RESEARCH

Environmental education in teaching-service-community integration practices: application of educational technologies in the waiting room

Educação ambiental nas práticas de integração ensino-serviço-comunidade: aplicação de tecnologias educacionais na sala de espera

Educación ambiental en prácticas de integración enseñanza-servicio-comunidad: aplicación de tecnologías educativas en la sala de espera

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ABSTRACT

Objective: to analyze the potential of the waiting room in Primary Health Care for environmental education in teaching-service-community practices through educational technologies. **Method:** a descriptive exploratory study, with a qualitative approach and documentary basis. Data collection occurred in December 2023, at a federal higher education institution in northern Brazil, including records of mandatory curricular activity and final monitoring report, which were submitted to content analysis in order to identify the documents relevant to coding, from which three categories emerged. **Results:** the data pointed out as potential: sharing of information among users, professionals, and students; improvement of cognitive skills; and user health and awareness promotion about environmental issues. The program offered for teaching qualification, in the sense of training for the Brazilian Health System, proved to be a tool for boosting interprofessional education. **Conclusions and implications for practice:** the study can contribute to identifying potential of the waiting room in teaching and learning about environmental education. It enables health training strategies from the perspective of education, health, and the environment.

Keywords: Educational Technology; Environmental Health Education; Nursing; Primary Health Care; Unified Health System.

RESUMO

Objetivo: analisar as potencialidades da sala de espera na Atenção Primária à Saúde para educação ambiental nas práticas de integração ensino-serviço-comunidade por meio de tecnologias educacionais. **Método:** estudo exploratório descritivo, com abordagem qualitativa e de base documental. A coleta de dados ocorreu em dezembro de 2023, em uma instituição de ensino superior federal da região Norte do Brasil, incluindo os registros de atividade curricular obrigatória e o relatório final de monitoria, que foram submetidos à análise de conteúdo, a fim de identificar os documentos pertinentes à codificação dos quais emergiram três categorias. **Resultados:** os dados apontaram como potencialidades: compartilhamento de informações entre usuários, profissionais e estudantes; aprimoramento de habilidades cognitivas; e promoção da saúde e sensibilização dos usuários sobre questões ambientais. O programa ofertado para qualificação do ensino, no sentido de formação para o Sistema Único de Saúde, mostrou-se uma ferramenta de impulso à educação interprofissional. **Conclusões e implicações para a prática:** o estudo pode contribuir para a identificação de potencialidades da sala de espera no ensino e na aprendizagem sobre educação ambiental. Viabiliza estratégias de formação em saúde na perspectiva da educação, da saúde e do meio ambiente.

Palavras-chave: Atenção Primária à Saúde; Educação em Saúde Ambiental; Enfermagem; Sistema Único de Saúde; Tecnologia educacional.

RESUMEN

Objetivo: analizar las potencialidades de la sala de espera en la Atención Primaria de Salud para la educación ambiental en las prácticas de integración enseñanza-servicio-comunidad mediante tecnologías educativas. **Método:** estudio exploratorio descriptivo, con enfoque cualitativo y base documental. La recogida de datos se realizó en diciembre de 2023, en una institución de educación superior federal de la región Norte de Brasil, incluyendo los registros de actividad curricular obligatoria y el informe final de monitoreo, que fueron sometidos a análisis de contenido, con el fin de identificar los documentos relevantes para la codificación de donde surgieron tres categorías. **Resultados:** los datos señalaron como potencialidades: el compartimiento de información entre usuarios, profesionales y estudiantes; la mejora de habilidades cognitivas; y la promoción de salud y sensibilización de los usuarios sobre cuestiones ambientales. El programa ofrecido para la cualificación de la enseñanza, en sentido de formación para el Sistema Único de Salud, se mostró como una herramienta de impulso a la educación interprofesional. **Conclusiones e implicaciones para la práctica:** el estudio puede contribuir a la identificación de potencialidades de la sala de espera en la enseñanza y aprendizaje sobre educación ambiental. Viabiliza estrategias de formación en salud desde las perspectivas de la educación, la salud y el medio ambiente.

Palabras clave: Atención Primaria de Salud; Educación en Salud Ambiental; Enfermería; Sistema Único de Salud; Tecnología Educacional.

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INTRODUCTION

Environmental education (EE) is a set of activities that aims to promote awareness and critical discussion on environmental issues, provided for in Brazilian Law 9.795/1999, which establishes EE as an essential public policy, ensuring its insertion in different educational levels and sectors of society.[1] This constitutes an effective strategy to promote sustainability and environmental responsibility in various areas of society, such as education, corporate, community and government,[2] and to promote health.[3]

In the educational field, in addition to curricular insertion in schools and universities, there is also the implementation of practical activities and field projects and the promotion of a culture of respect for the environment.[2] Discussions on EE and training should consider technical knowledge[2,3] and the construction of values, skills, attitudes and competencies aimed at conserving and improving the environment.[3]

In this context, nursing is a key agent within the scope of Primary Health Care (PHC) of the Brazilian Healthcare system (SUS - *Sistema Único de Saúde*), capable of carrying out care and prevention actions related to environmental issues,[3] through educational, collaborative and equitable practices, as established in the Brazilian National Curricular Guidelines (DCN – *Diretrizes Curriculares Nacionais*). These point to the need for training that incorporates respect for diversity and interdisciplinarity as well as a commitment to ethics, citizenship and access to health, which includes emerging themes and points out opportunities for developing socio-environmental, interdisciplinary and interprofessional practices.[4]

As a potential spatial resource in PHC, there is the waiting room,[5-8] where it is possible to implement educational actions,[5,8] given that it constitutes a strategic space in which professionals can carry out different health education themes, with attention to the population's particularities and health vulnerabilities associated with their territory and culture,[9] encouraging interprofessionalism and society participation.[8]

Therefore, integration constitutes a potential strategy to address EE issues,[1,2] such as solid waste management, which involves involvement of individual and collective care. In this scenario, professional training[3,9,10] should encourage strategies that help to use planned spaces to carry out health actions within services,[5,8] encouraging the development of skills and training for SUS.[8,9]

From this perspective, the processes involved in educational technology (ET) production, including teaching-learning processes, play an important role in communication, technological, educational and team management skills.[5] Furthermore, this encourages education and learning through research through critical and reflective exercises[11] demanded by these dynamics, such as associations with active methodologies,[12,13] regionalities and relationships with global indicators, considering the Sustainable Development Goals (SDGs), for instance.

Thus, observing the need for a movement to strengthen SUS,[13,14] the role of public higher education institutions (HEIs) in communities around them, qualified training and indicators of DCN for inclusive, equitable training that observes global demands,[15] such as the commitment of the planet and the environment in view of achieving the SDGs, and themes that need to be discussed more, such as food security, sustainable cities and EE,[16] the question emerged: how can public healthcare service spaces, such as the waiting room, have the potential to foster discussions on EE? To answer this question, the present study aimed to analyze the capacity of the waiting room in PHC for EE in teaching-service-community integration practices through educational technologies.

METHOD

This is a documentary, exploratory and descriptive study with a qualitative approach.[17] Documentary-based research involves exploring primary sources, which have not undergone interventions, constituting elementary sources for resolving relevant issues, such as training in higher education, following the COnsolidated criteria for REporting Qualitative research (COREQ).

The research was developed at a federal public HEI in northern Brazil, which has a program entitled "Undergraduate Education Qualification Support Program (PGRAD - *Programa de Apoio à Qualificação do Ensino de Graduação*)", Monitoring Subprogram, held since 2019, whose notice aims to leverage student participation in developing monitoring actions that aim at both academic-professional improvement and qualification of curricular activities of undergraduate courses through the proposal of innovative strategies. Professor and student monitor participation occurred through selection by public notices, offered every six months, which are structured over five months and linked to professors' curricular activities or their areas of activity. In this study, notices of actions related to the curricular activity Educational Processes in Health and Nursing (EPHN) were highlighted, which has a 120-hour workload, distributed in 45 hours for theory, 45 hours for practice and 30 hours for curricular extension.

The HEI has an agreement with the Municipal Health Department (SESMA - *Secretaria Municipal de Saúde*) of Belém (PA), through the Health Unit (HU) of Guamá, neighborhood, characterized by providing outpatient care through SUS and by having, in its physical facilities, a space called the Human Skills Laboratory (LHH), where practical classes for nursing and medical courses are held. In this HU, considering PHC coverage, the following services are offered: general clinical care; pediatrics; gynecology; dermatology; pulmonology; nursing consultations; prenatal care; heel prick test; vaccination; tuberculosis and leprosy tests; preventive cervical exam; and care for users with hypertension and diabetes through the HIPERDIA program.

The data sources for the studies were the EPHN teaching plan, the PGRAD final monitoring report and educational plans of four groups, from which assessment instruments and supporting documents from professors and EPHN were used. Partial reports from monitors and documents from other groups not assessed by professors were excluded.

Data collection took place in December 2023, in person and remotely, with the help of email, Google Drive® and WhatsApp®. To identify and organize the data, the researchers prepared an observation script, listing the points as follows: registered documents; developed flows; and themes addressed. Collection was carried out by the main researcher, under the guidance of a researcher with extensive experience in exploratory documentary examinations.

Data assessment was carried out through content analysis, which involves pre-analysis, material exploration, and processing and interpretation of results, in order to identify documents relevant to coding.[18] Through reading and systematizing the data, three categories and axes of appreciation related to the action in content analysis emerged. To present the recording and context units, maps, flowcharts and tables were constructed, seeking to establish relationships between the units identified in the developed processes, which generated three categories, discussed based on Paulo Freire's assumptions, aligned with the principles contained in the works *Pedagogia do oprimido* and *Educação como prática da liberdade*, reflecting an emancipatory educational approach.[19]

Documentation is available on the college's website and on the website of the Office of the Vice-Dean for Undergraduate Studies. Regarding data collection using email and WhatsApp®, this was carried out by the authors to carry out the study stages, which was supported by these devices. Thus, it is confirmed that they were used by the curricular activity as a pedagogical support mechanism for the purposes of skills training and teaching educational processes.

In these terms, the study was not submitted to an ethics committee, since, firstly, it used publicly accessible documents, and secondly, it falls within the sole paragraph: they will not be registered or assessed by REC/CONEP Resolution 510 of April 7, 2016, item VIII, activity carried out exclusively for the purpose of education, teaching or training without the purpose of scientific research of undergraduate students, vocational students or professionals in specialization.

RESULTS

As mentioned, from data analysis, three categories emerged: Methodological strategies produced from teaching about environmental education; Use of spaces within the Brazilian Healthcare system for environmental education; and Establishment of pedagogical practices for using educational technologies in teaching-service-community integration (Chart 1).

Category 1 - Methodological strategies produced from teaching about environmental education

In this category, it was possible to identify that the problem-based learning (PBL)[20] methodology was used as a critical professional training strategy, capable of intervening in environmental issues to improve the population's quality of life, using two elements of SUS health policies: innovation and leading role. This category points to two paths for skills training: recognition of the population's individual and collective health needs; and organization of educational processes. Thus, technologies were developed that consider interdisciplinary collaboration to gather knowledge, make situational diagnoses and assess processes.

Figure 1 presents the strategies adopted in this methodological path to achieve the notice objectives, considering the targets of the curricular activity guided by PBL.[20]

Chart 1. Analysis categories.

| Analysis categories	Thematic axes
Methodological strategies produced from teaching about environmental education	Problem-based education: application of problem-based learning in Primary Health Care
	Innovation in teaching methods: improvement of educational games
	Student leadership role: organization of planning, development of technologies for health education and implementation of educational practices
Use of spaces within the Brazilian Healthcare system for environmental education	Integrating public health and environmental education: information sharing and skills development
	Awareness raising: disease prevention, public health promotion and sustainability
	Implementation models: interactive lectures and production of informational material
Establishment of pedagogical practices for using educational technologies in teaching-service-community integration	Technology in education: a tool for discussing environmental issues
	Interdisciplinary collaboration: survey of sustainable concepts and practices in the literature
	Assessment and effectiveness: improving the educational process

Source: prepared by the authors (2024).
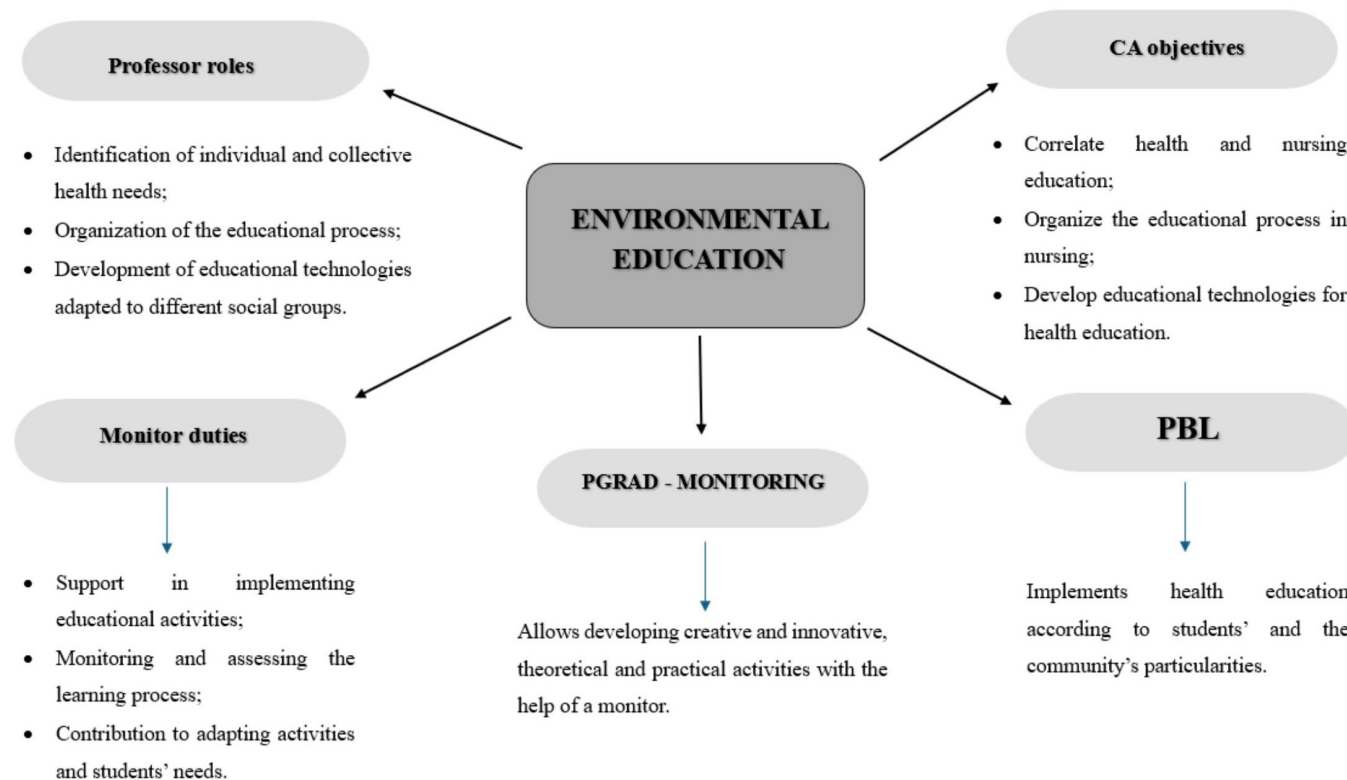
Figure 1. Mind map of strategies for insights between professors, monitors and objectives of curricular activity based on problem-based learning.
Source: prepared by the authors (2024).

The mind map developed in this study focuses on EE, emphasizing its importance in the context of health. At the first level, the vital role of professors stands out, which involves identifying individual and collective health needs, organizing the educational process, in order to create ET adapted to different social groups. This approach is complemented by specific objectives of the curricular activity, which seek to align EE with identified health needs. At the second level, the focus is on the role of monitors, including support for implementing educational activities, monitoring and assessment of learning processes as well as contributing to the adaptation of activities to students' needs. However, PGRAD is integrated into this scheme as an element that reinforces the quality of health education, conforming and complementing the teaching plan objectives. The map therefore reflects an integrated strategy, in which PBL[20] is used as a methodology to promote more effective health education that is more responsive to students' and the community's needs.

Category 2 - Use of spaces within the Brazilian Healthcare system for environmental education

In this category, it was possible to demonstrate that the waiting room is one of the opportune spaces of SUS for educational actions on the environment, enabling teaching-service-community

interaction among different audiences, genders and age groups dynamic there (Figure 2).

In the first point of our analysis, we observed teaching-service-community integration involving universities, Municipal Health Units and users. This interconnection provides a solid basis for the exchange of knowledge and experiences, enriching the educational process, which is essential to improving cognitive functions, such as memory, understanding and application. Moving on to the second point, using the waiting room as a learning environment is highlighted, which enhances cognitive functions of attention and perception.

The third point focuses on using reinforcement equipment and the detailing of the role of EE, incorporating specific methods and approaches, in which cognitive functions of analysis and synthesis are fundamental. In the fourth point, awareness emerges as a central objective, highlighting the importance of the functions of reflection and critical assessment. Finally, the fifth point describes implementation models based on strategies such as workshops, interactive lectures and informative materials, in folder or leaflet format, which present illustrations and texts in a conversational style, with the aim of addressing concepts, signs, symptoms, ways of preventing diseases and methods of correct disposal of solid waste adapted to the characteristics of waiting room
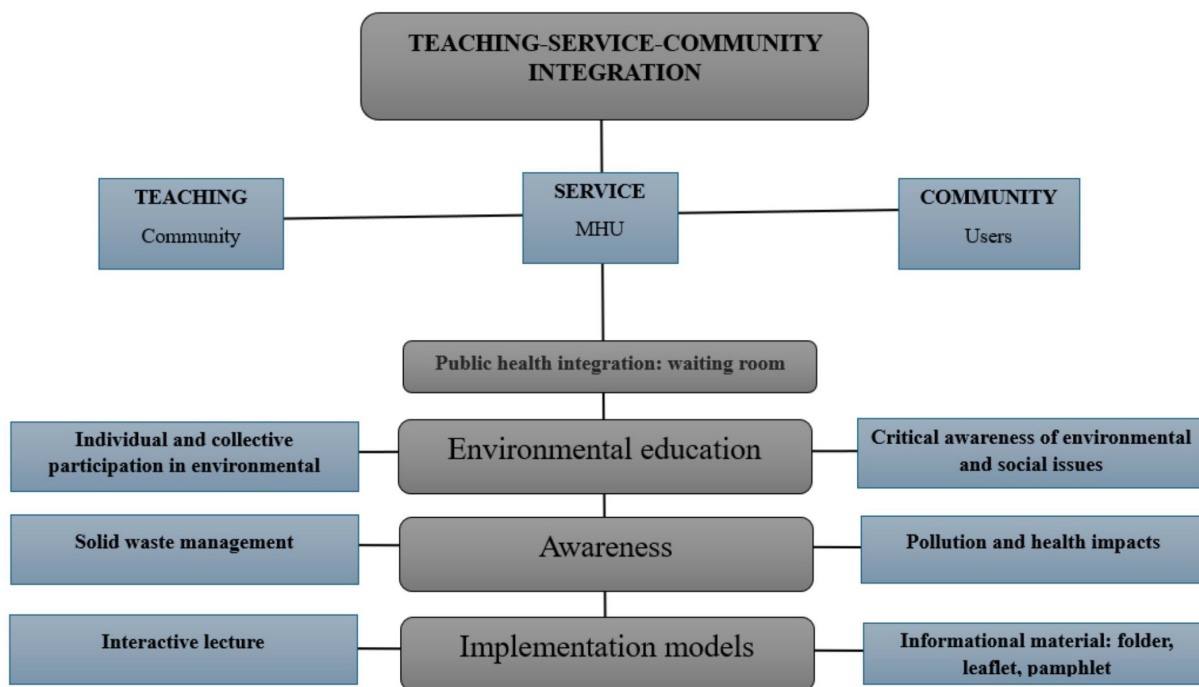
Figure 2. Flowchart of pedagogical intention for teaching-service-community integration through environmental education.
Source: prepared by the authors (2024).

audiences, essential to effectively apply learned EE concepts and practices, meeting creativity and problem-solving.

Category 3 - Establishment of pedagogical practices for using educational technologies in teaching-service-community integration

This category highlights teaching, service and community integration as a fundamental pillar in training healthcare professionals for SUS. It is integrated with the skills and competencies of students in health education contexts and in the application of innovative pedagogical practices. In this scenario, using ET allows us to respond to the regional health needs of communities, providing strategically planned interventions. In particular, spaces such as waiting rooms in public healthcare services have potential for interactive learning, and ET can be effectively used to provoke discussions and raise awareness about environmental issues, taking advantage of the diverse flow of individuals and transforming these spaces into dynamic and engaging learning centers. Chart 2 presents the ET constructed by students and their forms of operationalization.

Chart 2 presents the association between keywords, typologies and resources used by students that can be understood in the learning process. Figure 3 shows an educational process structured in several stages, reflecting a PBL approach applied to the context of healthcare services. Initially, there is a teaching plan in which concepts and strategies are developed in collaboration with monitors and students.

Subsequently, there is the practical application of the teaching tools produced in the waiting room, at which point educational strategies are implemented. After this phase, a new application takes place, allowing the review and improvement of the initial tactics. The final stage consists of a comprehensive assessment, in which feedback is used to further refine the educational process.

During planning, cognitive functions such as memory, attention and logical reasoning are activated to organize and structure teaching. In the implementation phase, perception and information processing are essential for effective interaction with students in the waiting room. Assessment and improvement involve higher cognitive functions such as critical analysis, reflection and decision-making. This ongoing process encourages the development and improvement of cognitive functions, reinforcing capacities for adaptation, problem-solving and learning in health contexts throughout life.

DISCUSSION

Interdisciplinarity and interprofessionalism[13] underpin the work among professionals from different areas of knowledge, who integrate different knowledge and specialized care, as well as providing the connection of professional health practices.[8,13] In this regard, in the service, these aspects collaborate to promote emerging discussions that, in the short term, deal with events surrounding the environmental theme and, in the medium and long term, imply decision-making. Therefore, the waiting room

Chart 2. Educational technologies developed during the curricular activity.

THEME	OBJECTIVE	THEORETICAL FOUNDATION	RESOURCES	RESULTS
Improper disposal of solid waste	Explain the improper disposal of solid waste and associated diseases.	"[...] raising public awareness of environmental risks and the consequences of environmental damage to health".[21] "[...] appropriation of the waiting room as a methodological resource to disseminate information on waste management".[22]	Image panel; board game.	Understanding the proper disposal of solid waste as a potential for the prevention and transmission of leptospirosis and dengue.
Correct disposal of urban solid waste	Explain about urban solid waste disposal, selective collection and environmental and health protection.	"[...] the creation of new cities and the development of urban areas contribute to the increase in negative impacts on the environment."[23]	Leaflet; question and answer game.	Promote awareness about the correct disposal of urban solid waste.
Health education on intestinal parasites	Promote awareness and understanding of intestinal parasites, such as cysticercosis, hookworm and giardiasis.	"[...] study dialogues with health education (...) and awareness of diseases caused by intestinal parasites."[24] "[...] the study correlates the dyad sanitation and intestinal parasites as a neglected process."[25]	Question and answer game; "right and wrong" sign artifact.	Raising awareness among the population about intestinal parasite prevention, diagnosis and treatment.

Source: prepared by the authors (2024).

shows itself to be a potential space[5] to address holistically health and the environment.[2,26]

In this regard, the activities developed in a timely manner by teaching-service-community integration[13] are suitable for inserting students in the service, with the purpose of developing skills, through theories and public policies, in PHC.[5] This can occur through educational practices, with the aim of training planning, organization, teamwork and leadership.[5,6,8]

This practice dialogues with creative and innovative pedagogical strategies, which are implemented and oriented towards student leading role.[5] Furthermore, this strategy enables direct training for monitors involved in learning associated with the correlation between health education and nursing, organization of the educational process, development of educational technologies and development of educational practices aligned with educational and health policies.[13,14]

In this context, PBL[20] is fundamental because, by providing opportunities for critical and reflective investigation of health problems, helps students identify individual and collective needs in a given territory,[7,8] aligned with an action. Therefore, professors and monitors can think of strategies aimed, initially, at studying concepts, such as EE, and, later, develop collaborative activities, in which students can practice other skills,[10] such as using digital resources. Likewise, this is an opportunity to discuss the different strategies to reach multiple social groups and their peculiarities.[5,8]

It is noted that the incorporation of these technologies into the integration strategy encourages learning[10] and training healthcare professionals for SUS,[5,13,14] considering that using the waiting room favors interaction between professionals, students and users through interactive practice that the environment makes possible.[5] Furthermore, the assessment of student groups that completed their planned activities provides professors and monitors with elements for assessing pedagogical practices as well as pointing out ways to implement training methodologies.

It is found that the choice of the PBL approach is capable of improving cognitive aspects[20] in nursing training, in PHC,[8] which builds learning through interference in the acquisition of knowledge, discernment and perception of needs for health promotion based on EE,[26,27] theme based on awareness of healthy practices[27] and stimulation of cognitive functions[26] in the course of applied dynamics. For instance, among students, logical reasoning is used to plan educational strategies and solve problems that arise during the learning process and action application,[28] in line with what was indicated in the formulation of public policies.[29]

For waiting room users, cognitive functions related to perception allow them to reflect on information received, critically assess its implications, and apply this understanding to the formation of attitudes and decision-making about health and environmental practices. In relation to monitor, the cognitive processes of communication, attention and adaptation[28] stand out as particularly important, given that they play a role in continuous improvement
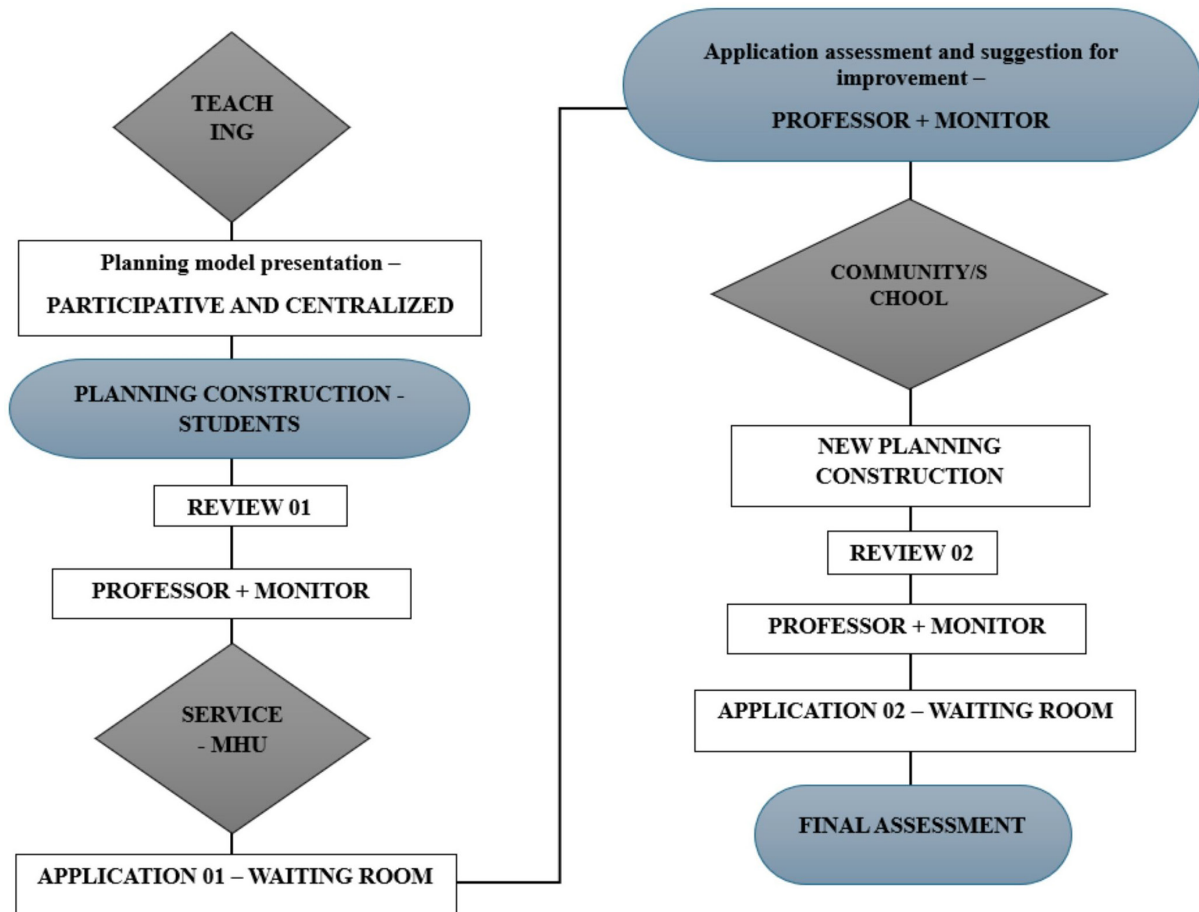
Figure 3. Flowchart of teaching-service-community integration practices.
Source: prepared by the authors (2024).

in the educational process in PHC,[29] contributing significantly to the quality of environmental health education in guidance.

The waiting room has become a learning environment,[5] by fostering critical awareness[14] regarding environmental[27] and social problems, as well as by enabling individual and collective engagement[7,8] in preserving the environment, through discussions on solid waste management, pollution, health impacts, among other themes.[26,27] Therefore, mediation by educational technologies enhances the integration carried out in the waiting room[5] and implements professional practice with educational approaches and strategies, in connection with public health policies.[29]

Furthermore, using technologies in education helps in the interaction of HU users[29] and, consequently, makes learning more attractive and effective.[5] In teaching-service-community integration practices, using leaflets, image panels and educational games contributes to raising awareness among the target audience about health education and the agents involved. In this context, ET should be adapted to meet the particularities of the people present in the waiting room.[5]

Furthermore, the educational process must be improved to change users' and academics' behavior,[7-9] in line with the

environment preservation,[26] in a continuous movement of transformation through action. Furthermore, it is important to promote inclusive learning that considers and values diversity, contributing to educational action in the waiting room that is committed to society.[30]

EA in the waiting room is essential for discussion and awareness of the proposed theme.[1,2,26,27] However, barriers and challenges to promoting environmental health education persist, which constitute impasses in the search for solutions that aim to change habits and build societies capable of sustainable development.[4,27] These obstacles are presented as elements of discussion throughout the process, as long as they are perceived by professors and/or monitors. Finally, it is appropriate to apply democratic educational practices to all those involved,[30] as, throughout and after application, assessments[6,7] are carried out for the purposes of learning exercises[28] on EE.[2]

Furthermore, to build a healthy society,[27] social awareness is necessary, creating environments that welcome the public, but which also provide democratic structural spaces for listening, information and reception,[30] with the aim of integrating community knowledge and scientific knowledge.[7]

Regarding these possibilities, regarding the culture of solid waste disposal in Brazil, there are still no concerns about the destination and the harm it causes to health. Thus, priority is given to raising awareness and sensitizing individuals, groups and communities in relation to the environment, providing a basic understanding of the importance of EE.[1,26,27]

Thus, educational practices involve dialogic processes of transformation[30] that benefit human life. Thus, the waiting room, in addition to learning, also constitutes a space for listening and coexistence with diversity, being a potential space for future generations to change cultural habits rooted in the current generation.[26,27] It promotes therapeutic proposals that enable users to build care plans and take responsibility for their lives[13,14] and learners — students — to understand the importance of exchanging knowledge to promote social transformation, equity and support for social improvement and health.[29,30]

CONCLUSIONS AND IMPLICATIONS FOR PRACTICE

This study highlights the environmental educational practices implemented in the PHC waiting room, highlighting the potential of these spaces to increase environmental awareness and knowledge among its participants. It was pointed out here that such an environment enables improvements in cognitive issues related to environmental health education, highlighting the effectiveness of the methodologies adopted. The waiting room, as a space to promote information, functions as an educational environment that transcends mere waiting, encouraging active participation and community engagement in environmental issues.

The practical implications of this study are significant for society, as they contribute to increasing environmental awareness, promoting sustainable and healthy behaviors. For healthcare professionals, using waiting rooms as educational environments offers an opportunity for deeper engagement with users, improving communication and the effectiveness of health interventions. For the healthcare system, these initiatives can lead to reduced costs in the long term as prevention and EE translate into a more informed population that is less prone to environmentally related diseases.

The study is limited to analyzing the processes applied based on official records. Thus, it highlights the need to measure the impact of educational interventions in the long term and the demand for more robust methodologies to assess sustainable behavioral changes. Future research should explore innovative strategies and assess the effectiveness of different pedagogical approaches in the context of environmental health as well as investigate the integration of educational and digital technology to improve EE.

Finally, it is recommended to expand environmental educational practices in waiting rooms and other healthcare settings, emphasizing the importance of interdisciplinary and interprofessional approaches.

AUTHOR'S CONTRIBUTIONS

Study design. Marília Gabriela Oliveira Da Silva. Nádile Juliane Costa de Castro.

Data collection or production. Marília Gabriela Oliveira Da Silva. Nádile Juliane Costa de Castro.

Data analysis. Marília Gabriela Oliveira Da Silva. Rita de Cássia Serra Furtado. Maria Luisa Maués de Sena. Karytta Souza Naka. Jamily Silva Souza. Nádile Juliane Costa de Castro.

Interpretation of results. Marília Gabriela Oliveira Da Silva. Rita de Cássia Serra Furtado. Maria Luisa Maués de Sena. Karytta Souza Naka. Jamily Silva Souza. Nádile Juliane Costa de Castro.

Writing and critical review of the manuscript. Marília Gabriela Oliveira Da Silva. Rita de Cássia Serra Furtado. Maria Luisa Maués de Sena. Karytta Souza Naka. Jamily Silva Souza. Nádile Juliane Costa de Castro.

Approval of the final version of the article. Marília Gabriela Oliveira Da Silva. Rita de Cássia Serra Furtado. Maria Luisa Maués de Sena. Karytta Souza Naka. Jamily Silva Souza. Nádile Juliane Costa de Castro.

Responsibility for all aspects of the content and integrity of the published article. Marília Gabriela Oliveira Da Silva. Rita de Cássia Serra Furtado. Maria Luisa Maués de Sena. Karytta Souza Naka. Jamily Silva Souza. Nádile Juliane Costa de Castro.

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