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The use of active teaching methodologies in Nursing: what does the scientific evidence say?

O uso de metodologias ativas de ensino na Enfermagem: o que dizem as evidências científicas?

El uso de metodologías activas de enseñanza en enfermería: ¿qué dice la evidencia científica?

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Abstract

The study aimed to analyze the scientific evidence on the use of active teaching methodologies in the practice of teaching in Nursing Undergraduate courses. This is an Integrative Literature Review (ILR) developed through two national electronic portals and three international databases. The ILR took place from February to May 2022. With the application of the selection criteria, 24 scientific articles were included. With the synthesis of the knowledge of this ILR, it became evident that

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the use of active teaching methodologies in the practice of teaching, in Nursing Undergraduate courses, is directed to two themes: the potential and contributions of active teaching methodologies and the weaknesses and the challenges for the use of active teaching methodologies. Among the strengths and contributions, the following stand out: approximation of theory with practice, development of skills and abilities and self-knowledge, interpersonal relationship and student-professor relationship. As for weaknesses and challenges, the following were highlighted: professors' training; curricular restructuring through an integrated curriculum; the inclusion of students in curricular changes and in the application of active methodologies during their academic training. The conclusion is that it is important and necessary to implement active teaching methodologies in nursing graduate courses through a curriculum integrated by modules or curricular units, making it essential to train nurses/professors.

Keywords: Pedagogical practices. Active methodologies. Higher education. Nursing.

Resumo

O estudo teve como objetivo analisar as evidências científicas sobre o uso de metodologias ativas de ensino na prática da docência nos cursos de Graduação em Enfermagem. Trata-se de uma Revisão Integrativa da Literatura (RIL) desenvolvida por meio de dois portais eletrônicos nacionais e três bases de dados internacionais. A realização da RIL ocorreu nos meses de fevereiro a maio de 2022. Com a aplicação dos critérios de seleção, incluíram-se 24 artigos científicos. Com a síntese do conhecimento desta RIL evidenciou-se que o uso de metodologias ativas de ensino na prática da docência, nos cursos de Graduação em Enfermagem, direciona-se para dois temas: as potencialidades e contribuições das metodologias ativas de ensino e as fragilidades e os desafios para o uso das metodologias ativas de ensino. Dentre as potencialidades e contribuições destacam-se: aproximação da teoria com a prática, desenvolvimento de competências e habilidades e autoconhecimento, relação interpessoal e relação alunos-professor. Já, nas fragilidades e desafios, evidenciaram-se: a capacitação docente; a reestruturação curricular por meio de um currículo integrado; a inclusão dos alunos nas mudanças curriculares e na aplicação das metodologias ativas durante a sua formação acadêmica. Conclui-se sobre a relevância e necessidade de implantação e implementação das metodologias ativas de ensino nos cursos de Graduação em Enfermagem por meio de um currículo integrado por módulos ou unidades curriculares, tornando-se essencial a capacitação de enfermeiros/docentes.

Palavras-chave: *Práticas pedagógicas. Metodologias ativas. Ensino superior. Enfermagem.*

Resumen

El estudio tuvo como objetivo analizar las evidencias científicas sobre el uso de metodologías activas de enseñanza en la práctica docente en cursos de graduación en enfermería. Se trata de una Revisión Integrativa de la Literatura (RIL) desarrollada a través de dos portales electrónicos nacionales y tres bases de datos internacionales. La RIL se llevó a cabo de febrero a mayo de 2022. Con la aplicación de los criterios de selección, se incluyeron 24 artículos científicos. Con la síntesis del conocimiento de esta EIR, se evidenció que el uso de metodologías activas de enseñanza en la práctica de la enseñanza, en los cursos de Graduación en Enfermería, se orienta hacia dos temas: las potencialidades y aportes de las metodologías activas de enseñanza y las debilidades y los desafíos para el uso de metodologías activas de enseñanza. Entre las potencialidades y aportes se destacan: la aproximación de la teoría con la práctica, el desarrollo de destrezas y habilidades y el autoconocimiento, la relación interpersonal y la relación alumno-docente. En cuanto a las debilidades y desafíos, se destacaron: la formación docente; la reestructuración curricular a través de un currículo integrado; la inclusión de los estudiantes en los cambios curriculares y en la aplicación de metodologías activas durante su formación académica. Se concluye que es importante y necesario implementar metodologías activas de enseñanza en los cursos de pregrado de enfermería a través de un currículo integrado por módulos o unidades curriculares, lo que hace imprescindible la formación de enfermeros/profesores.

Palabras clave: *Prácticas pedagógicas. Metodologías activas. Educación superior. Enfermería.*

Introduction

The higher education institution (HEI) that offers the Nursing Undergraduate course must comply with the National Curriculum Guidelines (DCNs/ ENF) in its Course Pedagogical Project (CPP), mentioning the potential of professional training for nurses (Veira *et al*., 2020). Among these potentialities, the DCNs/ENF point to the diversification of practice scenarios, the implementation of active teaching and learning methodologies based on case studies and problem situations, health education in different contexts and social groups, flexibility and comprehensiveness (Brasil, 2018).

In this sense, the DCNs/ENF proposed the (re)structuring of the CPPs of Nursing, aiming to constitute an egress profile that is in accordance with the perspectives and contemporary approaches of Nursing Education and the Law of Professional Practice in the country. With this restructuring, the courses are also adjusted to national and international standards, emphasizing the social needs, health of the population and the Unified Health System (UHS) (Brasil, 2018).

One of the recommendations of the National Health Council (NHC) to base pedagogical practices in the proposal of new DCNs/ENF is the collective construction of CPPs, with the active participation of professors, students, professionals of the service network, health counselors, UHS managers and users. In this perspective, the CPP must be creative, innovative and flexible, with the execution of pedagogical practices implemented by active teaching methodologies. Thus, the academic training will take place with innovative approaches and provide students with significant learning during their training process in the Nursing Undergraduate Course (BRASIL, 2018).

Given these circumstances, two main obstacles to the advancement of curricular changes and innovation in higher education nursing were selected, namely: pedagogical practices with traditional approaches and insufficient number of professors to develop the demands of labor activities linked to HEIs. Regarding this last obstacle, it is necessary to consider that professors have difficulties in developing the skills required for teaching due to work overload (Vasconcelos; Backes; Gue, 2011; D'Arisbo *et al*., 2018).

The active methodologies, when inserted in the training process in the nursing undergraduate courses, become a potential for the development of skills and professional skills with critical and reflective thinking. Thus, they contribute to the distancing of technical rationality and the approximation of practices related to integrality of care and social transformation, as well as in the establishment of student-professor relations based on reflective dialogue, favoring the link between those involved in the educational process and, consequently, with social actors in health care (Palheta *et al*., 2020).

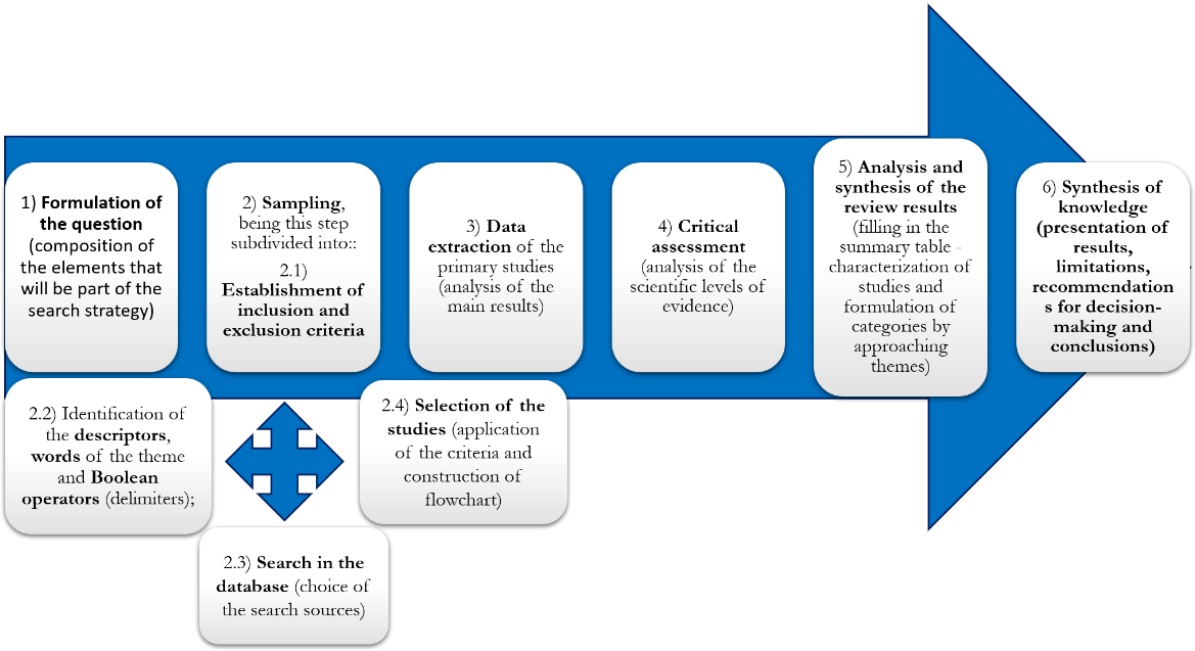
Study conducted by Fontes *et al*. (2021), with the objective of understanding the use of active methodologies in the Nursing Undergraduate course showed that many nurses professors linked to higher education institutions still do not feel prepared for the implementation of active methodologies in pedagogical practice. For this, it is necessary to reformulate the curriculum matrix of the course, allowing innovation and distance from the traditional teaching model.

For the development of pedagogical practices guided by active methodologies to be effective, it is necessary that the nurse professor is constantly qualified regarding the updating of contents and practices on teaching in higher education. To do so, he/she must participate in continuing education through scientific courses and events, attendance of Graduate courses in the area, scientific production and active listening with classes of students in which he/she acts as a professor to receive feedback (Fontes *et al*., 2019; Dias *et al*., 2020). Thus, this study aims to analyze the scientific evidence on the use of active teaching methodologies in the practice of teaching, in Nursing Undergraduate courses.

Methodology

This is an integrative literature review (ILR). The ILR is a secondary study that synthesizes the results of primary studies on a specific topic. In addition to the analysis and synthesis of the results of the selected studies, a critical evaluation of the levels of scientific evidence was carried out. The six steps recommended by Paula, Padoin and Galvão (2019), as shown in Figure 1, were strictly followed for the execution of this ILR.

Figure 1 – Steps to develop the Integrative Literature Review study



Source: created by the authors, based on Paula, Padoin and Galvão (2019).

As can be seen, the first step concerns the formulation of the question. To do so, the strategy of the elements PICo – Problem, Interest and Context – was used, which is indicated for qualitative reviews that seek to analyze the human experience and social phenomena (Stern; Jordan; Mcarthur, 2014). In the term **P**roblem, **I**nterest and **C**ontext, "P" corresponds to the term *Active teaching methodologies*; "I" to the term *Teaching practice in higher education; and "Co",* to *Nursing Undergraduate Courses*. Therefore, the ILR was conducted by the following guiding question: What are the scientific evidences on the use of active teaching methodologies in the practice of teaching, in the Nursing Undergraduate courses? **(Step 1)**.

Then, the selection criteria of the publications that composed the study were established **(2- step 1)**. The inclusion criteria used were: primary studies; Portuguese, English or Spanish language; and studies that addressed the use of active teaching methodologies in the practice of teaching in Nursing Undergraduate courses.

As an exclusion criterion, the following aspect was considered: studies that did not contemplate the proposed objective of the research. To identify the scientific productions excluded during the application of the criteria, the following classifications were used: NA, NR, NT and NQ (Paula; Padoin; Galvão, 2019). The acronym NA means that the scientific production is "**N**ot an **A**rticle" (Example: theses, dissertations, manuals,...); NR means that it is "**N**ot a **R**esearch" (Example: reviews, reflection, experience reports,...); NT means that it is "**N**ot of the **T**hematic" (Example: primary article with emphasis on health, ...); and NQ that does "**N**ot answer the review Question" (Example: primary article with the use of active methodologies, but whose focus is on learning, assistance, post-graduation...).

In the next step, there was the choice Health Sciences Descriptors (DeCS), Medical Subject Headings (MeSH terms) and Emtree terms[1], establishing the terms indexed in the vocabularies of their synonyms, respectively: alternative terms, entry terms and synonymous. To broaden the search for scientific productions on the proposed theme, two words composed in the same languages (Portuguese, English and Spanish) were used, according to the inclusion criterion (Chart 1) **(2- step 2)**. As a way to highlight the DeCS and MeSH of their synonyms/alternative terms and Emtree, Chart 1 was prepared.

Chart 1 – Mapping of Health Sciences Descriptors, Medical Subject Headings, Emtree and words used in the search strategies of the Integrative Literature Review

PICo	Vocabularies and Words	Mapping and Boolean operators
Problem (Active Teaching Methodologies)	DeCS	---
	MeSH	---
	Emtree	---
	Words	"Metodologia ativa" OR "Metodologias ativas" "Active methodology" OR "Active methodologies" "Metodología activa" OR "Metodologías activas"
Interest (Practice of the teaching in higher education)	DeCS	"**Educação Superior**" OR "Ensino Superior" "**Education, Higher**" OR "Higher Education" "**Educación Superior**" OR "Enseñanza Superior"
	MeSH	**"Education, Higher"** OR "Graduate Education" OR "Educations, Graduate" OR "Graduate Educations"
	Emtree	---
	Words	---
Context (Nursing Undergraduate Courses)	DeCS	**"Educação em Enfermagem"** OR "Curso de Assistente em Enfermagem Pediátrica" OR "Curso de Enfermagem" OR "Cursos de Enfermagem" OR "Ensino de Enfermagem" **"Education Nursing"** OR "Educations, Nursing" OR "Nursing Education" OR "Nursing Educations" **"Educación en Enfermería"** OR "Enseñanza de Enfermería"
	MeSH	**"Education Nursing"** OR "Nursing Education" OR "Educations, Nursing" OR "Nursing Educations"
	Emtree	"Education, Nursing" OR "Education, Nursing, Baccalaureate" OR "Faculty, Nursing" OR "Nurse Education" OR "Nursing Education Research" OR "Nursing Faculty" OR "Nursing School" OR "Schools, Nursing"
	Words	---

Source: created by the author.

The search for scientific productions took place in two national electronic portals – Virtual Health Library (VHL) and Portal of Journals of the Coordination of Higher Level Personnel Improvement (CAPES), and in three international databases – MEDLINE/PubMed (via National Library of Medicine), EMBASE (Elsevier) and SCOPUS (Elsevier) **(2 – step 3)**. It should be noted that the access to the five sources of search occurred through the site "CAPES Journals", in the "CAFe Access", made possible by the registration of the doctoral student by the University of the Taquari Valley – Univates.

Then, the search strategies were applied in each of the sources – electronic portals and databases –, with the choice of type of search, search options or filters used (Chart 2) **(2 – step 4)**. The search strategy in the two portals was applied in the three languages, separately, by the fact that the number of productions is larger, compared to the search of the three languages together. In the international databases, the search took place in the English language, according to the guidance received in the ILR[2] update workshop , conducted by the researcher in 2021.

It should be noted that the search carried out on the VHL electronic portal included scientific productions inserted in the databases of Latin American and Caribbean Health Sciences Literature (LILACS) and the Nursing Database (BDENF). The search performed on the CAPES Portal of Journals included the scientific productions inserted in the Scientific Electronic Library Online (SciELO) – SciELO Brasil, SciELO Portugal, SciELO Spain and SciELO Colombia and the Cumulative Index to Nursing and Allied Health Literature (CINAHL) database. In this way, the reason why there were no searches of scientific productions directly in these sources of the health and nursing area is justified, specifically.

Chart 2 – Portals and databases, search type, search options or filters and search strategies used in the Integrative Literature Review

Portals and databases	Type of search	Search options or filters	Search strategies and the language used in each source (Portuguese, English and Spanish)
Virtual Health Library (VHL)- Regional Portal	Simple	Filter in the "Database", removing publications from MEDLINE and, in "Language", publications in "French" and "Italian".	("Metodologia ativa" OR "Metodologias ativas") AND ("Educação Superior" OR "Ensino Superior") AND ("Educação em Enfermagem" OR "Curso de Enfermagem" OR "Cursos de Enfermagem" OR "Ensino de Enfermagem")
			("Active methodology" OR "Active methodologies") AND ("Education, Higher" OR "Higher Education") AND ("Education Nursing" OR "Educations, Nursing" OR "Nursing Education" OR "Nursing Educations")
			("Metodología activa" OR "Metodologías activas") AND ("Educación Superior" OR "Enseñanza Superior") AND ("Educación en Enfermería" OR "Enseñanza de Enfermería")
CAPES Portal of Journals	Simple	Filter in the "Collection", removing publications from MEDLINE.	("Metodologia ativa" OR "Metodologias ativas") AND ("Educação Superior" OR "Ensino Superior") AND ("Educação em Enfermagem" OR "Curso de Enfermagem" OR "Cursos de Enfermagem" OR "Ensino de Enfermagem")
			("Active methodology" OR "Active methodologies") AND ("Education, Higher" OR "Higher Education") AND ("Education Nursing" OR "Educations, Nursing" OR "Nursing Education" OR "Nursing Educations")
			("Metodología activa" OR "Metodologías activas") AND ("Educación Superior" OR "Enseñanza Superior") AND ("Educación en Enfermería" OR "Enseñanza de Enfermería")
MEDLINE/ PubMed (through National Library of Medicine)	Advanced	Additional "Language" filter for the languages "English", "Portuguese" and "Spanish"	((((Education, Higher[MeSH Terms]) OR ("Graduate Education" OR "Educations, Graduate" OR "Graduate Educations")) AND (Education Nursing[MeSH Terms])) OR ("Nursing Education" OR "Educations, Nursing" OR "Nursing Educations" OR "Education, Nursing" OR "Education, Nursing, Baccalaureate" OR "Faculty, Nursing" OR "Nurse Education" OR "Nursing Education Research" OR "Nursing Faculty" OR "Nursing School" OR "Schools, Nursing")) AND ("Active methodology" OR "Active methodologies")
EMBASE (Elsevier)	Wide	"Origins" result filter, selecting "Embase".	(('education, higher' OR 'graduate education'/exp OR 'graduate education' OR 'educations, graduate' OR 'graduate educations') AND ('education nursing'/exp OR 'education nursing') OR 'nursing education'/exp OR 'nursing education' OR 'educations, nursing' OR 'nursing educations' OR 'education, nursing'/exp OR 'education, nursing' OR 'education, nursing, baccalaureate'/exp OR 'education, nursing, baccalaureate' OR 'faculty, nursing'/exp OR 'faculty, nursing' OR 'nurse education'/exp OR 'nurse education' OR 'nursing education research'/exp OR 'nursing education research' OR 'nursing faculty'/exp OR 'nursing faculty' OR 'nursing school'/exp OR 'nursing school' OR 'schools, nursing'/exp OR 'schools, nursing') AND 'active methodology' OR 'active methodologies'
SCOPUS (Elsevier)	By Document	"All fields" option in the three fields	(ALL ("Education, Higher" OR "Graduate Education" OR "Educations, Graduate" OR "Graduate Educations") AND ALL ("Education Nursing" OR "Nursing Education" OR "Educations, Nursing" OR "Nursing Educations" OR "Education, Nursing" OR "Education, Nursing, Baccalaureate" OR "Faculty, Nursing" OR "Nurse Education" OR "Nursing Education Research" OR "Nursing Faculty" OR "Nursing School" OR "Schools, Nursing") AND ALL ("Active methodology" OR "Active methodologies"))

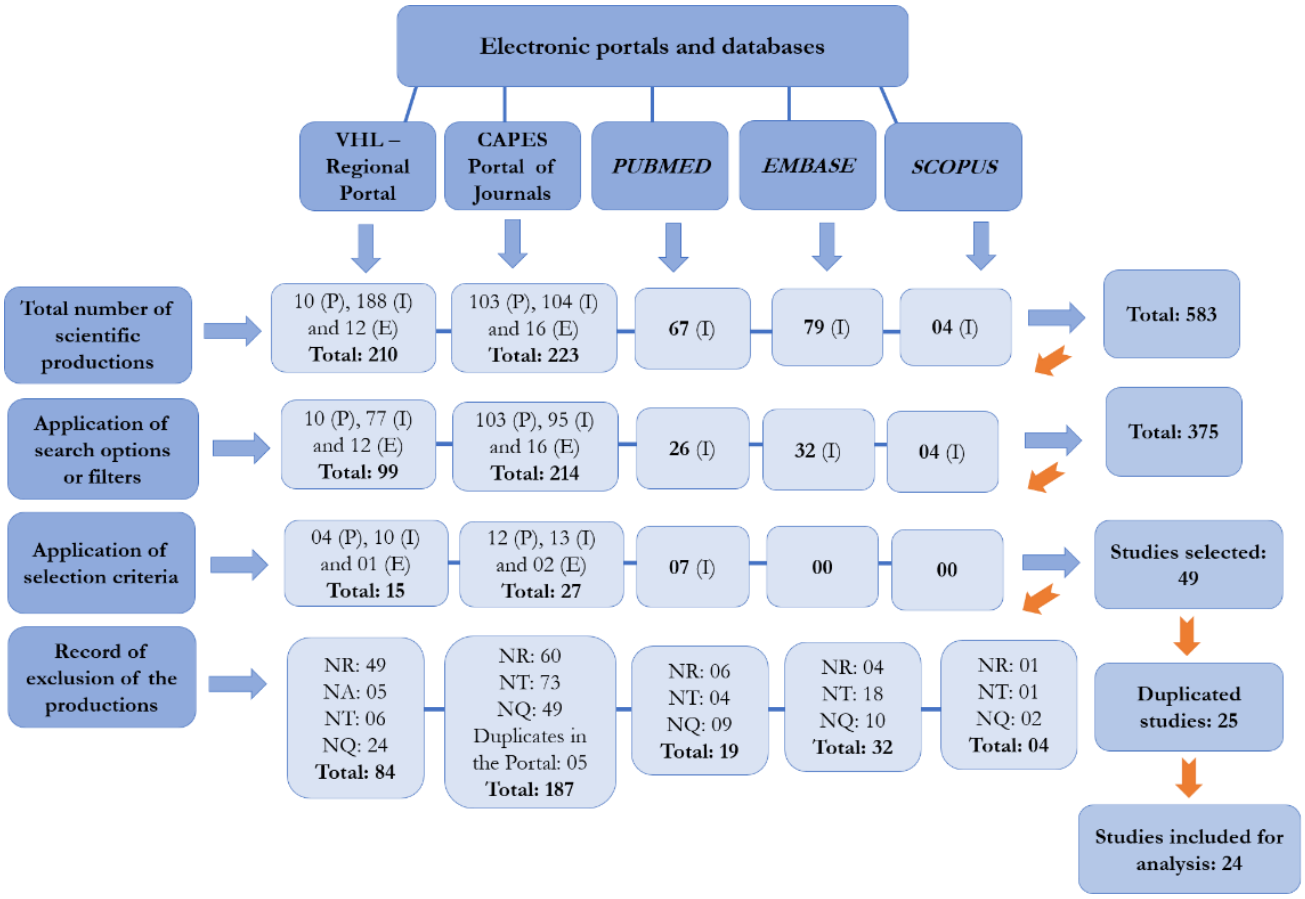
Source: created by the author.

The searches in the portals and databases made it possible to find a total of 583 scientific productions and, with the application of the inclusion and exclusion criteria, 24 studies were selected (Figure 2). The searches and the application of the selection criteria were carried out in the months of March and April 2022, without a time cut.

After selection, the articles were identified with the code of the letter "A" of article, accompanied by a number (A1, A2, A3...), according to the order in which they were saved. In order to systematize the organization of the work to describe the characterization of the 24 studies, a chart was prepared with the following information: code,

title, journal and country of publication, place of research, year of publication and country, approach and type of research, data collection instrument(s), data analysis framework or technique, participants and research scenario. It should be noted that this chart does not appear in the text of this production, as it was built for better visualization and to systematize the process of analysis, synthesis and organization of categories.

Figure 2 – Flowchart on the selection of primary studies included in the ILR



Source: created by the author.

Since this is a secondary study of ILR, which does not involve human beings and has public access, this research was not submitted to the Research Ethics Committee, but respected Law n. 9.610, of February 19, 1998 (Brasil, 1998), ensuring the authorship of statements and conclusions and the originality of ideas. And, by the inclusion of scientific productions regarding primary studies, the guidelines and regulatory standards for research involving human beings of Resolution n. 466, of 12 December 2012, of the National Health Council (Brasil, 2012) were respected, and the Resolution n. 510 of 7 April 2016, which provides the rules applicable to research in Human and Social Sciences (Brasil, 2016).

Results and discussion

After finalizing the selection process of the 24 articles that make up the corpus of this ILR, the extraction of characteristics and results was carried out **(step 3)**, with the latter inserted in a chart with the respective article code, which was performed in step 5.

Regarding the characterization, it was evident that eight of the scientific productions were published in the Brazilian Journal of Nursing. As for the country of publication, Brazil stood out with 22 publications. Then came Spain and Australia, which were the countries of origin of one production each.

The year of publication of the scientific articles varied between 2010 and 2021: one article in 2010, one in 2012, three in 2015, three in 2016, seven in 2018, one in 2019, five in 2020 and three in 2021. Concerning the place where the research was carried out, the following origins were identified by state, region and country: seven in Rio de Janeiro, six in São Paulo, three in Paraná, two in Minas Gerais, two in the Southern Region and one in Bahia, Ceará, the Federal District and Spain each.

In relation to the type of approach, 19 studies are qualitative. The most used data collection instruments were: seven semi-structured interviews, five questionnaires and three focus groups. The main data analysis techniques were: 11 with Content Analysis and five with Thematic Content Analysis.

About the participants of the study, it was identified that: 13 studies were carried out only with students, eight only with professors and three with student and professors, both from Nursing Undergraduate courses. As for the research scenario, 17 were developed in public universities, five in private universities, and, in two productions, the scenario was not informed.

To consider the critical evaluation of studies (step 4), Chart 3 was prepared, which shows the reference of each article with its respective code and level of evidence. It is noteworthy that, in the present ILR, the classification of evidence was used in a hierarchical manner, referred to by Fineout-Overholt and Stillwell (2011 apud PAULA, PADOIN; GALVÃO, 2019), in which the level and type of clinical issue of the primary study/included study was taken into account.

The classification of hierarchical evidence levels is in three types: evidence directed to treatment/intervention with seven levels (L1- L7); evidence directed to prognosis or etiology with five levels (L1- L5); and evidence directed to experience or meanings with five levels (L1- L5). It should be mentioned that the hierarchy of evidence levels is represented in the design of a pyramid, with the top level as the first level with the highest rating and, at the bottom, the last level with the lowest ranking of evidence. That is, the closer to the top of the pyramid, the greater its representativeness in scientific research and knowledge area; the closer to the base, the lower this representativeness (Fineout-Overholt; Stillwell, 2011 *apud* Paula; Padoin; Galvão, 2019; Stillwell *et al*., 2010).

Chart 3 – Code, reference and level of evidence/clinical question of the scientific articles included in the corpus of the Integrative Literature Review

Code	Reference	Level of evidence/Clinical question
A1	MAESTRI, Eleine *et al*. Teaching strategies in undergraduate nursing courses: an approach to non-communicable chronic diseases. *Cienc Cuid Saude*, v. 19, n. e50388, p. 1-8, 2020.	L6 (Treatment/Intervention)
A2	FABBRO, Márcia R. C. *et al*. Active teaching and learning strategies: perceptions of nursing students. *Rev Min Enferm*, v. 22, p. e-1138, p. 1-8, 2018.	L4 (Meaning/Experience)
A3	MELO, Bárbara C.; SANT'ANA, Geisa. The practice of active methodologies: student's comprehension while author of teaching-learning process. *Com Ciências Saúde*, v. 23, n. 4, p. 327-339, 2012.	L4 (Meaning/Experience)
A4	AMESTOY, Simone C. *et al*. Fragilities and potentialities in the training of nurse leaders. *Rev Gaúcha Enferm*, v. 42, n. esp, p. 1-10, 2021.	L2 (Meaning/Experience)
A5	PINTO, Antonio G. A. *et al*. Perceptions of nursing students on the use of the reflective portfolio. *Enferm Foco*, v. 11, n. 3, p. 61-68, 2020.	L2 (Meaning/Experience)
A6	SILVA, Douglas O. *et al*. Teaching strategies for learning about sepsis. *REUFSM*, v. 10, e.17, p. 1-18, 2020.	L6 (Treatment/Intervention)
A7	OLIVEIRA, Karime R. E. *et al*. The teaching approach on communicative skills in different teaching methodologies. *Rev Bras Enferm*, v.5, p.2447-53, 2020.	L2 (Meaning/Experience)
A8	DALCÓL, Camila *et al*. Communication skills and teaching-learning strategies: perception of nursing students. *Cogitare Enferm*, v. 3, p. 743, 2018.	L2 (Meaning/Experience)

Code	Reference	Level of evidence/Clinical question
A9	*MESQUITA, Simone K. C; MENESES, Rejane M. V.; RAMOS, Déborah K. R. Active teaching/learning methodologies: difficulties faced by the faculty of a nursing course*. *Trab Educ Saúde*, v. 14 n. 2, p. 473-486, 2016.	L4 (Prognosis/Etiology)
A10	OLIVEIRA, Karime R. E; BRAGA, Eliana M. The development of communication skills and the teacher's performance in the Nursing student's perspective. *Rev Esc Enferm USP*, v. 50, n. esp. P. 032-038, 2016.	L4 (Prognosis/Etiology)
A11	GOMES, Daiana M. *et al*. Methodology of problematization- Applicability in the teaching of fundamental nursing. *Research, Ociety and Development*, v. 10, n. 6, p. e34510615378, 2021.	L4 (Prognosis/Etiology)
A12	COLARES, Karla T. P; OLIVEIRA, Wellington. Use of active methodologies from the perspective of undergraduate nursing students. *Revista SUSTINERE,* v. 8, n. 2, p. 374-394, 2020.	L4 (Prognosis/Etiology)
A13	RIBEIRO, Kátia R. B. *et al*. Influence of playfulness in nursing education: an action research. *R pesq: cuid fundam online*, v. 12, p. 751-757, 2020.	L2 (Meaning/ Experience)
A14	PAIM, Aramasi S.; IAPPE, Nadine T.; ROCHA, Daniele L. B. Teaching methods used by teachers of nursing: focus on questionable methodology. *Enfermería Global*, v. 14, n. 1, p. 153-169, 2015.	L4 (Prognosis/Etiology)
A15	CLAPIS, Maria J. *et al*. Problematization methodology in primary healthcare teaching. *Rev Bras Enferm*, v. 71, n. suppl 4, p. 1768-1774, 2018.	L4 (Prognosis/Etiology)
A16	CAVEIÃO, Cristiano; PERES, Aida M.; ZAGONEL, Ivete P. S. Teaching-learning tendencies and strategies used in the leadership development of nurses. *Rev Bras Enferm*, v. 71, suppl 4, p. 1622-1630, 2018.	L4 (Prognosis/Etiology)
A17	ENDERLE, Cleci F. *et al*. Teaching strategies: promoting the development of moral competence in undergraduate students. *Rev Bras Enferm*, v, 71, n. suppl 4, p. 1747-1753, 2018.	L4 (Prognosis/Etiology)
A18	MESSAS, Jussara T. *et al*. The educational environment of the undergraduate nursing course from the student perspective. *Rev Esc Enferm USP*, v. 49, n. esp 2, p. 106-114. 2015.	L4 (Meaning/ Experience)
A19	CASTRO, Talita C.; GONCALVES, Luciana S. The use of gamifi cation to teach in the nursing fi eld. *Rev Bras Enferm*, v. 71, n. 3, p. 1101-1108, 2018.	L4 (Meaning/ Experience)
A20	DAVI, Flavio S. *et al*. *Evolução para a práxis emancipatória: desenvolvimento do método de simulação realística no ensino de graduação em enfermagem*. *Online braz j nurs (Online)*, v. 17, n. 1, p. 127-139, 2018.	L4 (Prognosis/Etiology)
A21	TAVARES, Claudia M. M. *et al*. Innovations in the teaching-learning process of psychiatric nursing and mental health. *Rev Bras Enferm*, v.74, n. suppl 5, p. e20200525, 2021.	L2 (Meaning/ Experience)
A22	PARANHOS, Vania D.; MENDES, Maria M. R. Competency-based curriculum and active methodology: perceptions of nursing students. *Rev Latino-Am Enfermagem*, v. 18, n. 1, p. 07 telas, 2010.	L4 (Prognosis/Etiology)
A23	MEIRA, Maria D. D.; KURCGANT, Paulina. Nursing education: training evaluation by graduates, employers and teachers. *Rev Bras Enferm*, v. 69, n. 1, p 16-22, 2016.	L4 (Prognosis/Etiology)
A24	ARRUE, Marta; CABALLERO, Silvia. *Ensinar habilidades para resolver conflitos com pacientes com síndrome confusional aguda em enfermagem utilizando o método de caso (MC). Nurse Education Today*, v. 35, p. 159-164, 2015.	L6 (Treatment/ Intervention)

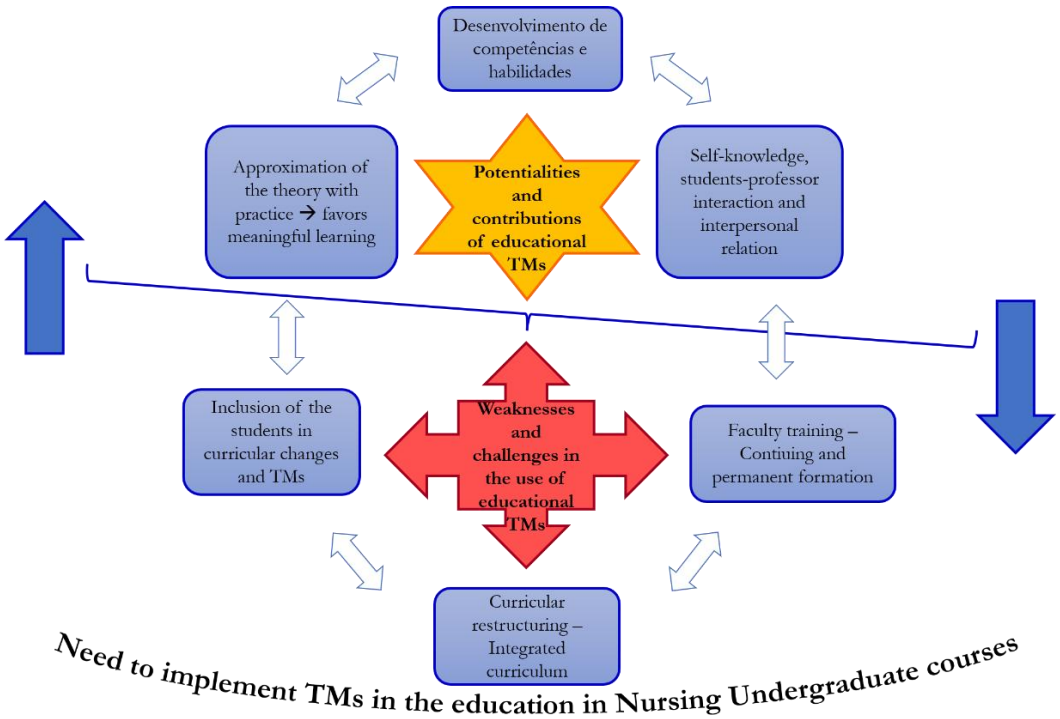
Source: created by the author.

Regarding the analysis of the classification of scientific evidence and according to the clinical issue of each primary study included in the ILR, it was evidenced: 11 studies of L4 (Prognosis/Etiology), six studies of L2 (Meaning/Experience), four studies of L4 (Meaning/Experience) and three studies of L6 (Treatment/Intervention). Thus, it is perceived the need for studies with higher levels of evidence (N1 and N2), because, of the 24 articles, six indicated positive evaluation concerning the scientific evidence in primary research on the use of active teaching methodologies in the teaching practice in the Nursing Undergraduate courses.

After the critical evaluation (levels of evidence), there was the analysis and synthesis of the review results (step 5) (FIGURE 3). It is noteworthy that, according to the theoretical framework used for this ILR (Paula; Padoin;

Galvão; 2019), the results are presented in a systematic way and then described and discussed with the relevant literature of the area of scientific knowledge.

Figure 3 – Analysis and synthesis of results on the use of active teaching methodologies in teaching practice, in Nursing Undergraduate courses



Source: Prepared by the authors

The following is a synthesis of knowledge, composed by presentation/dissemination of results and discussion with the literature. The limitations and recommendations for decision-making are also presented (CHART 5), as well as the conclusion of the ILR **(step 6)**.

The synthesis of the knowledge of this ILR evidenced that the use of active teaching methodologies (TMs) in teaching practice in nursing undergraduate courses is directed especially to two topics: the potentialities and contributions of TMs and the weaknesses and challenges for the use of TMs. These topics will be presented and discussed as follows.

The **potentialities and contributions of the TMs** that stand out are: the approximation of theory with practice, favoring meaningful learning; the development of skills and abilities; and self-knowledge, interpersonal relationship and student-professor relationship.

The potentialities and contributions, in general, are consistent with the learning that students acquire when professors develop their pedagogical practices in nursing higher education through TMs (A2; A4). There is also the appreciation of the student during his/her training process (A3), since his/her curiosity to carry out research on a certain subject arises, expanding the sources of knowledge (A11). Thus, the development of evidence-based practices related to specialized areas in Nursing (A6), sensitizing the student for decision making to perform humanized and ethical actions as well to develop critical and reflective thinking (A7).

For the use of TMs to become potential and contribute significantly in Nursing Undergraduate courses, there is need for positive involvement of institutional management and the course itself (A20). The institution needs to provide adequate physical conditions and structure, such as the construction and structuring of simulation laboratories, so that students and professors can develop theoretical-practical activities with TMs (A18; A20). The

course coordination needs to promote discussions among professors by offering training (courses, debates, workshops...) that deal with TMs in pedagogical practices (A20).

It should be noted that, of the 24 articles included in the study, 14 directly evidenced some TMs with their respective potentialities and contributions during pedagogical practices, which will be presented in Chart 4.

Chart 4 – Active methodology, contributions and potentiality in the nurse's initial training

Active Methodology	Contributions and potentialities
Portfolio	- Used as an assessment, enabling a stronger bond between students and the teacher (A1). - Quite significant for students, as it provides knowledge already acquired and reconstruction of new knowledge, articulating theory with practice (A5; A15; A22). - Enhances communication skills (A7).
Case studies	- Used as an assessment and study extension, during theoretical-practical activities in the classroom and in health services (A1).
Problem-Based Learning (PBL)	- Recommended for laboratory simulation activities with the aim of improving the articulation of theory with practice (A2; A8; A14; A15). - Contributes to the student's contact with the profession and the world of work, at the beginning of the course (A15). - Contributes to verbal expression, especially in small groups (A8).
Problematization	- Contributes to a critical view of reality and problems, preparing students to play the role of professionals and citizens in their environment, especially with regard to the need to change from the "dominant biomedical model to a holistic model", with a systematic and reflective view of care (A11). - Contributes to verbal expression, especially in small groups (A8).
Seminars, PBL, Problematization, simulations in health environments	- Favor the development of communication skills (A7; A11).
Board games	- Provides significant learning on the topic (A13).
Simulated jury	- Contributes to the discussion and strengthening of group work (A16).
Role-playing	- Develops the following skills: therapeutic communication, ethical decision-making, empathy with culturally diverse patients, clinical reasoning and problem-solving (A16).
Project-Based Learning (PBL)	- Promotes self-learning, enabling the practical application of acquired knowledge (A16).
Gamification	Innovative nature with the potential to increase students' interest in the class or in remaining on the course, stimulating interactivity (A19).
Case Method	- Contributes to the acquisition of skills that every nurse will need during their career, enabling teachers to evaluate individual participation and the performance of small groups (A24).
Realistic simulations, problem situations, clinical cases or problematization, feedback	- Enhance learning (A4; A19).

Source: created by the author.

As for the **approximation of theory with practice**, the use of TMs provides a closer contact with the reality of the service, favoring meaningful learning (A3) and providing greater articulation between the contents of the disciplines and the specific knowledge of the profession (A12). In this perspective, TMs are seen as facilitators of learning by relating theory to practice (A14; A15).

The execution of pedagogical practices with TMs provides the development of reflections on learning and its meanings in the perception of students (A5). In this bias, significant learning contributes to the initial training of nurses with quality (A13; A17; A23).

By being inserted in the educational context, TMs stimulate the teaching and learning processes, provide the student not only participation, but also commitment to their own learning. In this sense, it is reaffirmed the need to integrate theory into practice in order to prioritize the training by competences of the future nurse (Duque *et al*., 2019). Therefore, it is also reiterated that TMs enable the formation of more humanized professionals, autonomous, conscious and prepared for the challenges of their profession (Duque *et al*., 2019; Mocarzel; Rangel, 2021).

Regarding the **development of skills and abilities**, A1 evidences that both professors and students affirm that the use of TMs during classes is effective to develop skills and optimize time use. A3 points to the development of specific skills, such as: autonomy, clinical reasoning, teamwork, increased responsibility, better communication with the community and health service and empowerment.

Communication was the skill most evidenced in the studies included in the ILR (A3; A7; A10; A12; A15; A22). The publications point out that the use of TMs strengthens and favors the communicative process and the development of communication skills (A7), since this approach requires a greater interaction of students with the health teams with which they develop the practices (A3; A10; A15). Moreover, this skill is also required in the presentations of work during training (A12), observation and writing about health data/information collection and the ability to develop critical awareness (A22).

Therefore, TMs enable students not only to understand the skills of the nurse, but also to realize how these skills can be used during their training process (A11). In addition, they contribute to the development of moral and ethical competence for conflict resolution, and to critical and reflective thinking about the domain of scientific knowledge, stimulating clinical reasoning (A17).

In general, TMs work as an effective and efficient communication network that provides autonomy and logical skill to the student. In the interaction between the student and the subject studied, the application of this methodology allows the student to listen, talk, ask and discuss about the subjects in question. Thus, it is possible to emphasize that they help in the recreation of collective knowledge and facilitate creative thinking, basing the whole process on dialogue and exchange of knowledge (Duminelli et al., 2019).

Other potentialities and contributions in the initial training of nurses, in the execution of pedagogical practices with the use of TMs, are directed to self-knowledge of the student, in student-professor interaction and interpersonal relationship. As for **self-knowledge**, the student shows his/her own growth as a human being and citizen, learning to listen and respect different opinions of his/her colleagues and the professor, demonstrating greater interest and sensitivity in human relations, in overcoming obstacles and developing autonomy (A2).

Students have greater ease to report their doubts, their desires, their concerns and their challenges in the first academic experiences, realizing their progression with greater security, tranquility and confidence during the training process (A21). Furthermore, TMs stimulate self-study, integration between biopsychosocial dimensions, decision-making and ease in helping colleagues, in making and receiving criticism, in working as a team (A3). It is also necessary to consider that the TMs favor the adaptation of the student to the new life cycle he/she experience, the vocational training.

Self-knowledge is a fundamental element, both for the personal evolution and professional growth of a person, thus emphasizing that, in the scenario of TMs, the student puts him/herself in the main role and not in the secondary position of grinding his/her own knowledge. A characteristic of self-knowledge is the independence before the facts, in the resolution of doubts, in obtaining information (Diesel; Baldez; Martins, 2017).

As for the **student-professor interaction**, TMs present greater ease when compared with traditional methodologies, because they show the improvement of pedagogical practices (A12). The use of TMs in teamwork provides greater contact and approximation with other colleagues, which facilitates academic daily life with the professor (A5). Thus, greater interaction between those involved and participation in discussions in activities developed in groups are promoted, contributing once again to the construction of knowledge and commitment to reflection and action (A13).

In order to establish teaching and learning processes in a solid and instigating way in the area of nursing, it is necessary to build a bond between those involved in the educational process and that the previous model is gradually replaced. In the traditional model of learning, the professor was the center of teaching, but with the pedagogical innovations, the student took responsibility for his/her learning, which strengthens the interaction between students and professors, since the latter takes the place of mediator in educational practice (Pfeffer, 2021).

Interpersonal relationships strengthen not only initial academic training, but also contribute to the experience of daily life and professional work. This is because the stimulus to the development of relationship skills during graduation facilitates the development of their activities in the field of action as human beings, nurses and team leaders (A5).

In this perspective, TMs contribute to interpersonal relations, since they are aimed at the insertion of collaborative activities, such as work in small groups, aiming at student-professor interaction, in the context of an active, collaborative, humanized and ethical teaching (A21). Given this, it is important to highlight the *communication* factor as a key piece for a good relationship. In addition to communication, characteristics such as sympathy and collaboration among professionals are also fundamental to better determine human interaction in a teamwork (Pelisolli; Bona, 2017).

In relation to the weaknesses and challenges for the use of educational TMs, the following points were evidenced: the lack of the faculty training, as continuous and permanent training; the need for curricular restructuring through an integrated curriculum; the inclusion of students in curricular changes and application of TMs during their academic training; and the need to implement TMs in Nursing Undergraduate courses.

Although it is essential to insert innovative strategies in the teaching and learning process in the context of current education, higher education professors still face difficulties in using TMs in their pedagogical practices (A1). Studies show that the main difficulties faced by professors of Nursing Undergraduate courses are to carry out training on TMs and insert them into the theoretical-practical context of their pedagogical activities (A1; A2; A3; A9; A14; A21).

Thus, the faculty training appears as a weakness and challenge in the development of pedagogical practices with the use of TMs, since professors often do not make the articulation of theory with practice so easily (A2). Many professors have difficulties in understanding the applicability and/or resistance in the implementation of TMs, requiring continuing training (courses, improvement, specializations, among others) and/or pedagogical training by the institution/ continuing education (A9).

This need for faculty training in relation to the articulation of theory with practice was also evidenced in the study of A21, in which many professors had difficulties to articulate the educational institution with health services due to lack of access to situations-problems faced in the daily work of professionals who worked in health services and related areas. This limits the carrying out of actions in an interdisciplinary way and, consequently, undermines the link between teaching-service-community triad and the articulation of theory with practice (A21).

Faculty training contributes to the quality of the educational process of the future professional, making the construction of knowledge more active and attractive to students, taking into account the needs of the contemporary labor market (A9; A14; A18). Being well qualified, the professor provides students with new didactic strategies and enables greater learning, playing a role of facilitator in the educational process (A18).

The professor needs to be prepared and trained to meet the demands, pointing to new possibilities of innovation in the development of pedagogical practices. The professor is responsible for monitoring, mediating, analyzing results and gaps in the training process. Therefore, he/she must be able to develop and assume the importance of his/her role in the context of higher education in nursing (PFEFFER, 2021).

The curricular restructuring was evidenced as another weakness and challenge in the educational process in higher education of nursing. For the use of TMs to occur in a systematic and integrated manner in the Nursing Undergraduate Courses, this approach needs to be contemplated in the curriculum (A1). The professors point out how much the implementation of an integrated curriculum with the use of TMs can contribute to the development of skills and abilities during the initial training of nurses (A8; A22).

Another point made by professors in some studies deals with the importance and need to systematize, in pedagogical practices, the evaluative activities in the course curriculum (A2; A9). This systematization is another element that can provide greater participation of students in an active way in the classes, exposing their opinions and reflections (A2).

The implementation of an integrated curriculum through TMs allows the integration of scientific knowledge in an interdisciplinary way, favoring the articulation of acquired knowledge with reality. Moreover, this integration,

considered as an indicator in the evaluation of the quality of education in several countries, will raise the level of student engagement in the activities proposed by the professor (A12).

Based on the scenario presented, it is reaffirmed that the curricular restructuring is necessary, because the clinical factors are fundamental for training focused on the potential of the individual, as well as for the identification of health needs and local and regional problems, mainly. In addition, it is important to highlight that, with the application of TMs, there is greater integration of scientific knowledge in an interdisciplinary manner (QUADROS; CALOMÉ, 2017).

In this context, the lack of **inclusion of students in curricular changes and in the application of TMs** during their academic training is also a weakness and challenge in pedagogical practice (A3; A12; A18; A20). Studies show that some students have a deficit in knowledge about what TMs are and their importance for training. Other studies suggest that professors develop more attractive classes, so that students show greater interest in participating in the discussions, and that students themselves claim to learn better when classes are developed through TMs (A3; A12).

Thus, it becomes relevant the insertion of the student in training or institutional events that address what TMs are, their objectives, their potential and contributions to the vocational training process, because some students, professors have resistance to change (A18).

Therefore, this will facilitate the implementation of new pedagogical practices with the use of TMs, contributing to the articulation of theory and practice, to the development of realistic simulation in the educational institution, to increase the student's interest in seeking knowledge, for the professor's involvement in teaching and learning processes, and to expand the scientific production of those involved: students and professor (A11; A20).

Weber (2018) confirms the need to include students in the curricular changes and application of TMs in the process of teaching Nursing. For the author, students need to participate in this process of change during their training, because this will contribute positively to their profile of egress in the institution, since they can exercise a differentiated role in the labor market of the profession.

Finally, in relation to the **limitations and recommendations** for decision-making of the studies analyzed in this ILR about the use of TMs in Nursing Undergraduate courses, it was evident that the limitations are directed to the following aspects: low number of participants in the studies; the scenario considered in the research was limited to only one educational institution; few scientific productions on the subject; importance of the articulation between theory and practice.

Among the **recommendations**, the following can be highlighted: conduction of a research on the use of active methodologies in Nursing teaching, with the development of innovative pedagogical practices; faculty training; curricular restructuring, pointing out the need to insert in teaching practice what is recommended in CPPs; importance of conducting studies also in the scenario of private education institutions; studies that perform comparisons of teaching with traditional methods with the teaching of active methods.

Final thoughts

The analysis of the 24 articles that deal with the use of TMs in teaching practice in Nursing Undergraduate courses revealed their potential and contributions, as well as their weaknesses and challenges. In this context, it is evident the relevance of implementing TMs in Nursing Undergraduate courses through a curriculum integrated by modules or curricular units.

For this, faculty training is essential, both through the encouragement of continuing education in an individual way and by the institutional offer of permanent education in a collective way. Therefore, the relevance of course management and coordination is highlighted, which should provide qualifications about this subject within the pedagogical schedules, so that professors can participate in the proposed activities. Thus, it will be possible to instigate the nurses professors about the importance of innovating their pedagogical practices in Nursing higher education.

Finally, it is reiterated that the changes presented throughout this study contribute significantly in the initial training of nurses, providing the development of skills and abilities that contribute to academic training, collaborating in the integration of theory with practice and human relations.

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References

BRASIL. Plenário do Conselho Nacional de Saúde. *Resolução n. 466, de 12 de dezembro de 2012.* Aprova as diretrizes e normas regulamentadoras de pesquisas envolvendo seres humanos.

BRASIL. Plenário do Conselho Nacional de Saúde. *Resolução n. 510, de 07 de abril de 2016*. Dispõe sobre as normas aplicáveis a pesquisas em Ciências Humanas e Sociais.

BRASIL. Plenário do Conselho Nacional de Saúde. *Resolução n. 573, de 31 de janeiro de 2018.* Recomendações do Conselho Nacional de Saúde (CNS) à proposta de Diretrizes Curriculares Nacionais (DCN) para o curso de graduação Bacharelado em Enfermagem.

BRASIL. Presidência da República. Congresso Nacional. *Lei n. 9.610, de 19 de fevereiro de 1998*. Altera, atualiza e consolida a legislação sobre direitos autorais e dá outras providências.

CAMAS, N. P. V.; BRITO, G. S. Metodologias ativas: uma discussão acerca das possibilidades práticas na educação continuada de professores do ensino superior. *Rev Diálogo Educ*, Curitiba, v. 17, n. 52, p. 311-336, 2017.

D'ARISBO, A. *et al*. Regimes de flexibilização e sentidos do trabalho para docentes de ensino superior em instituições públicas e privadas. *Trab Educ Saúde*, Rio de Janeiro, v. 16 n. 2, p. 495-517, 2018.

DIAS, M. A. M. Domínio das metodologias ativas por docentes de curso de graduação em Enfermagem. *Research, Society and Development*, Vargem Grande Paulista, v. 9, n. 8, p. e364985169, 2020.

DIESEL, A.; BALDEZ, A. L. S.; MARTINS, S. N. Os princípios das metodologias ativas de ensino: uma abordagem teórica. *Rev Thema*, Pelotas, v. 14, n. 1, p. 268-88, 2017.

DUQUE, K. A. S. *et al.* Importância da metodologia ativa na formação do enfermeiro: implicações no processo ensino aprendizagem. *Revista Eletrônica Acervo Saúde*, Ouro Fino, v. 36, n. 2, p. 50-57, 2019.

DUMINELLI, M. V. *et al*. Metodologias ativas e a inovação na aprendizagem no ensino superior. *Brazilian Journal of Development*, São José dos Pinhais, v. 5, n. 5, p. 3965-3980, 2019.

FINEOUT-OVERHOLT, E.; STILLWELL, S. B. Asking compelling, clinical questions. *In*: MELNYK, B. M.; FINEOUT-OVERHOLT, E. *Evidence-based practice in nursing & healthcare:* a guide to best practice. Philadelphia: Wolters Kluwer Health/Lippincott Williams & Wilkins; 2011. p. 25-39.

FONTES, F. L. L. A. *et al*. Utilização de metodologias ativas no curso de graduação em Enfermagem: uma oportunidade de superação do modelo de ensino tradicional. *Research, Society and Development,* Vargem Grande Paulista, v. 10, n. 1, p. e35410111774, 2021.

FONTES, F. L. L. A. *et al*. Enfermagem no ensino superior: estratégias utilizadas pelo enfermeiro docente para melhoria de suas práticas pedagógicas. *Revista Eletrônica Acervo Saúde*, Ouro Fino, v. 18, n. 18, p. e435, 2019.

MOCARZEL, M. S. M. V.; RANGEL, M. Por uma nova didática: discursos e narrativas no Ensino Superior. *Rev Diálogo Educ*, Curitiba, v. 21, n. 70, p.1097-1113, 2021.

PALHETA, A. M. S. *et al.* Formação do enfermeiro por meio de metodologias ativas de ensino e aprendizado: influências no exercício profissional. *Interface (Botucatu)*, Botucatu, v. 24, p. e190368, 2020.

PAULA, C. C.; PADOIN, S. M. M.; GALVÃO, C. M. Revisão integrativa como ferramenta para tomada de decisão na prática em saúde. *In*: LACERDA, Maria R.; COSTENARO, Regina G. S. *Metodologias da pesquisa para a enfermagem e saúde:* da teoria à prática. Porto Alegre: Moriá, 2019. p. 51-76.

PELISOLLI, C. S. C.; BONA, A. S. Metodologia de ensino e aprendizagem sobre relacionamento interpessoal no ambiente de trabalho. *Revista Thema*, Pelotas, v. 14, n. 1, 2017.

PFEFFER, R. S. Metodologias ativas aplicadas à cursos de capacitação. *Revista de Educação Universidade Federal de Pernambuco*, Caruaru, v. 7, n. 15, 2021.

STILLWELL, S. B.; *et al*. Evidence-based practice, step by step: asking the clinical question: a key step in evidence-based practice. *AJN, American Journal of Nursing*, New York, v. 110, n. 3, p. 58-61, 2010.

STERN, C.; JORDAN, Z.; MCARTHUR, A. Developing the review question and inclusion criteria: the first steps in conducting a systematic review. *AJN, American Journal of Nursing*, New York, v. 114, n. 4, p. 53-56, 2014.

QUADROS, J. S.; COLOMÉ, J. S. Metodologias de ensino-aprendizagem na formação do enfermeiro. *Revista Baiana de Enfermagem*, Salvador, v. 30, n. 2, p. 1-10, 2017.

VASCONCELOS, C. M. C. B.; BACKES, V. M. S.; GUE, J. M. La evaluación en la enseñanza de grado en enfermería en América Latina: una revisión integrativa. *Enfermería Global*, Murcia, v. 10, n. 3, p. 118-139, 2011.

VIEIRA, M. A. *et al*. Diretrizes curriculares nacionais do curso de graduação em enfermagem: implicações e desafios. *R pesq: cuid fundam online*, Rio de Janeiro, v. 12, p. 1099-1104, 2020.

WEBER, L. C. *Metodologias ativas no processo de ensino da Enfermagem:* revisão integrativa. 2018. Dissertação (Mestrado em Ensino). Lajeado: Universidade do Vale do Taquari, 2018.

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