extract from them the most appropriate aspects in order to meet the objective of this research.

In the databases, the inclusion criteria were previously defined, referring to articles published in the last twenty years, in Portuguese. After applying the limits and reading the abstracts, 06 articles were selected for reading in full, 1 was duplicated in one or more databases and, therefore, 05 articles met the inclusion criteria and constituted this integrative review.

Table 1 presents the articles selected according to the journal, research title, database, year of publication, authorship and type of study, objective, results and conclusion. Then, its contents will be discussed in thematic categories.

During the analysis of the articles, we observed a greater amount of productions that involve the teaching-learning process at undergraduate and graduate levels. Of the 5 studies that made up the sample, all are aimed at high school/technical/vocational education, seeking to meet the objective proposed in the research.

As for the publication period, it was found that the year with the highest number of published articles was 2015, with three publications, corresponding to 60% of publications included in the study. The years 2002 and 2017 have one study each, representing 20% each of the publications.

Regarding the profession, 17 authors took

Database	Search strategy	Quantity	Selection
LILACS	“learning” and “nursing education” and “nursing education” and “vocational education” [subject descriptor]	113	0
SciELO	“learning” and “nursing education” and “nursing education” and “vocational education” [subject descriptor]	32	2
BDEF	“learning” and “nursing education” and “nursing education” and “vocational education” [subject descriptor]	88	3
Total		233	5

Table 1 - Search strategies used in the databases

Journal / Title / Base	Year / Author / Type of Study	Goal	Results	Conclusion
<i>Nursing - USP/ Assessment of the teaching-learning process: its meaning for the high school nursing student / BEDENF.</i>	2002 / <i>Frias;Takahashi /Estudo metodológico.</i>	Understand the meaning of assessment for the high school student	The meanings were classified by semantic criteria, giving rise to 3 categories (Teaching-Learning, Emotional Factors and Teacher's Role) and 3 subcategories of the Teaching-Learning category: Global expression, Perceiving learning and Constant learning.	The meanings expressed by the subjects show that they are aware of the importance of evaluation as an instrument that, when used with a view to growth and development, enables the perception of the student's knowledge, their reorientation needs and how the educational process is being developed.
Minimum Nursing Review / Evaluation of nursing technician training by nurses in hospital practice / LILACS.	2015 / Camargo et al. / Quantitativa.	To analyze how nurses in the hospital care practice evaluate the training of nursing technicians based on national curricular references.	For 73%, the technicians' profile does not meet the nurses' expectations; 90% understand that the theoretical-practical teaching-learning process and internships must be modified; the teaching contents for 75% must be revised to the current reality; in terms of evaluation, 75% understand that it must be more rigorous;	The training of the nursing technician in the studied scenario does not meet the expectations of health care in the hospital. It is necessary to advance in changes that can improve the pedagogical planning of the course, the inseparable articulation between theory and practice and the competent pedagogical training of teachers and internship supervisors.
Minimal Nursing Review / Digital Educational Technology Assessment “vital signs and anatomy” By students of professional education in nursing / LILACS.	2015 / Góeset al. / Estudo metodológico.	Evaluate educational digital technology “vital signs and anatomy” by students of professional education in Nursing regarding the content, interface and usability of the system.	Twenty-one EPT Nursing students participated in the study, who had already completed 50% of the course. All items were considered adequate by more than 90% of the evaluators. The students expressed suggestions, which were considered for the improvement of the technology.	It is considered that the technology developed is adequate to be made available in Nursing education inserted in the pedagogical framework of problematization and meaningful learning, based on the evaluations of the main users, Nursing students.

REBEEn / Learning needs of students of Professional Education at a Technical Level in Nursing/ SciELO.	2015 / Góes; Côrrea; Camargo; Hara. / Qualitativo.	To develop and validate a digital object as an auxiliary resource in the training of EPT students, based on their teaching needs.	No participant reported the desire to learn from instruments that stimulate clinical reasoning and interdisciplinarity, from situations that simulate those that will be experienced during professional practice.	It is concluded that students have difficulties in content unrelated to Nursing. This way, it is urgent to search for teaching tools that provide interdisciplinarity according to reality and that provide subsidies for the training of teachers to work in teaching in EPT in nursing.
REBEEn / Moral suffering of the teaching nurse of technical courses in nursing / SciELO.	2017 / Duarte et al. / Qualitativa	To know how nurses who teach technical courses in nursing have experienced situations of moral distress (MH) at work	Two categories were constructed: lack of commitment to the future profession expressed in the relationship with the teaching nurse; and lack of commitment to the teaching-learning process.	SM experiences are present in the professional routine of the teachers participating in the research. It is necessary to rethink the teaching practice, the relationships and the training spaces in order to favor the confrontation of dilemmas, anxieties and conflicts experienced in the teaching practice.

Table 1. Categorization of studies on the teaching-learning process in technical nursing courses

part in this study, of which 16 (95.23%) are nurses and 1 (4.76%) is a nursing technician. As for the qualifications of the authors, 10 doctors (58.82%), 2 masters (11.76%), 2 postgraduate (11.76%), 2 graduate (11.76%) and 1 technician (5.88%). Working at the following institutions: School of Nursing of the University of São Paulo (USP), Federal Institute of Science and Technology Education of Rio Grande do Sul, University of São Paulo, School of Nursing of Ribeirão Preto, Hospital São Francisco de Ribeirão Preto, University Federal University of Rio Grande and Federal University of Santa Maria.

Regarding the research design, it was identified that of the 5 publications, 3 used a qualitative approach (60%), 1 quantitative (20%) and 1 qualitative-quantitative (20%). Most of the studies were developed in the State of São Paulo, representing 80% of the researches and only 1 in Rio Grande do Sul, equivalent to 20% of the publications.

When evaluating the included studies, the categorized articles were critically observed, interpreting the various results produced by the research and discussing what was found in the five included articles, from the perspective of the researchers responsible for each research.

With regard to the article by Takahashi and Frias (2002), the authors argue that teaching-learning does not only occur within the classroom, but in all environments and situations. The assessment of learning, in turn, is no longer a simple classification of students within pre-determined standards to continually analyze their global expression and all attitudes that demonstrate learning. The meaning expressed by the students surveyed shows that they are aware of the importance of assessment, since the assessment of meaningful learning must be done in terms of searching for evidence, guiding student and teacher, as it provides information to the

student to improve their performance and gives elements to the teacher to improve their teaching procedures (SESTARI et al., 2020).

The research that analyzed how nurses in the hospital care practice evaluate the training of nursing technicians based on national curricular references reveals that, in general, for the nurses interviewed, the profile of nursing assistants and technicians does not meet the expectations of care in field hospitals. Regarding the issue of teaching and learning, it was noted the concern of those surveyed with issues related to ethics and technique. The evaluation of 68% of the nurses surveyed defines the ethical-professional commitment as precarious, 90% believe that there is a need for modification in the theoretical-practical teaching-learning process and 85% believe that this modification must extend to the internships (CAMARGO, 2015).

The authors suggest advancing in changes that can improve the pedagogical project of the course, the articulation between theory and practice and the competent pedagogical training of teachers and internship supervisors. They also consider that the training of nursing technicians needs significant reforms. Abolishing technical and mechanical training, providing critical training, allowing reflection on its practice, with a theoretical, scientific, professional and technological basis.

Technologies have been increasingly incorporated into nursing education. The use of digital technologies for training and education, especially those supported by the internet, is unquestionable. In line with this thought, Góes et al. (2015) developed a methodological study on the evaluation of the "anatomy and vital signs" technology, aiming to implement improvements in the application through the suggestions and results obtained, making it possible to identify the influences of this tool in the teaching-learning process.

The developed application was well

evaluated, all items were considered adequate by more than 90% of the evaluators. When it comes to educational technology, this resource does not replace the role of the teacher, they are tools incorporated to improve the quality of teaching, making it more attractive, enabling student autonomy (COIMBRA and GORAYEB, 2018).

From the study carried out by Góes et al. (2015), a chain of deficits can be inferred, where training difficulties arising from basic education interfere with the learning of introductory nursing contents which, in turn, interfere with the acquisition of specific knowledge. Students had difficulties in non-Nursing-related content, such as Portuguese and mathematics, and also in introductory courses in the Professional and Technological Education (EPT) course, which may interfere with training and, consequently, with the quality of care.

In addition to this difficulty in the teaching process, it was possible to observe teaching action based on hospital-centered teaching, acting contrary to pedagogical proposals that aim to contribute to the strengthening of SUS. In view of the above, we highlight the need to seek teaching tools that provide interdisciplinarity and that provide subsidies for teacher training to work in teaching the EPT in nursing (MAGALHÃES and PEREIRA, 2019).

In this sense, attention must be paid to the quality of education, which can disqualify health actions, given that the nursing technician corresponds to the largest professional category in the health area and has a fundamental role in all levels of health care (SILVA and MACHADO, 2019).

The study that portrays the teaching practice of nurses working in technical courses in nursing, brings situations of students' lack of commitment to the future profession, expressed during the teaching-learning

process. These situations give rise to moral distress (MH), manifestations of anguish and frustrations, in the faculty, which in most cases are not perceived as problems and dilemmas associated with SM. This way, teachers remain in suffering, causing disenchantment with the profession, the desire to abandon it and disqualifying the teaching practice and the teaching-learning process (DUARTE, 2016).

The student's lack of commitment to the teaching-learning process and learning deficiencies in basic training are situations perceived and experienced by nurses that result in dissatisfaction in the act of teaching practice. For the authors, it is necessary to rethink teaching practice, relationships and learning environments, using strategies and strengthening relationships with peers, in order to favor the confrontation of obstacles present in educational practice.

Therefore, it is essential to identify strategies that encourage the active participation of students in their teaching-learning process, so that they can develop skills for the exercise of a care practice based on reflection, criticism and in accordance with social demands and guidelines. of the SUS (Unified Health System).

## CONCLUSION

Through this Integrative Review, it was found that the Brazilian production about the teaching-learning process in technical nursing courses is still incipient, it is considered that further research on the subject can be carried out in more depth. As observed in the articles listed as a sample for this research, the teaching-learning process in technical nursing courses from the perspective of the student, the nurse as a teacher, with all the obstacles inherent to the process in the classroom and as a work team, evaluating the final result of the former student in the professional field.

It was noticed in this study that there is a



need for modifications and readaptations in the teaching-learning process starting from basic education, as it reflects on subsequent levels of teaching, affecting teaching practice and the effective teaching process. It is highlighted, in some studies, that the evaluation of the process must be continuous, allowing the identification of failures and contributing to the improvement of the results.

The interventions proposed in some articles studied bring teaching methodologies that contribute to learning and suggest teaching methods that can be used by teachers during the teaching-learning process. It is recommended to bring the training centers closer to hospitals and/or health institutions, providing a synergistic articulation between

the actors involved in the training process, recognizing that the advances of the DCNs are indisputable, since they sought to align professional training in the national territory, respecting the characteristics of each region.

In view of what has been exposed in this study, it is concluded that some authors program different methodologies and teaching strategies with the objective of guaranteeing students' adherence to the process and compliance with pedagogical proposals, while providing the student's critical education. Adherence to Information and Communication Technologies (ICTs) can and must be used as pedagogical tools and strategies to correct flaws in the training process for nursing technicians.

## REFERENCES

CAMARGO, R. A. A.; GONÇALVES, A. E.; GÓES, F. S. N.; NAKATA, V. Y.; PEREIRA, M.C.A. Avaliação da formação do técnico de enfermagem por enfermeiros da prática hospitalar. **Revista de Enfermagem do Centro Oeste Mineiro**, Belo Horizonte, v. 19, n. 4, p. 951-957, abr. 2015. Disponível em: <[http://www.revenf.bvs.br/scielo.php?script=sci\\_arttext&pid=S1415-27622015000400012&lng=pt&nrm=iso](http://www.revenf.bvs.br/scielo.php?script=sci_arttext&pid=S1415-27622015000400012&lng=pt&nrm=iso)>. Acesso em: 10 abr. 2017. DOI: <http://dx.doi.org/10.5935/1415-2762.20150073>.

CAMARGO, A. A. R.; GÓES, F.; CÔRREA, A. K.; HARA, Y. N. C. Necessidades de aprendizagem de alunos da Educação Profissional de Nível Técnico em Enfermagem. **Revista Brasileira de Enfermagem**, internet, v. 68, n. 1, p. 20-5, abr. 2015. Disponível em: <<http://www.scielo.br/pdf/reben/v68n1/0034-7167-reben-68-01-0020.pdf>>. Acesso em: 10 abr. 2017 DOI: <http://dx.doi.org/10.1590/0034-7167.2015680103p>.

COIMBRA, A. C. C.; GORAYEB, F. H. Z. O USO DAS TIC NO AMBIENTE ESCOLAR PELOS PROFESSORES DE ENSINO TÉCNICO. **Colloquium Humanarum**, internet, v. 15, n. 3, p. 186-194, 2018. Disponível em: <https://revistas.unoeste.br/index.php/ch/article/view/2331>. Acesso em: 25 ago. 2022.

COSTA, F. C.; BORGES, E.L.; DONOSO, M. T.V. Perfil dos Alunos de Cursos Técnicos de Enfermagem de uma Escola Particular em Minas Gerais. **Revista de Enfermagem do Centro Oeste Mineiro**, internet, v. 3, n.1, p. 554-568, jan. - abr. 2013. Disponível em: <<http://www.seer.ufsj.edu.br/index.php/recom/article/viewFile/327/387>>. Acesso em: 10 de abr. de 2017. DOI: <http://dx.doi.org/10.19175>.

DIAS, R. A.; SCHIAVON, I. C. A.; OLIVEIRA, E. C.; CAMPOS, I. C. M. O ensino por competências na educação do profissional técnico de nível médio em enfermagem: uma revisão integrativa. **Revista de Enfermagem do Centro Oeste Mineiro**, internet, v. 3 n. 3, p. 883-890, abr. 2013. Disponível em: <<http://www.seer.ufsj.edu.br/index.php/recom/article/view/357/535>>. Acesso em: 17 de junho de 2016. DOI: <http://dx.doi.org/10.19175>.

DUARTE, C. G.; LUNARDI, V.L.; SILVEIRA, R. S.; BARLEM, E. L. D.; DALMOLIN, G. L. Sofrimento moral do enfermeiro docente de cursos técnicos em enfermagem. **Revista Brasileira de Enfermagem**, internet, v.70, n. 2, p. 301-307, mar. - abr. 2017. Acesso em: 11 de abr. de 2017. DOI: <http://dx.doi.org/10.1590/0034-7167-2016-0185>.

FRIAS, M. A. da E.; TAKAHASHI, R. T. Avaliação do processo ensino-aprendizagem: seu significado para o aluno de ensino médio de enfermagem. **Revista de Enfermagem do Centro Oeste Mineiro**, São Paulo, v. 36, n. 2, p. 156-163, junho 2002. Disponível em: <[http://www.scielo.br/scielo.php?script=sci\\_arttext&pid=S0080-6234200200020008&lng=en&nrm=iso](http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0080-6234200200020008&lng=en&nrm=iso)>. Acessado em: 10 Maio de 2017. DOI: <http://dx.doi.org/10.1590/S0080-62342002000200008>.

GÓES, F. S. N.; CÔRREA, A. K.; CAMARGO, R. A. A.; HARA, C. Y. Necessidades de aprendizagem de alunos da Educação Profissional de Nível Técnico em Enfermagem. **Rev. bras. Enferm.**, v. 68, n. 1, p. 20-25, abr. 2015. Disponível em: <<http://bases.bireme.br/cgi-bin/wxislind.exe/iah/online/?IsisScript=iah/iah.xis&src=google&base=LILACS&lang=p&nextAction=lnk&exprSearch=744614&indexSearch=ID>>. Acesso em: 25 de março de 2016. DOI: <http://www.dx.doi.org/10.5935/1415-2762.20150024.b>.

MAGALHÃES, W. de A. M.; PEREIRA, A. L. S. O uso da aprendizagem baseada em problemas no ensino técnico: projetos integradores como experiência interdisciplinar. **Educitec - Revista de Estudos e Pesquisas sobre Ensino Tecnológico**, Manaus, Brasil, v. 5, n. 12, 2019. DOI: 10.31417/educitec.v5i12.836. Disponível em: <https://sistemascmc.ifam.edu.br/educitec/index.php/educitec/article/view/836>. Acesso em: 25 ago. 2020.

MACHADO, C. M. F. **Avaliação do processo de ensino-aprendizagem: um estudo em um curso para Técnico em Saúde Bucal**. 2009. Dissertação (Mestrado), Escola Nacional de Saúde Pública Sergio Arouca Rio de Janeiro: s.n, Rio de Janeiro, 2009. Disponível em: [https://www.arca.fiocruz.br/bitstream/handle/iciict/2435/ENSP\\_Disserta\\_%E7%E3o\\_Machado\\_Maria\\_Cristina\\_Figueira.pdf;jsessionid=node0w5g476rtj7w3oribkuw9qtxv93740.node0?sequence=1](https://www.arca.fiocruz.br/bitstream/handle/iciict/2435/ENSP_Disserta_%E7%E3o_Machado_Maria_Cristina_Figueira.pdf;jsessionid=node0w5g476rtj7w3oribkuw9qtxv93740.node0?sequence=1).

SILVA, M. C. N. da; MACHADO, M. H. Sistema de Saúde e Trabalho: desafios para a Enfermagem no Brasil. **Ciência & Saúde Coletiva, internet**, v. 25, n. 1, p. 07-13, 2020. Disponível em: <<https://doi.org/10.1590/1413-81232020251.27572019>>. Acesso em: 20 jan. 2021. DOI: <https://doi.org/10.1590/1413-81232020251.27572019>.

SESTARI, F. B.; GARCIA, I. K.; SANTAROSA, M. C. P. Integração de conceitos no contexto do ensino técnico integrado ao ensino médio a partir de Unidades de Ensino Potencialmente Significativas (UEPS). **Research, Society and Development, internet**, v. 9, n. 4, p. e64942855, 2020. Disponível em: <https://rsdjournal.org/index.php/rsd/article/view/2855>. Acesso em: 26 ago. 2021. DOI: 10.33448/rsd-v9i4.2855.

SOUZA, M. T.; SILVA, M. D.; CARVALHO, R. Revisão integrativa: o que é e como fazer. **Einstein**, São Paulo, v. 8, n. 1, p. 102-106, abr. 2010. Disponível em: <[http://www.scielo.br/scielo.php?script=sci\\_arttext&pid=S1679-45082010000100102&lng=en&nrm=iso](http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1679-45082010000100102&lng=en&nrm=iso)>. Acesso em: 14 mar. 2017. DOI: <http://dx.doi.org/10.1590/s1679-45082010rw1134>.

STEFENON, D. L. e CASTELLAR, S. M. V. Os pressupostos da avaliação e a produção de currículos na escola: reflexões a partir da geografia. **Educação e Pesquisa**, São Paulo, v. 46, n. 216270, p. 1-17, abr. 2020. Disponível em: <<https://doi.org/10.1590/S1678-4634202046216270>>. Acesso em: 20 maio 2020. DOI: <https://doi.org/10.1590/S1678-4634202046216270>.