



Active pedagogical strategies and contributions to health promotion teaching in universities

Estratégias pedagógicas ativas e contribuições para o ensino de promoção da saúde nas universidades

Estrategias pedagógicas activas y contribuciones para la enseñanza de promoción de la salud en las universidades

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ABSTRACT

Objective: To identify the contributions of active pedagogical strategies for the teaching-learning of health promotion in the university setting. **Methods:** This is an integrative literature review carried out in June 2021 and complemented in October 2022 with the combined use of the descriptors “universities” AND “health promotion” AND “teaching”, as arranged in the Medical Subject Headings (MeSH), with the search also being conducted with the respective synonyms in Portuguese. Searches were made on the Scientific Electronic Library Online (SciELO), Latin American and Caribbean Health Sciences Literature (Lilacs), Current Nursing and Allied Health Literature (Cinahl), Web of Science and Scopus databases accessed via Capes Journals Portal. **Results:** 4,414 documents were obtained, with the application of filters and full text reading culminating in a corpus of analysis of 7 articles distributed across Spain (n=1), United States (n=1), Taiwan (n=1) and Brazil (n=4). The most used active pedagogical strategies were developed from social media resources such as Facebook, Maguerez Arch and conversation circles, social tools such as WhatsApp, pedagogical workshops based on problematization, gamification, case-based learning and constructions shared from social media. **Conclusion:** The option for using active pedagogical strategies proved to be consistent with the profile outlined for the university context.

Descriptors: Universities; Health promotion; Higher Education Policy.

RESUMO

Objetivo: Identificar as contribuições de estratégias pedagógicas ativas para o ensino-aprendizagem da promoção à saúde no cenário universitário. **Métodos:** Trata-se de uma revisão integrativa de literatura realizada em junho de 2021 e complementadas em outubro de 2022 com a utilização combinada nos descritores “universidades” AND “promoção da saúde” AND “ensino”, no qual, paralelamente, realizou-se também a busca com os respectivos sinônimos em inglês dispostos no Medical Subject Headings (MeSH). Realizou-se o levantamento nas bases de dados Scientific Electronic Library Online (SciELO), Literatura Latino-Americana e do Caribe em Ciência da Saúde (Lilacs), Current Nursing and Allied Health Literature (Cinahl), Web of Science e Scopus por intermédio do Portal de Periódicos da Capes. **Resultado:** Obtiveram-se 4.414 documentos cuja aplicação de filtros e leitura de texto completo culminou em um corpus de análise de 7 artigos distribuídos entre Espanha (n=1), Estados Unidos (n=1), Taiwan (n=1) e Brasil (n=4). As estratégias pedagógicas ativas mais utilizadas desenvolveram-se a partir de recursos das redes sociais como Facebook, o Arco de Maguerez e rodas de conversa, ferramentas sociais como o WhatsApp, oficinas pedagógicas baseadas na problematização, gamificação, aprendizagem baseada em casos e construções compartilhadas de mídias sociais. **Conclusão:** A opção pelo uso de estratégias pedagógicas ativas se mostrou coerente com o perfil traçado para o contexto universitário.

Descritores: Universidades; Promoção da Saúde; Política de Educação Superior.



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Received on: 09/20/2021

Accepted on: 12/05/2022

RESUMEN

Objetivo: Identificar las contribuciones de estrategias pedagógicas activas para enseñanza/aprendizaje de promoción de la salud en el escenario universitario. **Métodos:** Se hizo una revisión integradora de literatura realizada en junio de 2021 y complementada en octubre de 2022 con la utilización combinada en los descriptores “universidades” AND “promoción de la salud” AND “enseñanza”, lo cual, paralelamente, se realizó también la búsqueda con los respectivos sinónimos en inglés dispuestos en el Medical Subject Headings (MeSH). Fue realizado el levantamiento en las bases de datos Scientific Electronic Library Online (SciELO), Literatura Latino-Americana y del Caribe en Ciencia de la Salud (Lilacs), Current Nursing and Allied Health Literature (Cinahl), Web of Science y Scopus por intermedio del Portal de Periódicos Capes. **Resultado:** Se obtuvieron 4.414 documentos cuya aplicación de filtros y lectura de texto completo culminó en un corpus de análisis de 7 artículos repartidos entre España (n=1), Taiwán (n=1) y Brasil (n=4). Las estrategias pedagógicas activas más utilizadas se desarrollaron a partir de recursos de las redes sociales como Facebook, el Arco de Maguerez y charlas, herramientas sociales como WhatsApp, talleres pedagógicos basados en la problematización, gamificación, aprendizaje basada en casos y construcciones compartidas de medios sociales. **Conclusión:** La opción por el uso de estrategias pedagógicas activas se mostró coherente con el perfil trazado para el contexto universitario.

Descriptores: Universidades; Promoción de la Salud; Política de Educación Superior.

INTRODUCTION

The pedagogical process in higher education has undergone transformations, especially in the last decade, due to the insertion of new teaching methods that seek dynamic, interactive and effective ways to foster the building and sharing of knowledge with the aim of generating social transformations. In this context, pedagogical strategies are understood as viable operational proposals for teaching and learning in the contemporary world⁽¹⁾.

Active pedagogical strategies are operative tactics of educational knowledge whose implementation enables student protagonism in the construction of learning processes, thereby enabling the construction of scientific knowledge and fostering reflection on active educational practice. However, despite the use of active methodologies being viable proposals for teaching and learning, their implementation still faces barriers such as the banking model of education, the lack of training of teachers to implement active teaching practices and behavioral traits of students who, for having been used to other pedagogical proposals, begin to show no openness to new teaching strategies^(1,2).

The use of active pedagogical practices in the university context is already a reality worldwide. It is used as systematic and interactive content and makes students co-responsible to produce knowledge. Some examples include flipped classrooms, the use of dynamic digital technologies, videos and peer assessment, which lead to increased student satisfaction with the teaching and learning process⁽³⁾.

The use of active teaching methodologies in the national context is still recent despite experiences such as realistic simulation and team-based learning already happening frequently in addition to strategies that are still little addressed, such as gamification, rotation through learning stations, problem-based learning and project-based learning as didactics for the practical teaching of professionals^(4,5,6,7).

It should be noted that such implementation has guaranteed positive results in the teaching-learning process as it encourages students to reflect on active development, teamwork, brainstorming and cooperation in educational processes. It enables new forms of action and reflection of those involved and leads to transformation of autonomy, centralization and critical initiative, thereby breaking the traditional pedagogical aspects, strengthening the fundamental components of academic training and work environment^(3,4,8).

The use of active pedagogical methods can be focused on any topic. In higher education programs in the health field, they have been increasingly applied with public health content, especially those related to health promotion⁽⁹⁾.

Health promotion is understood as the analysis of different types of approaches that focus on habits, behaviors, lifestyles and disease prevention, which, combined with the university scenario, tends to positively impact the training process, especially due to the possibility of creating knowledge multipliers^(10,11,12).

This study is justified by the need to modify pedagogical practices in higher education, especially those related to topics that have a significant impact on the students' health. Furthermore, it is important to emphasize that student protagonism in active methodologies can also influence not only professional practice but also their life story based on the premise that “it is necessary to develop in the individual the ability to undertake their own purposes”, with health and well-being being part of this great objective⁽¹³⁾.

Therefore, the objective of this study is to identify the contributions of active pedagogical strategies to the teaching and learning of health promotion in the university setting.

METHODS

This is an Integrative Literature Review (ILR) conducted in six distinct steps: 1. definition of research question; 2. selection of inclusion and exclusion criteria for studies; 3. selection of information that contributes to the categorization of articles; 4. construction of the article inclusion flowchart including evaluation and eligibility; 5. analysis of the collected articles; 6. presentation of selected articles in a synoptic table⁽¹⁴⁾.

As a first step of the ILR, the research question was defined as follows: What are the contributions of active pedagogical strategies to teaching and learning of health promotion in the university setting?

In the second step of the ILR⁽¹⁴⁾, the following inclusion criteria were defined: 1. publications in Portuguese, Spanish, and English with no time frame restriction; 2. publications in article format; 3. publications with full texts available online. In addition, the following exclusion criteria were also established: 1. publications that did not answer the research question; 2. duplicate publications; 3. literature reviews, reflective texts, and theoretical papers.

In the third step of the ILR⁽¹⁴⁾ the information to be extracted from the studies was defined and it included: title, country of origin, year, database, objectives, and prevalent themes.

The search was carried out in June 2021 and complemented in October 2022 on the Scientific Electronic Library Online (SciELO), the Latin American and Caribbean Health Sciences Literature (Lilacs), the Web of Science, and Scopus databases accessed via the Capes Journals Portal. The academic-scientific relevance contributed to the choice of these databases. To identify the findings, the following Boolean operation was used: (Universities AND Health promotion AND Teaching).

The fourth step of the ILR was the construction of the article inclusion flowchart, including evaluation and eligibility. It should be noted that this step was carried out through the evaluation of three independent reviewers using the Rayyan platform^(14,15). To illustrate the flow of inclusion and exclusion of studies in this ILR, the PRISMA flowchart was used⁽¹⁶⁾. The article inclusion flowchart is shown in Figure 1.

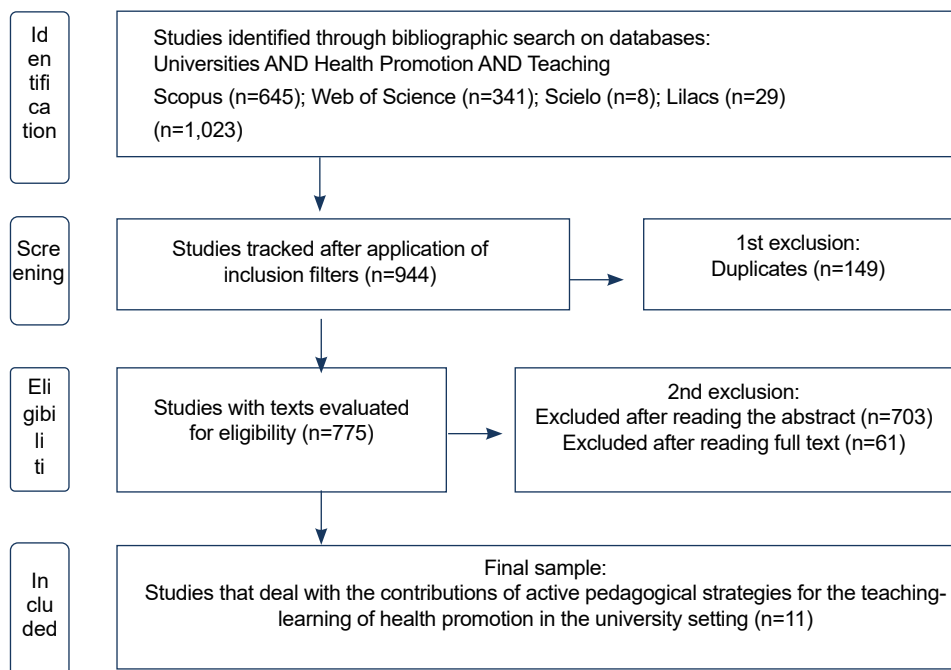


Figure 1 - Flowchart with representation of eligibility and inclusion of articles in the study selection. Source: Author's own elaboration. Model adapted from PRISMA flowchart⁽¹⁶⁾

In the fifth step of the ILR, the analysis of the collected articles was carried out taking into consideration ethical aspects and respecting the authorship of the ideas, concepts and definitions pointed out by the authors. The separation of relevant studies occurred by incorporating the inclusion and exclusion criteria from the first search result and then by reading the titles and abstracts and the publication as a whole.

Finally, in the last step of the ILR, the review was presented in a synoptic table to summarize the most relevant findings. The variables selected to compose the table were: title, year, country of origin, objective and prevalent themes.

RESULTS

A total of 1,023 articles were initially found. After applying filters and inclusion and exclusion criteria, the total was reduced to 944 studies. After screening, 149 manuscripts were excluded due to duplicity and later another 683 were excluded due to thematic irrelevance. In the last step of the analysis of the textual corpus, 61 articles were read in full and 11 of these were selected.

The studies presented here contribute to revealing the panorama of publications of articles that use different active pedagogical strategies for teaching and learning about health promotion at the university. Therefore, in order to analyze the selected studies, the teaching and learning approaches of each article were considered focusing on the various existing pedagogical strategies as the prism of this discussion. The summary of the articles analyzed can be found in Chart I.

Chart I - Research results (authorship, year of publication, title, place of publication, objectives, main results and pedagogical strategies listed).

Authors, title, country and year	Population	Objective	Pedagogical Strategies
Mascarenhas PM, Lopes VM, Silva MDS, Da Silva GR, Duarte ACS, Boery RNSO. Oficina pedagógica na construção de conhecimentos sobre arboviroses (Brazil, 2017) ⁽¹⁷⁾	10 students of the Biological Sciences program at a State University in the Southwest of Bahia.	To describe the use of the pedagogical workshop as a space for construction, reflection and problematization of reality.	Pedagogical workshop on the problematization of reality.
Pérez LIJ. Mejora de Hábitos de Vida Saludables en Alumnos Universitarios Mediante una Propuesta de Gamificación (Spain, 2017) ⁽¹⁸⁾	148 students from the Physical Activity and Sport Sciences program.	To improve healthy lifestyle habits in university students through an educational intervention based on gamification.	Gamification.
Paulino DB, Martins CC de A, Raimondi GA, Hattori WT. <i>WhatsApp</i> ® como Recurso para a Educação em Saúde: Contextualizando Teoria e Prática em um Novo Cenário de Ensino-Aprendizagem (Brazil, 2018) ⁽¹⁹⁾	Students in the Public Health III module of the Medicine program at the Federal University of Uberlândia.	To share a successful experience using the multiplatform messaging and voice application, WhatsApp®, in the UFU Medicine program.	Active method interpretation with the multiplatform application WhatsApp®.
Bernardes VP, Dias LF, Pereira MA, Fernandes ME, Raimondi GA, Paulino DB. <i>Facebook</i> ® como Ferramenta Pedagógica em Saúde Coletiva: Integrando Formação Médica e Educação em Saúde (Brazil, 2019) ⁽²⁰⁾	49 Students of the Public Health III curricular unit of the Medicine program at the Public University of Minas Gerais.	To report the experience – hitherto unprecedented in the literature – of using a Facebook® page in a Health Education module in the media of a Public Health curricular unit in the third year of the Medicine program at a Brazilian federal university.	Active method interpretation with the social media platform Facebook®.
Dias LF, Vargas LG, Silva GM e, Souza TG de, Santos CAG, Raimondi GA, et al. Promoção da Saúde: Coerência nas Estratégias de Ensino-Aprendizagem (Brazil, 2019) ⁽²¹⁾	65 students of Public Health in Medicine at the Federal University of Brazil.	To report the experience of a Health Promotion and disease prevention unit of a Public Health curricular component.	Problematization in the construction of the Maguerez Arch and conversation circles.
Wallace H, VanderMolen J. Teaching Health Education Through the Development of Student-Centered Video Assignment (United States, 2019) ⁽²²⁾	15 students of the Grand Valley State University introductory undergraduate public health program.	To explore the ways in which a student-centered video assignment enhanced student learning about how to develop and teach a health education plan designed to address a complex public health problem.	Researchers' interpretation of the student-centered video assignment/reflective groups.

Authors, title, country and year	Population	Objective	Pedagogical Strategies
Chang YY, Chen MC. Using Reflective Teaching Program to Explore Health-Promoting Behaviors in Nursing Students (Taiwan, 2020) ⁽²³⁾	57 second-year Nursing students from a university in Northern Taiwan.	To explore the experiences and factors that affect health-promoting learning with reflective teaching in Nursing students.	Use of the active method of reflective evaluation, engagement and action-reflection.
Al-Natour A, AlNatour A, Ali RA, Alzoubi F, Almomani M, ALBashtawy M Students' Perceptions and Experiences in a Health Promotion Course Using Interactive Learning (Jordan, 2021) ⁽²⁴⁾	16 students from a federal university in Jordan who were completing the Health Promotion module.	To describe students' experiences and perceptions of the Health Promotion program using an interactive learning approach.	Use of reflective groups and simulation methods.
Dadaczynski K, Tolks D. Digital Health Communication and Health Literacy in Times of COVID-19. Planning and Implementation of a Special Course of Study in Health Promotion and Prevention (Germany, 2021) ⁽²⁵⁾	Students of the Health Promotion program at a German university.	To report the experience of using active pedagogical strategies in teaching health promotion during the COVID-19 pandemic period.	Pedagogical workshop on the problematization of reality; Gamification; Flipped classroom using virtual strategies.
O'Hara L, Taylor J. Impact of the use of the Red Lotus Critical Health Promotion Model as a Pedagogical Framework on Health Promotion Graduates' Professional Practice: A Mixed Methods Study (Australia, 2022) ⁽²⁶⁾	Students and graduates of the Health Promotion module at an Australian university.	To report the impact of using a pedagogical framework for competency-based university graduates of health promotion programs at a regional Australian university.	Use of the active method of reflective evaluation, engagement and action-reflection.
Chong SCS, Anderson K, Mackenzie-Stewart R, Hobbs C, Conna B. Embedding Experiential Learning in Undergraduate Health Promotion Curriculum (Australia, 2022) ⁽²⁷⁾	Students of a community health promotion module offered at an Australian university.	To report the impact of using methodologies based on professional pedagogical practice for competency-based university graduates of health promotion programs from an Australian regional university.	Use of the active method of reflective evaluation, engagement and action-reflection.

With the final total of 11 articles, studies carried out in Spain⁽¹⁸⁾, United States⁽²²⁾, Taiwan⁽²³⁾, Jordan⁽²⁴⁾, Germany⁽²⁵⁾, Australia^(26,27) and Brazil^(17,19-21) were found. Approximately 18% of the articles were published in 2017, 9% in 2018, 27% in 2019, 9% in 2020, 18% in 2021 and the last 18% in 2022.

DISCUSSION

The incorporation of health promotion themes in Universities featured some pedagogical teaching and learning strategies that should be mentioned: social media resources such as Facebook^{®(20)}, social tools such as WhatsApp^{®(19)}, constructions shared from social media⁽²²⁾, pedagogical workshops based on problematization⁽¹⁷⁾, gamification^(18,25), Maguerez Arch and conversation circles^(21,24) and learning reflective assessment, engagement and action-reflection^(23,26,27).

For organizational purposes, these resources were divided into two categories, namely Category 1: Use of digital technologies for active pedagogical strategies; Category 2: Carrying out practices of active pedagogical strategies without the use of digital technologies.

Category 1: Use of digital technologies for active pedagogical strategies

The use of digital technologies for the implementation of active pedagogical strategies is already a widespread practice in the teaching-learning process. These are used in different ways depending on the objective. A study carried out in Spain used active methodologies in a virtual context for the digital literacy of young adults, in which the interaction between subjects was the main point associated with the success of the activity⁽²⁸⁾.

Specifically in the teaching-learning of health promotion, the use of Facebook demonstrated its relevance through the creation of a discussion page in which students from a public university in Minas Gerais made posts with a focus on health education while discussing cases and experiences related to the practice among peers⁽²⁰⁾.

Initiatives such as this one emphasize the protagonism of students since part of the student attribution is the selection of themes, the active search for scientific references, and the responsibility for disclosing and managing the page. Despite that, it is important to emphasize the challenge in creating tools that encourage the consumption of health information on social media since the abundant supply of content in the virtual scenario can be an unfavorable factor for initiatives of this nature. In addition, specialized supervision is also perceived as necessary for the dissemination of quality scientific content⁽²⁹⁾. One of the tools used to attract the reader is the sharing of music to listen to during exercise, as well as music for relaxation when sleeping in addition to discussion of emerging themes of interest by the target audience⁽³⁰⁾.

Facebook can also be used in academic settings to promote library services, reading groups and study groups. Thus, it is proposed to repeat this teaching-learning experience in other spaces and think of Facebook as an effective pedagogical strategy for developing skills and expanding and consolidating knowledge with the active participation of students, as they are fundamental subjects in this process inherent to the teaching and learning strategy⁽³¹⁾. It should be noted that in times of social isolation, the Facebook library service was able to meet an academic need for teachers and students who were unable to use libraries and physical collections for being away from college⁽³²⁾.

With regard to the use of WhatsApp as an active resource for health education, it was observed how this tool enhances discussions and ensures the flow of dialog in a non-formal space⁽¹⁹⁾. This strategy is already used in other scenarios such as Primary Health Care (PHC), whose implementation is aimed at health education groups for specific purposes, such as smoking cessation in the context of the pandemic⁽³³⁾.

The WhatsApp resource was also used in high school settings, such as, for example, in the teaching of Chemistry in a public state network in Porto Alegre, in which this technological virtual space allowed the exchange of videos, information and discussions about the themes in addition to expanding student-student, student-teacher, and student-technology interaction⁽³⁴⁾. The interaction between students and technology is the most evident in a strategy using social media and includes four main elements: deepening, thinking, discussing and observing, emphasizing the process of learning concepts and skills⁽²²⁾.

It is worth noting that in addition to the use of specific applications, digital technologies are now essential for health promotion practices. The speed in the dissemination of information and the urgency in the dissemination of new content – especially in the pandemic period – established digital technologies as allies of public health, not only for the dissemination of scientific content, but also for the identification of fake content⁽³⁵⁾.

Precisely in the pandemic period, universities established the virtual scenario as a possibility of continuity of theoretical teaching, requiring the use of various resources to achieve the proposed activity, as observed in the German experience in teaching health promotion, when games, synchronous classes, and flipped classroom were used⁽²⁵⁾.

In addition to the use of digital and social media, problem-based pedagogical workshops (PBL) were also carried out with a focus on teaching-learning health promotion. Problem-Based Learning (PBL) is known as critical thinking for assessment in solving complex real-world problems. The use of blogs, vlogs and podcasts as part of classroom teaching can improve student performance and foster reflection⁽³⁶⁾.

The problem-based learning (PBL) pedagogical workshops are spaces for construction, reflection and problematization of reality. The workshops provided opportunities for presentations, playful activities, development of an integrative panel, participatory and dialogued lecture, construction of a video with a summary of learning, parodies and a post-test to assess the knowledge and degree of satisfaction of the participants⁽¹⁷⁾.

It should be noted that the technological tools are great increments for the construction of strategies and active teaching methods, providing greater depth and interaction on the subject.

Category 2: Carrying out practices of active pedagogical strategies without the use of digital technologies

Carrying out educational practices without the use of digital technologies is a major contemporary challenge, especially when adapting to face-to-face teaching. In that regard, an active pedagogical strategy of great impact for the teaching-learning process is gamification. This can be understood as the use of game design elements in non-playful contexts⁽³⁷⁾.

In a gamification experience in teaching health promotion in Spain, the achievement of the proposed objective was observed as improvement in lifestyle resulted from the establishment of scavenger hunts and group games⁽¹⁸⁾. The

gamification strategy is an innovation used, above all, in the construction of games in teams using printed materials or projections in subjects where the result usually shows improvement in the interaction and socialization of students⁽³⁸⁾.

Another tool used in the establishment of active pedagogical practices is the use of the Maguerez Arch. The Brazilian experience provided students in the health area with a look at reality with a focus on autonomy and shared responsibility for teaching-learning in five stages: 1. observation of reality; 2. identification of problems; 3. theorizing; 4. solution hypotheses; 5. planning, application and execution of the action⁽²¹⁾. The construction of the Maguerez Arch allows students to reflect on the identification of problems of individual aspects and promotes playful activities based on health promotion through conversation circles⁽³⁹⁾.

In an elementary school scenario related to socio-environmental education among 6th graders, the Charles Maguerez Arch was used as a positive way to carry out a critical analysis at school and the observation of reality. Even the environment became a setting for the practice – for instance, the playground, which was previously just a space for leisure for students – allowing reflection on the importance of the environment⁽⁴⁰⁾.

It is also necessary to consider the reflective teaching program as a possible strategy used for teaching and learning health promotion. The experience with the use of the reflective strategy focused on engagement and action-reflection encourages the student to reflect before, during and after the practice of teaching^(23,26,27). With the use of reflective journals produced by the students, as well as with the use of simulation activities, it is possible to observe changes in lifestyle behaviors and the incorporation of massively spread health promotion content, with regular exercises, balanced and healthy diet and adequate water intake being the most significant changes observed^(24,41).

The present study contributes to the identification of pedagogical strategies of active teaching as catalyst elements in the teaching-learning process of health promotion in universities. In the social sphere, the interpretations of this study can serve to strengthen the professional identity of institutions, thus reinforcing their commitment to health promotion.

As a limitation we highlight the identification of a high number of investigations carried out during the pandemic period, but which were not associated with the object of study since the use of active methodologies in this period was restricted, mainly due to the technical limitations of teachers.

CONCLUSION

It was verified that it is feasible to use active pedagogical teaching-learning strategies in higher education focusing on the health promotion theme. Such use reinforces student protagonism, catalyzes social interaction and enables the change of habits and the multiplication of educational practices based on healthy styles.

CONFLICTS OF INTEREST

The authors state that there are no conflicts of interest in the development of this research.

FUNDING SOURCES

None.

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How to cite: Bispo LS, Carvalho RF, Faria MGA, Oliveira MTC, Melgoza F. Active pedagogical strategies and contributions to health promotion teaching in universities. *Rev Bras Promoç Saúde*. 2023;36:13132.
